Biological Resources Technical Report

Phelan 20 Project

MARCH 2025

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Acronyms and Abbreviations

Acronym	Definition
Amsl	above mean sea level
BMP	best management practice
BSA	biological survey area
Cal-IPC	California Invasive Plant Council
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDNPA	California Desert Native Plants Act
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
City	City of Hesperia
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
FESA	Federal Endangered Species Act
GIS	geographic information system
MBTA	Migratory Bird Treaty Act
MM	Mitigation Measure
project	Phelan 20 Project
SWPPP	stormwater pollution prevention plan
USFWS	U.S. Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program

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1 Introduction

This biological resources technical report documents the results of surveys conducted to identify potential biological resources constraints for the Phelan 20 Project (project) in Hesperia, San Bernardino County, California. Figure 1, Project Location, shows the regional location and vicinity of the project site.

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

1.1 Project Description

1.1.1 Project Location

The approximately 21.4-acre project, including the 19.2-acre project site and 2.2-acre off-site improvement area, is in the western part of Hesperia, which is in the Victor Valley Region of San Bernardino County (Figure 1). Specifically, the project site is in Section 21, Township 4 North, Range 5 West, as depicted on the U.S. Geological Survey Baldy Mesa, California, 7.5-minute topographic quadrangle map. The project site is south of Phelan Road, north of Hollister Road and vacant land, east of Los Banos Avenue, and west of U.S. Highway 395. The project site consists of Assessor's Parcel Number 3064-531-06-0000 and existing right-of-way. Regional access to the project site is provided via U.S. Highway 395, off the Joshua Street intersection, approximately 2.5 miles southeast of the project site.

1.1.2 Project Components

The project would consist of construction of an industrial warehouse building and associated improvements (see Figure 2, Site Plan). The project would provide 419,840 square feet of industrial/warehouse space and include a small office space and associated improvements, including loading docks, truck and vehicle parking, landscaped areas, and an 8-foot-tall tube steel fence along the eastern, western, and southern boundaries of the project site.

On-Site and Off-Site Improvements

The project would involve improvements along Phelan Road, including frontage landscaping and pedestrian improvements. A variety of trees, shrubs, plants, and land covers would be planted within the project frontage's landscape setback area, within the landscape areas around the proposed industrial/warehouse building, and throughout the project site.

Site Access, Circulation, and Parking

Access to the project site would be provided by three driveways: one driveway on the northern side of the project site off Phelan Road and two driveways on the eastern side of the project site along a new street (New Caliente Road) that would be developed as part of the project. The project would provide paved passenger-vehicle parking areas north and west of the industrial/warehouse building, and tractor-trailer stalls and loading docks east of the building. In total, the project would provide approximately 62 loading dock positions, approximately 57 tractor-trailer stalls, roughly 200 passenger-vehicle parking spaces (including accessible spaces), and approximately 10.6% landscape area coverage.

Utility Improvements

Given the vacant, undeveloped nature of the project site, both wet and dry utilities, including domestic water, sanitary sewer, and electricity, would need to be extended onto the project site from Phelan Road. Stormwater would be managed on site using an underground infiltration/detention system in the eastern portion of the project site to capture and treat on-site stormwater.

Operations

Tenants for the project have not been identified; however, the final layout of the industrial/warehouse building is complete. Business operations would be expected to be conducted within the enclosed building, with the exception of the ingressing and egressing of trucks and passenger vehicles accessing the site; passenger and truck parking; the loading and unloading of trailers within designated truck courts/loading areas; and the internal and external movement of materials around the project site via forklifts, pallet jacks, yard hostlers, and similar equipment. It is anticipated that the facilities would be operated 24 hours a day, 7 days a week. At this time, the project applicant does not anticipate leasing any portion of the building to a tenant that would require refrigerated space, and this use is not contemplated in this environmental analysis.

2 Regulatory Setting

2.1 Federal

2.1.1 Federal Endangered Species Act

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

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

2.1.2 Migratory Bird Treaty Act

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

2.1.3 Clean Water Act

The Clean Water Act (CWA) is the major federal legislation governing water quality, providing guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 of the CWA requires an applicant for a federal license or permit that may result in a discharge of pollutants into waters of the United States to obtain state certification, thereby ensuring that the discharge would comply with provisions of the CWA. The State Water Resources Control Board and Regional Water Quality Control Boards administer the 401 certification program in California. Section 402 of the CWA establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by the U.S. Army Corps of Engineers that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. The U.S. Army Corps of Engineers

implementing regulations are found in Code of Federal Regulations (CFR) Title 33, Parts 320 to 332. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the U.S. Environmental Protection Agency in conjunction with the U.S. Army Corps of Engineers (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic ecosystem only if there is no practicable alternative that would have less adverse impacts.

Wetlands and Other Waters of the United States

The definition of "waters of the United States" establishes the geographic scope for authority under Section 404 of the CWA; however, the CWA does not specifically define waters of the United States, leaving the definition open to statutory interpretation and agency rulemaking. The definition of what constitutes "waters of the United States" (provided in 33 CFR 328.3[a]) has changed multiple times over the past few decades, starting with the United States v. Riverside Bayview Homes Inc. court ruling in 1985. Subsequent court proceedings, rulemakings, and congressional acts in 2001 (Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers), 2006 (Rapanos v. United States), 2015 (Clean Water Rule), 2018 (suspension of the Clean Water Rule), 2019 (formal repeal of the Clean Water Rule), 2020 (Navigable Waters Protection Rule), and 2021 (Pasqua Tribe et al. v. United States Environmental Protection Agency, resulting in remand and vacatur of the Navigable Waters Protection Rule and a return to "the pre-2015 regulatory regime") have attempted to provide greater clarity to the term and its regulatory implementation. On December 30, 2022, the agencies announced the final Revised Definition of "Waters of the United States" rule (Rule) (88 CFR 3004–3144). The Rule was published in the Federal Register on January 18, 2023, and became effective on March 20, 2023, restoring federal jurisdiction over waters that were protected prior to 2015 under the CWA for traditional navigable waters, the territorial seas, interstate waters, and upstream water resources that significantly affect those waters. The Rule represents a re-expansion of federal jurisdiction over certain water bodies and wetlands previously exempt pursuant to the 2020 Navigable Waters Protection Rule. The Rule also considers various subsequent court decisions, including two notable Supreme Court decisions.

There are two key changes that the Rule incorporates. Firstly, the Rule reinstates the "Significant Nexus" test. The Significant Nexus test refers to waters that either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas (86 FR 69372–69450). The Significant Nexus test attempts to establish a scientific connection between smaller water bodies (such as ephemeral or intermittent tributaries) and larger, more traditional navigable waters (such as rivers). Significant nexus evaluations take into consideration hydrologic and ecologic factors, including volume, duration, and the frequency of surface water flow in the resource and its proximity to a traditional navigable water, and the functions performed by the resource on adjacent wetlands. In addition, the Rule adopts the "Relatively Permanent Standard" test. To meet the Relatively Permanent Standard, water bodies must be relatively permanent, standing, or continuously flowing and have a continuous surface connection to such waters.

On May 25, 2023, the Supreme Court issued its long-anticipated decision in Sackett v. U.S. Environmental Protection Agency, in which it rejected the U.S. Environmental Protection Agency's claim that "waters of the United States," as defined in the CWA, include wetlands with an ecologically significant nexus to traditional navigable waters. The Supreme Court held that only those wetlands with a continuous surface water connection to traditional navigable waterways would be afforded federal protection under the CWA. Specifically, to assert jurisdiction over an adjacent wetland under the CWA, a party must establish that (1) the adjacent body of water constitutes water(s) of the United States (i.e., a relatively permanent body of water connected to traditional interstate navigable waters)

and (2) the wetland has a continuous surface connection with that water, making it difficult to determine where the water ends and the wetland begins.

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

Western Joshua Tree

On October 21, 2019, the California Fish and Game Commission received a petition from the Center for Biological Diversity to list western Joshua tree (*Yucca brevifolia*) (Center for Biological Diversity 2019).[1] On November 1, 2019, the Commission referred the petition to CDFW for evaluation. CDFW evaluated the scientific information presented in the petition and other relevant information possessed by CDFW at the time of review and prepared a report for submittal to the Commission. The report states that CDFW recommended that the Commission accept the petition for further consideration of western Joshua tree under CESA. On September 22, 2020, the Commission approved the petition to accept the candidacy proposal for western Joshua tree, effective October 9, 2020 (California Fish and Game Commission 2020). When a plant or wildlife species is granted candidacy under CESA, the species is given the same protection as a threatened or endangered species while the Commission evaluates whether formal listing as threatened or endangered under CESA is warranted.

[1] On October 21, 2019, the California Fish and Game Commission received a petition to list the following as threatened under CESA: (1) western Joshua tree throughout its California range, or, in the event the Commission determines that listing of western Joshua tree throughout its California range is not warranted, then (2) the western Joshua tree population within the northern part of western Joshua tree's California range, or (3) the western Joshua tree population within the southern part of western Joshua tree's California range.

In listing western Joshua tree as a candidate species under CESA, the California Fish and Game Commission directed CDFW staff to evaluate whether the species should be formally listed under CESA. In March 2022, CDFW staff presented its findings to the Commission and recommended against the listing, citing the species' widespread distribution and lack of data regarding the extent to which climate changes are expected to affect the species. This information was presented to the Commission on June 15–16, 2022. The Commission voted on the proposed listing at this meeting, but the vote resulted in a 2–2 tie. The Commission discussed western Joshua tree's listing status at its October 12–13, 2022, meeting; however, it was decided at this meeting to extend Joshua tree's candidate status discussion until the February 23, 2023, meeting, which was anticipated to be the final meeting before a listing decision was made. On July 1, 2023, the Western Joshua Tree Conservation Act was passed. Although western Joshua tree is a candidate species, take of western Joshua trees can occur through payment of pre-determined mitigation fees.

Western Burrowing Owl

On March 5, 2024, conservation groups petitioned the California Fish and Game Commission to protect five imperiled populations of the western burrowing owl (burrowing owl; *Athene cunicularia*) under CESA (Center for Biological Diversity et al. 2024). On October 10, 2024 California Fish and Game Commission added burrowing owl as a candidate for potential listing as a protected species under the CESA. As a candidate for potential listing, the species is temporarily afforded the same protections as a state-listed endangered or threatened species.

2.2.2 California Fish and Game Code

2.2.2.1 Fully Protected Species

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

2.2.2.2 Sections 1600–1616

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

Under California Fish and Game Code Sections 1600–1616, CDFW has the authority to regulate work that will substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. CDFW also has the authority to regulate work that will deposit or

dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects. Applications to CDFW must include a complete, certified California Environmental Quality Act (CEQA) document.

2.2.2.3 California Native Plant Protection Act

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

2.2.2.4 Nesting Birds

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

2.2.3 California Environmental Quality Act

CEQA requires identification of a project's potentially significant impacts on biological resources and ways that such impacts can be avoided, minimized, or mitigated. CEQA also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed 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." A rare animal or plant is defined in Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act."

Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing as defined further in CEQA Guidelines Section 15380(c). A species of animal or plant is presumed to be endangered, rare, or threatened if it is listed as rare, threatened, or endangered under Title 14 of the California Code of Regulations (CCR), Sections 670.2 or 670.5, or under 50 CFR 17.11 or 17.12 pursuant to FESA.

Finally, under CEQA Guidelines Section 15380(d), a species that is not included in any listing identified under Section 15380(c) is considered to be endangered, rare, or threatened if the species can be shown to meet the criteria in Section 13580(b). Per Section 15380(e), this does not include "any species of the Class Insecta which is a pest whose protection under the provisions of CEQA would present an overwhelming and overriding risk to [humans] as determined by (1) the Director of Food and Agriculture with regard to economic pests, or (2) the Director of Health Services with regard to health risks." CDFW has developed a list of "Special Species" as "a general term that refers to all of the taxa the California Natural Diversity Database (CNDDB) is interested in tracking, regardless of their legal or protection status (CDFW 2023b)." This is a broader list than those species that are protected under FESA, CESA, or other California Fish and Game Code provisions, and includes lists developed by other organizations, including, for example, the Audubon Watch List. Guidance documents prepared by other agencies, including the U.S. Bureau of Land Management Sensitive Species and USFWS Birds of Conservation Concern, are also included in this CDFW Special Species list. As such, the CDFW list of "Special Species" is covered by CEQA Guidelines Section 15380. Additionally, CDFW has concluded that plant species listed as California Rare Plant Rank (CRPR) 1 or 2 by the California Native Plant Society (CNPS), and potentially some CRPR 3 plants, are covered by CEQA Guidelines Section 15380.

CEQA Guidelines Appendix G Section IV 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 the U.S. Fish and Wildlife Service."

2.2.4 Porter–Cologne Water Quality Control Act

Pursuant to provisions of the Porter–Cologne Water Quality Control Act, the Regional Water Quality Control Boards regulate discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code Section 13260[a]). The State Water Resources Control Board defines a water of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code Section 13050[e]). All waters of the United States are waters of the state. Waters of the state include wetlands, and the State Water Resources Control Board definition of wetlands includes the following (SWRCB 2021):

1. Natural wetlands,
2. Wetlands created by modification of a surface water of the state, and
3. Artificial wetlands that meet any of the following criteria:
    a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
    b. Specifically identified in a water quality control plan as a wetland or other water of the state;
    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
    d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes…:
        i. Industrial or municipal wastewater treatment or disposal,
        ii. Settling of sediment,

iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial permitting program,
iv. Treatment of surface waters,
v. Agricultural crop irrigation or stock watering,
vi. Fire suppression,
vii. Industrial processing or cooling,
viii. Active surface mining – even if the site is managed for interim wetlands functions and values,
ix. Log storage,
x. Treatment, storage, or distribution of recycled water, or
xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
xii. Fields flooded for rice growing.

All waters of the United States are waters of the state. Wetlands, such as isolated seasonal wetlands, that are not generally considered waters of the United States are considered waters of the state if, "under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation" (SWRCB 2021). If a CWA Section 404 permit is not required for a project, the Regional Water Quality Control Board may still require a permit (waste discharge requirements) for impacts to waters of the state under the Porter–Cologne Water Quality Control Act.

2.2.5 California Desert Native Plants Act

The purpose of the California Desert Native Plants Act (CDNPA) is to protect certain species of California desert native plants from unlawful harvesting on both public and privately owned lands. The CDNPA only applies within the boundaries of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. Within these counties, the CDNPA prohibits the harvest, transport, sale, and possession of specific native desert plants unless a person has a valid permit or wood receipt, and the required tags and seals. The appropriate permits, tags, and seals must be obtained from the sheriff or commissioner of the county where collecting will occur, and the county will charge a fee. More information on the CDNPA, including the species protected under the law, is available by reading the provisions of the law.

2.3 Local

2.3.1 San Bernardino County General Plan and Development Code

The San Bernardino County Policy Plan contains the goals and policies that guide future development within San Bernardino County (San Bernardino County 2022). San Bernardino County is broken into three geographic planning regions: the Valley, the Mountains, and the Desert. The project site occurs within the Desert Planning

Region. The Desert Planning Region has two goals and policies: (1) to preserve open lands by working with the U.S. Bureau of Land Management and (2) to ensure that off-highway-vehicle use is managed to protect environmentally sensitive resources (San Bernardino County 2022).

The project would also need to comply with the San Bernardino County Development Code. The Development Code implements the goals and policies of the General Plan. Development Code Section 88.01.060, Desert Native Plant Protection, is a subset of the Plant Protection and Management Code (Development Code Chapter 88.01) and focuses on the conservation of specified desert plant species. This code ensures coordination with the CDNPA and requires issuance of a Tree or Plant Removal Permit in compliance with Development Code Section 88.01.050 for the following species:

(1) The following desert native plants 6 feet or greater in height or with stems 2 inches or greater in diameter:
    a. Smoketree (*Psorothamnus spinosus* [Synonym: *Dalea spinosa*])
    b. All species of the genus *Prosopis* (mesquites)
(2) All species of the family Agavaceae (century plants, *nolinas, yuccas*)
(3) Creosote (*Larrea tridentata*) rings, 10 feet or greater in diameter
(4) All western Joshua trees
(5) Any part of the following species, whether living or dead:
    a. Desert ironwood (*Olneya tesota*)
    b. All species of the genus *Prosopis* (mesquites)
    c. All species of the genera *Cercidium* or *Parkinsonia* (*palos verdes*)

2.3.2 City of Hesperia General Plan

The City's General Plan Conservation and Open Space Elements (City of Hesperia 2010) contain goals and policies that address biological resources. The following goals and policies pertain to biological resources and are relevant to the project:

Goal CN-3. Minimize development and set aside necessary open space near and along the surface waters as well as those washes and other water passageways located in the City to preserve and protect plant and animal species and their natural habitat dependent on such surface waters and waterways.

Policy CN-3.1. Monitor the development impacts to these surface water resources within the city.

Policy CN 3.2. Preserve areas within the Oro Grande wash and un-named wash #1 that exhibit ideal native habitat in a natural state.

Goal CN 4. Establish policies and regulations to protect the natural environment and habitat of the City's biological resources.

Policy CN-4.1. Preserve pristine open space areas and known wildlife corridors areas for conservation to protect sensitive species and their habitats.

Policy CN-4.2. Encourage the protection, preservation and long-term viability of environmentally sensitive habitats and species in the City.

Policy CN-4.3. Identify lands that are suitable for preservation for sensitive species and their habitats.

Policy CN-4.4. In those areas known as possible habitat for endangered and sensitive species, require proper assessments before authorizing development.

Policy CN-4.5. Where such assessments indicate the presence of endangered or sensitive species, require appropriate actions to preserve the habitat and protect the identified species.

2.3.3 Hesperia Municipal Code, Chapter 16.24, Protected Plant Policy

Hesperia Municipal Code Chapter 16.24 contains the City's protected plants policies. This chapter establishes policies governing the removal of protected plants, including the following (Hesperia Municipal Code 16.24.150):

1. The following regulated desert native plants 6 feet or greater in height or with stems 2 inches or greater in diameter:
   a. *Psorothamnus spinosus* (smoketree)
   b. All species of the family Agavaceae (century plants, nolinas, yuccas)
   c. All species of the genus *Prosopis* (mesquites)
2. Creosote rings, 10 feet or greater in diameter
3. All Joshua trees (mature and immature)
4. All plants protected or regulated by the CDNPA

Additionally, Hesperia Municipal Code Section 16.24.060 states the following:

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

2.3.3.1 Protected Plant Plan and Relocation/Adoption

The Hesperia Protected Plant Policy states the following for tentative tract, non-single-family residential developments (i.e., commercial, industrial, and apartment development) (City of Hesperia 2009):

- A protected plant plan shall be prepared by a certified arborist or registered botanist.
- An application and fee shall be completed and paid to the City.
- Healthy, transplantable plants shall be relocated on site or may be placed in an adoption program.

Per the Protected Plant Policy, a developer must describe their adoption program in a letter, on company letterhead, before it can qualify as an approved adoption program. At a minimum, the letter must include the following (City of Hesperia 2009):

A. A public notice process which may include publication in local newspapers, radio advertisement, hand distributed fliers, and other noticing techniques. Noticing must occur over a period of not less than three weeks.
B. The location where the trees may be viewed by the public and a clearly identified period of at least two weeks (including weekends) when trees/plants are available for adoption.
C. The person that will be available on-site to assist those adopting trees to find the actual trees/plants for removal. An on-site or cell phone number for that person is required.
D. A note that a copy of the City Joshua Tree Transplanting Guidelines will be provided to each adopter.
E. A log showing the name, address, and phone number of each adopter and the number and type of trees/plants they received.

Note- At least 50% of the transplantable trees and plants shall be adopted or the remaining number below 50% shall be purchased at $350 per transplantable tree. Purchased trees must be recycled at Advance Disposal.

2.3.3.2 Findings for Removals

Per Hesperia Municipal Code Section 16.24.050, the reviewing authority must authorize the removal of a native tree or plant subject to the provisions of the Hesperia Municipal Code only if the following findings are made:

A. The removal of the native tree or plant does not have a significant adverse impact on any proposed mitigation measures, soil retention, soil erosion and sediment control measures, scenic routes, flood and surface water runoff and wildlife habitats (flora and fauna), especially those with limited habitats (e.g., eagles).
B. The removal of the native tree or plant is justified for one of the following reasons:
    1. The location of the native tree or plant and/or its drip line interferes with the reasonable improvement of the site with an allowed structure, sewage disposal area, paved area or other approved improvement or ground disturbing activity. Also such improvements have been designed in such a manner as to save as many healthy native trees and/or plants as reasonably practicable in conjunction with the proposed improvements;
    2. The location of the native tree or plant and/or its drip line interferes with the planned improvement of a street or development of an approved access to the subject or adjoining private property;
    3. The location of the native tree or plant is hazardous to pedestrian or vehicular travel or safety as determined by the director of transportation, flood control and airports or other county reviewing authority;
    4. The native tree or plant or its presence interferes with or is causing excessive damage to utility services or facilities, roadways, sidewalks, curbs, gutters, pavement, sewer line(s), drainage or flood control improvements, foundations, existing structures, or municipal improvements;

5. The condition or location of the native plant or tree is adjacent to and in such close proximity to existing or proposed structure that the native plant or tree has or will sustain significant damage.

C. Joshua trees that are proposed to be removed have been transplanted or stockpiled for future transplanting wherever possible. In the instance of stockpiling the permittee has posted a bond to ensure such Joshua trees are transplanted appropriately.

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3 Methods

Data regarding biological resources present within the 31.7-acre biological survey area (BSA), which consists of the project site, off-site improvement areas, and a 100-foot buffer, was obtained through review of pertinent literature, field reconnaissance, habitat assessments, and protocol/focused surveys, which are described in detail in this chapter. For purposes of this report, special-status resources are defined as follows:

- Special-status plant species
  - Species designated as either rare, threatened, or endangered by USFWS or CDFW and that are protected under either FESA (16 USC 1531 et seq.) or CESA (California Fish and Game Code Section 2050 et seq.)
  - Species that are candidate species being considered or proposed for listing under FESA or CESA
  - Species that are included on the CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2023a) with a CRPR of 1 or 2 (CNPS 2023a)
  - Species protected under the CDNPA
- Special-status wildlife species
  - Species designated as either rare, threatened, endangered, or fully protected by USFWS or CDFW and that are protected under either FESA (16 USC 1531 et seq.) or CESA (California Fish and Game Code Section 2050 et seq.)
  - Species that are candidate species being considered or proposed for listing under FESA or CESA
  - Other species that are included on the CDFW Special Animals List as Species of Special Concern (CDFW 2023b)
  - Species designated by California Fish and Game Code Section 4000 as fur-bearing animals
- Special-status vegetation communities
  - Vegetation communities designated as sensitive by CDFW

3.1 Literature Review

Prior to conducting a field assessment, a literature search and database review were conducted by Dudek biologists to evaluate the natural resources found or potentially occurring within the BSA. The database review included the most recent versions of the CNDDB, special-status species lists (CDFW 2023a, 2023b, 2023c), and CNPS's Inventory of Rare and Endangered Plants of California (CNPS 2023a). These databases were reviewed to identify sensitive biological resources present or potentially present for the U.S. Geological Survey 7.5-minute quadrangle on which the BSA is located (Baldy Mesa) and the eight surrounding quadrangles (Silverwood Lake, Hesperia, Victorville, Phelan, Shadow Mountains SE, Adelanto, Telegraph Peak, and Cajon). The CDFW occurrence data and critical habitat databases were queried using geographic information system (GIS) software based on a 5-mile buffer around the BSA. Potential and/or historical drainages and aquatic features were investigated based on a review of U.S. Geological Survey topographic maps (1:24,000-scale; [USGS 2024]), aerial photographs [Google Earth 2023], the USFWS National Wetlands Inventory database (USFWS 2023a), and the Natural Resource Conservation Service's Web Soil Survey (USDA 2023a).

3.2 Field Surveys

On February 17, 2023, Dudek biologists Eilleen Salas and Zarina Pringle conducted an initial reconnaissance-level field survey of the BSA to document biological resources and vegetation communities. The biological reconnaissance survey also included an aquatic resources delineation and a habitat assessment for burrowing owl (*Athene cunicularia*), American badger (*Taxidea taxus*), and desert kit fox (*Vulpes macrotis arsipus*). Photographs collected during the reconnaissance-level survey ware provided in Appendix A, Photo Documentation. Additional field surveys conducted included a focused special-status plant survey and desert native plant survey, a focused western Joshua tree survey, and protocol presence/absence surveys for Mojave Desert tortoise (*Gopherus agassizii*) (Appendix B, Mojave Desert Tortoise Data Sheet) and Mohave ground squirrel (*Xerospermophilus mohavensis*) (Appendix C, Mohave Ground Squirrel Protocol Surveys).

Table 1 lists the dates, personnel, type of survey, time, and conditions for each survey. Photos of the BSA can be found in Appendix A and in the specific survey reports.

Table 1. Survey Conditions

Date	Biologists	Times	Weather Conditions
Biological Reconnaissance Survey; Aquatic Resources Delineation; Habitat Assessments for Burrowing Owl, American Badger, and Desert Kit Fox			
2/17/2023	E. Salas; Z. Pringle	9:00 a.m.–2:00 p.m.	37°F–50°F; 50%–80% cloud cover; 2–5 mph wind
Special-Status Plant and Desert Native Plant Survey			
05/04/2023	S. Greely; S. Carey; T. Park	12:35 p.m.–4:53 p.m.	49°F–51°F; 40%–50% cloud cover; 10–18 mph wind
05/08/2023	B. Schultz; S. Greely	8:00 a.m.–12:50 p.m.	49°F–63°F; 0% cloud cover; 2–12 mph wind
Western Joshua Tree Focused Surveys[1]			
10/13/2022	S. Tian; A. Castro	NR	NR
03/24/2023	S. Tian; A. Castro	NR	NR
03/27/2023	S. Tian; A. Castro	NR	NR
03/28/2023	S. Tian; A. Castro	NR	NR
03/29/2023	S. Tian; A. Castro	NR	NR
03/30/2023	S. Tian; A. Castro	NR	NR
04/03/2023	S. Tian; A. Castro	NR	NR
11/01/2023	S. Tian; A. Pfleeger	NR	NR
11/02/2023	S. Tian; A. Pfleeger	NR	NR
11/03/2023	S. Tian; A. Pfleeger	NR	NR
11/06/2023	S. Tian; A. Pfleeger	NR	NR
11/07/2023	S. Tian; A. Pfleeger	NR	NR
Mojave Desert Tortoise Protocol-Level Surveys			
04/21/2023	E. Salas; Z. Pringle	9:09 a.m.–3:16 p.m.	59°F–76°F; 0% cloud cover; 1–3 mph wind

Table 1. Survey Conditions

Date	Biologists	Times	Weather Conditions
05/04/2023	S. Greely; S. Carey; T. Park	8:29 a.m.–12:35 p.m.	41°F–49°F; 40–80% cloud cover; 5–16 mph wind
Mohave Ground Squirrel Protocol Surveys			
03/2023–07/2023	Dipodomys Ecological Consulting	Varied[2]	Varied[2]

Notes: mph = miles per hour; NR = not recorded.

1 L. Badillo, K. Narel, K. Dayton, and S. Carey functioned as assistants (i.e., putting tags on trees) on various dates while working directly with an International Society of Arboriculture Certified Arborist and qualified desert botanist.

2 Survey conditions for the Mohave ground squirrel protocol surveys are provided in Appendix C.

3.2.1 Vegetation Community and Land Cover Mapping

Dudek biologists conducted vegetation mapping in the BSA on February 17, 2023. The survey date, biologists, and weather conditions are included in Table 1. Dudek biologists used CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018) and the California Natural Communities List (CDFW 2023d), based on A Manual of California Vegetation, Online Edition (CNPS 2023b), to map the entire BSA. These classification systems focus on a quantified, hierarchical approach that includes both floristic (plant species) and physiognomic (community structure and form) factors as currently observed (as opposed to predicting climax or successional stages). Vegetation communities and land covers were delineated to the vegetation alliance level and, where appropriate, the association level. Some modifications, such as from the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986; Oberbauer et al. 2008), were incorporated to accommodate the lack of conformity of the observed communities to those included in these references.

Vegetation mapping was conducted on foot to visually cover 100% of the BSA. Vegetation communities and land cover types were mapped in the field using an Esri ArcGIS mobile application. Vegetation communities were classified based on site factors, descriptions, distribution, and characteristic species present within an area. Information was recorded, including dominant species and associated cover classes, aspect, canopy height, and visible disturbance factors.

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

Following completion of the fieldwork, Dudek GIS analysts digitized the vegetation boundaries as delineated by the field biologists and created a GIS coverage for vegetation communities.

3.2.2 Flora

Latin and common names for plant species with a CRPR follow CNPS's Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2023a). 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's Natural Resources Conservation Service PLANTS Database (USDA 2023b).

3.2.3 Fauna

All wildlife species detected during the field surveys by sight, vocalizations, burrows, tracks, scat, or other signs were recorded. The site was visually scanned with and without binoculars to identify wildlife. Latin and common names of animals follow Crother (2017) for reptiles and amphibians, American Ornithological Society (AOS 2023) for birds, the Mammal Diversity Database (ASM 2021) for mammals.

3.2.4 Special-Status and Regulated Resources

3.2.4.1 Special-Status Plant Survey

Based on the results of the literature review discussed in Section 3.1, nine special-status plant species were determined to have a moderate potential to occur within the BSA based on known species distribution, species-specific habitat preferences, and habitat conditions on site: Mojave milkweed (*Asclepias nyctaginifolia*), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), Mojave monkeyflower (*Diplacus mohavensis*), Booth's evening-primrose (*Eremothera boothii* ssp. *boothii*), sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*), short-joint beavertail (*Opuntia basilaris* var. *brachyclada*), beaver dam breadroot (*Pediomelum castoreum*), Latimer's woodland-gilia (*Saltugilia latimeri*), and western Joshua tree. Therefore, focused surveys were conducted for these target species. In addition, desert native plants, in accordance with the CDNPA and Hesperia Municipal Code Chapter 16.24, were considered target species and are further discussed in Section 3.2.4.3, Desert Native Plant Survey.

Dudek conducted a focused special-status plant survey within the BSA on May 4 and 8, 2023. The survey dates and biologists are provided in Table 1. Field survey methods and mapping of rare plants conformed to the CNPS Botanical Survey Guidelines (CNPS 2001), Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018), and General Rare Plant Survey Guidelines (Cypher 2002). The surveys consisted of one survey pass in May that provided 100% coverage of the BSA. Western Joshua tree mapping within the BSA was conducted during a separate focused survey and is further discussed in Section 3.2.4.2, Western Joshua Tree Focused Survey.

Before conducting the surveys, Dudek botanists conducted reference population checks and a literature search to ensure the focal special-status plant species were in bloom and identifiable. White-bracted spineflower was observed in bloom on April 19, 2023, near Keenbrook Road within the upper terrace of Cajon Wash (off Cajon Boulevard). Mojave monkeyflower was observed in bloom on May 21, 2023, near Barstow approximately 4 miles south of Highway 40 and 5.5 miles west of Newberry Mountain. Additionally, Mojave monkeyflower, Latimer's woodland-gilia, and beaver dam breadroot were observed in San Bernardino County in April 2023 (iNaturalist 2023). It should be noted that short-joint beavertail is a conspicuous stem succulent species that can be identified outside the blooming period, and therefore it was not included in the 2023 reference check. Similarly, western Joshua tree is a conspicuous tree that can be identified outside of the blooming period.

Furthermore, although the most recent rainfall data for Hesperia is not available, in Victorville (located 8 miles north of Hesperia), the average annual precipitation is 5.52 inches (WRCC 2023a). Victorville received approximately 5.36 inches of precipitation from September 2022 to April 2023 (NOAA RCCs 2023); therefore, the area received

average precipitation totals for the rain year, and surveys for special-status plant species adequately covered flora that are known to bloom within the vicinity.

3.2.4.2 Western Joshua Tree Focused Survey

Per the City's Protected Plant Policy (City of Hesperia 2009) and the Western Joshua Tree Conservation Act, Dudek's International Society of Arboriculture Certified Arborists performed a western Joshua tree survey to inventory and evaluate the health and relocation potential for each western Joshua tree within the project site plus off-site improvement areas and a 50-foot buffer (hereafter referred to as Joshua tree inventory survey area). During the inventory, the GPS position of each western Joshua tree found within the Joshua tree inventory survey area was recorded. Dudek Certified Arborists walked in parallel transects to ensure documentation of each western Joshua tree.

Dudek collected the following attributes of each tree:

- Species
- Size class (Size A: less than 1 meter, Size B: greater than 1 meter and less than 5 meters, and Size C: greater than 5 meters)
- Actual height (meters)
- Health (excellent, good, fair, poor, critical, and dead)[2]
- Live or dead
- Tree maturity (mature if branching occurs, not mature if no branching occurs)

If a tree had a severe bend in the trunk, height was recorded with two measurements, h1 and h2, h1 being the main, upright trunk, and h2 being the remaining, non-vertical trunk or branch. H1 and h2 were then added together to get an overall height and size class. If a tree was found leaning, the height was measured from the base of the tree along the leaning trunk to the top of the farthest leaf.

All inventoried and assessed protected trees were tagged with an aluminum tag bearing a unique identification number that was placed on the main trunk on the north side of each western Joshua tree. Tagging on the north side allows for proper orientation during relocation (each relocated western Joshua tree needs to be oriented in the same direction as it was in its original location). Photographs for each tree were taken in accordance with CDFW requirements for western Joshua tree photographs and included an object for frame of reference.

[2] **Tree Health Rating Descriptions**
Excellent. Tree has excellent health and strong vigor. No damage. Flowering and fruiting expected. Typically, only given to large, high-quality specimens (taller than 15 feet in height). Transplanting generally not recommended due to size.
Good. Tree has good health and vigor. All branches are alive and healthy. Damage is very localized and minimal. Flowering and fruiting likely, if tree is large enough. Tree is transplantable.
Fair. Tree health is average. Some stressors or damage possible, but any damage is minimal to moderate (e.g., rodent grazing, insect damage). No dead/broken branches. Tree is transplantable.
Poor. Tree is under stress, and overall health is in decline, or tree has taken significant damage. Mortality likely unless stressors relieved and/or conditions change. Broken/dead limbs likely present. Tree is generally not transplantable.
Critical. Tree is in extreme decline. One or more branches dead. One or more branches dying. Physical damage likely present. Damage is significant and extensive. Mortality expected within 2 to 4 years. Tree is not transplantable.
Dead. Tree is dead.

3.2.4.3 Desert Native Plant Survey

On May 4 and 8, 2023, desert native plant surveys were conducted within the BSA in accordance with the CDNPA and Hesperia Municipal Code Chapter 16.24. The survey dates, biologist, and weather conditions are provided in Table 1. All of the desert native plant target species are conspicuous shrubs that would have been identifiable during the survey.

In accordance with Hesperia Municipal Code Chapter 16.24, the following desert native plants were considered target species:

1. The following desert native plants with stems 2 inches or greater in diameter or 6 feet or greater in height:
   a. Smoketree;
   b. All species of the family Agavaceae (century plants, nolina, yuccas, cacti);
   c. All species of the genus *Prosopis* (mesquites).
2. Creosote rings, 10 feet or greater in diameter.
3. All Joshua trees (mature and immature).

In accordance with the CDNPA, Chapter 3, the following desert native plants were considered target species:

(a) All species of the family Agavaceae (century plants, *nolinas, yuccas*).
(b) All species of the family Cactaceae (cacti), except for the plants listed in subdivisions (b) and (c) of Section 80072, which may be harvested under a permit obtained pursuant to that section.
(c) All species of the family Fouquieriaceae (ocotillo, candlewood).
(d) All species of the genus *Prosopis* (mesquites).
(e) All species of the genus *Cercidium* (palos verdes).
(f) *Acacia greggii* (catclaw).
(g) *Atriplex hymenelytra* (desert-holly).
(h) *Dalea spinosa* (smoke tree).
(i) Olneya tesota (desert ironwood), including both dead and live desert ironwood.

3.2.4.4 Desert Tortoise Protocol-Level Survey

On April 2, 1990, the Mojave desert tortoise was listed by USFWS as threatened (55 FR 12178–12191). Proposed actions within the range of the Mojave desert tortoise fall under purview of FESA. Because the BSA lies within the range for Mojave desert tortoise (CDFW 2023b) and is in the Western Recovery Unit (USFWS 2011), Dudek biologists conducted focused surveys for Mojave desert tortoise to determine the status of the species on site. To evaluate impacts to Mojave desert tortoise, protocol surveys were conducted in accordance with the Pre-project Field Survey Protocol for Potential Desert Tortoise Habitats section included in Preparing for Any Action That May Occur within the Range of the Mojave Desert Tortoise (*Gopherus agassizii*) (USFWS 2010). Following the small-project survey protocol, Dudek biologists conducted surveys of the BSA in April and May 2023. Biologists surveyed by walking approximately 10-meter-wide (32.8 feet) transects for 100% coverage of the BSA.

3.2.4.5 Burrowing Owl, American Badger, and Desert Kit Fox Habitat Assessment

Dudek conducted a habitat assessment for burrowing owl in accordance with Appendix C of the Staff Report on Burrowing Owl Mitigation (CDFW 2012) concurrently during the biological reconnaissance survey on February 17, 2023 (Table 1). Vegetation type, structure, and height was documented, and all burrows or burrow surrogates were checked for suitability for burrowing owl (i.e., burrows or surrogates greater than 11 centimeters in diameter in height and width and presence of burrowing owl individuals and/or their sign (i.e., feathers, cast pellets, prey remains, whitewash, etc.).

A habitat assessment for American badger and desert kit fox was conducted concurrently with the burrowing owl habitat assessment. All burrows encountered were checked for American badger and desert kit fox individuals as well as sign of American badger (i.e., tracks, scat, and claw marks along the sides of burrows) and/or desert kit fox (i.e., scat, tracks, freshly dug dirt).

Any diagnostic sign of any of these species was recorded using a mobile device mapping application (i.e., Esri Collector).

3.2.4.6 Mohave Ground Squirrel Habitat Assessment and Protocol Survey

Dipodomys Ecological Consulting biologists conducted an initial visual survey of the BSA on March 14, 2023, for Mohave ground squirrel. The visual survey was conducted by driving and walking throughout the BSA to identify suitable habitat for Mohave ground squirrel, which is consistent with the methods described in the Mohave Ground Squirrel Survey Guidelines (CDFW 2010). Field methods are described in detail in Appendix C. Following the initial visual survey, three 5-day live-trapping surveys for Mohave ground squirrel were conducted between March 24 and July 14, 2023, within the project site.[3] The methods used for this trapping effort followed the most recent Mohave Ground Squirrel Survey Guidelines (CDFW 2010). Camera trappings consisted of one camera station in a location designated by CDFW; methods are described in detail in Appendix C.

3.2.4.7 Aquatic Resources Delineation

Before conducting fieldwork for the aquatic resources delineation, Dudek reviewed aerial maps from the National Wetlands Inventory (USFWS 2023a), the National Hydrography database (USGS 2023), the Natural Resource Conservation Service (USDA 2023a, 2023b), and historical aerials and topographic maps (Google Earth 2023; Historical Aerials Online 2023) to assess the potential for aquatic resources with the BSA.

The survey was conducted on foot to visually and systematically cover the BSA. During the survey, Dudek evaluated indicators of potential jurisdictional waters and wetlands, including hydrology, vegetation, and soil characteristics, in accordance with the current policies and mapping requirements, including the following:

- The USACE's 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987)
- The 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a)

[3] Dipodomys Ecological Consulting conducted live trapping and camera stations across two 50-trap 5x10 survey grids, referred to as the northern and southern project parcels. The northern project parcel contains the Phelan 20 Project site, and, therefore, only the methods and results for the northern project parcel are included herein.

- USACE's 2008 A Field Guide to the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b)
- State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State, adopted April 2, 2021 (SWRCB 2021)
- Section 1602 of the California Fish and Game Code.

No jurisdictional aquatic features, including federal or states jurisdictional waters or wetlands, were observed in the BSA.

As no aquatic resources were delineated, GPS data collection and geographic information system (GIS) mapping of jurisdictional features were not required. Findings were documented in digital field notes and confirmed through a review of available mapping resources and site observations.

3.2.5 Survey Limitations

Limitations of the surveys include a diurnal bias and the absence of trapping for reptiles, amphibians, and small mammals at night. The surveys were conducted during the daytime to maximize the detection of most wildlife. Most birds are active in the daytime, so diurnal surveys maximize the number of bird observations. Conversely, diurnal surveys usually result in few observations of mammals, many of which may only be active at night. In addition, many species of reptiles and amphibians are secretive in their habits and are difficult to observe using standard meandering transects.

4 Environmental Setting

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

4.1 Climate

The BSA is in the Victor Valley region in western San Bernardino County. The average annual temperatures in Hesperia range from 48.1°F to 75.5°F (WRCC 2023b). The average annual precipitation for Hesperia is 5.43 inches (WRCC 2023b). Periods of extended drought are common throughout the region.

4.2 Geology and Topography

The BSA is in Hesperia at the southern edge of the Mojave Desert, which is a region containing desert plains, dry lakebeds, and scattered mountains. The southern portion of Hesperia lies at the foothills of the San Bernardino Mountains and National Forest. The central and northern portions of Hesperia are on a moderate to gentle slope with elevations ranging from 2,900 feet to 4,200 feet above mean sea level (amsl) (Google Earth 2023).

The BSA is composed of undeveloped vacant lands bisected by dirt roads. The topography within the BSA consists of a flat plain and a slope in the southeastern portion of the BSA, where the elevation declines toward the Oro Grande Wash, which occurs outside of the BSA to the southeast. Elevation ranges from approximately 3,615 feet amsl in the southwestern portion of the BSA to 3,575 feet amsl in the northeastern portion of the BSA (Google Earth 2023). Adjacent land uses include residential areas and Phelan Road to the north, undeveloped land and U.S. Highway 395 to the east, undeveloped land and Sultana Street to the south, and residential areas and Los Banos Road to the west.

4.3 Soils

According to the U.S. Department of Agriculture's Natural Resource Conservation Service's Web Soil Survey (USDA 2023a), the BSA consists of three soil complexes: Cajon sand (0% to 2% slopes), Cajon sand (9% to 15% slopes), and Hesperia loamy fine sands (2% to 5% slopes). These soil types are described in more detail below and are presented in Figure 3, Soils.

Cajon Series consists of very deep, somewhat excessively drained soils that formed in sandy alluvium from dominantly granitic rocks. The Cajon soils are on recent fans and river terraces at elevations of 200 to 4,300 feet amsl. Creosote bush, saltbush (*Atriplex* sp.), western Joshua trees, and annual grasses and forbs are common vegetation found on these soils (USDA 2023a).

Hesperia Series consists of very deep, well-drained soils that formed in alluvium derived primarily from granite and related rocks. The Hesperia soils are on long, smooth alluvial fans and valley fill at elevations of 200 to 4,800 feet amsl. Creosote bush is commonly found on the Hesperia soil series in the high desert, and sparse annuals can be found in the valley regions (USDA 2023a).

4.4 Surrounding Land Uses

The BSA consists of primarily vacant, undeveloped land. The BSA has had multiple dirt roads running through it since the mid-1990s (Google Earth 2023; Historic Aerials Online 2023), some of which appeared to continue to experience frequent use at the time of the 2023 site visits. The BSA is bordered to the north by open space and scattered residential areas, to the east by another parcel of open space and U.S. Highway 395, to the south by open space with more scattered residential areas, and to the west by open space and residential areas. Specific land uses in the immediate vicinity include the following:

- **North:** Phelan Road and vacant land
- **East:** Vacant land and U.S. Highway 395
- **South:** Sultana Street and vacant land
- **West:** Los Banos Road, vacant land, and residential areas

In the broader BSA vicinity, development includes both residential and commercial uses, and the California Aqueduct.

4.5 Watersheds and Hydrology

The BSA occurs in the southern portion of the Burkhardt Lake–Mojave River subwatershed (Hydrologic Unit Code 180902080706) of the Bell Mountain Wash–Mojave River watershed (Hydrologic Unit Code 1809020807) (Figure 4, Hydrologic Setting). The Bell Mountain Wash–Mojave River Watershed comprises approximately 276 square miles (176,739 acres) and encompasses both Hesperia and Victorville in the high desert part of southwestern San Bernardino County, approximately 18 miles north of San Bernardino. The Bell Mountain Wash drainage basin is a tributary of the Mojave River and is approximately 3 miles southwest of the BSA. Surface water flowing in the vicinity of the site is normally ephemeral, occurring in intermittent washes during and immediately following precipitation events (Young 2014). The Oro Grande Wash, which occurs outside of the southeastern portion of the BSA, flows northeast for approximately 10 miles before it joins the Mojave River.

5 Results

This chapter describes the results of the literature review, field surveys, and habitat assessments for the BSA.

5.1 Vegetation Communities and Land Covers

Four vegetation communities or land cover types were mapped in the BSA (Table 2). The spatial distribution of the vegetation communities and land covers are presented in Figure 5, Biological Resources.

State rankings of 1, 2, or 3 are considered high priority for inventory or special status, and impacts to these communities typically require mitigation. The BSA contains Joshua tree woodland and desert almond–Mexican bladdersage scrub, which are considered sensitive biological resources by CDFW under CEQA (CDFW 2023d).

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

Vegetation Community/ Land Cover	Alliance	Association	State Ranking[1]	Project Site (acres)	Off-Site Improvement (acres)	100-Foot Buffer (acres)	Total BSA (acres)
Scrub							
Desert Almond–Mexican Bladdersage Scrub	*Salazaria mexicana*	*Salazaria mexicana*[2]	SNR	0	0	0.9	0.9
Joshua Tree Woodland	*Yucca brevifolia*[3]	N/A	S3	17.7	1.0	6.3	24.9
Disturbed and Developed							
Disturbed	N/A	N/A	N/A	1.5	0.7	1.7	3.9
Urban/ Developed	N/A	N/A	N/A	0	0.5	1.4	1.9
		Total[4]	**N/A**	**19.2**	**2.2**	**10.3**	**31.7**

Notes: BSA = biological survey area; N/A = not applicable.

1 The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers have the following meanings (NatureServe 2023):
1 = critically imperiled
2 = imperiled
3 = vulnerable to extirpation or extinction
4 = apparently secure
5 = demonstrably widespread, abundant, and secure
SNR = unranked, subnational rank not yet assessed

2 Association is identified as a high priority for inventory and considered a sensitive biological resource by the California Department of Fish and Wildlife (CDFW) under CEQA (CDFW 2023d)

3 Communities listed by CDFW as high priority for inventory (i.e., State Rank [S] 1, 2, or 3) (CDFW 2023d).

4 Total acreages may not sum due to rounding.

5.1.1 Desert Almond–Mexican Bladdersage Scrub

Desert almond–Mexican bladdersage scrub alliance communities include desert almond (*Prunus fasciculata*), Mexican bladdersage (*Scutellaria mexicana* [= *Salazaria mexicana*]), and/or purple sage (*Salvia dorrii*) as dominant or co-dominant species in the shrub canopy. Desert almond–Mexican bladdersage scrub has an open to intermittent shrub canopy less than 10 feet (3 meters) in height with an open herbaceous layer. Species associated with the desert almond–Mexican bladdersage scrub alliance include burrobrush (*Ambrosia salsola*), Anderson's boxthorn (*Lycium andersonii*), California buckwheat (*Eriogonum fasciculatum*), Nevada jointfir (*ephedra nevadensis*), and spiny hopsage (*Grayia spinosa*) (CNPS 2023b).

The only association in the desert almond–Mexican bladdersage scrub alliance mapped in the BSA is *Salazaria mexicana* association. This vegetation community is in the northern portion of the BSA, north of Phelan Road, and is dominated by Mexican bladdersage.

The desert almond–Mexican bladdersage scrub alliance is ranked by CDFW as a G4S4. This ranking indicates that globally and within California the alliance is apparently secure. However, this association is considered a high priority for inventory and is considered a sensitive biological resource by CDFW (CDFW 2023d; NatureServe 2023).

5.1.2 Joshua Tree Woodland

Joshua tree woodland alliance communities include western Joshua tree with a cover greater than 1% in the tree strata (Sawyer et al. 2009). Joshua tree woodland has an open to intermittent canopy less than 46 feet (14 meters) in height with a variable ground layer (CNPS 2023b). Species associated with the Joshua tree alliance include white bursage (*Ambrosia dumosa*), big sagebrush (*Artemisia tridentata*), yellow rabbitbrush (*Chrysothamnus viscidiflorus*), Nevada jointfir, and California buckwheat (CNPS 2023b).

Joshua tree woodland composes the majority of the BSA. Associated species observed within this alliance included rubber rabbitbrush (*Ericameria nauseosa*), yellow rabbitbrush, Anderson's boxthorn, and peach thorn (*Lycium cooperi*).

Joshua tree woodland alliance is ranked by CDFW as a G4S3 alliance (CDFW 2023d). This ranking indicates that globally and within California the alliance is apparently secure, but within California the alliance is considered vulnerable and at risk (CDFW 2023d; NatureServe 2023). Therefore, this alliance is considered a sensitive biological resource by CDFW (CDFW 2023d).

5.1.3 Disturbed Habitat

Although not recognized by the Natural Communities List (CDFW 2023d), disturbed habitat refers to areas that have had anthropogenic disturbance and, as a result, cannot be identified as a native or naturalized vegetation association. However, these areas do have a recognizable soil substrate. If vegetation is present, it is almost entirely composed of non-native vegetation, such as ornamentals or ruderal exotic species. Disturbed habitat is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2023d).

Disturbed habitat in the BSA consists of numerous dirt roads that bisect the BSA.

5.1.4 Urban/Developed Land

Not recognized by the Natural Communities List (CDFW 2023d), 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 supports a variety of ornamental plants and landscaping. Urban/developed land is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2023d).

Within the BSA, urban/developed land consists of one paved road, Phelan Road, running east–west along the northern boundary of the BSA.

5.2 Plants and Wildlife Observed

5.2.1 Plants

A total of 80 species of native or naturalized plants, 68 native (85%) and 12 non-native (15%), were recorded within the BSA. Dudek biologists recorded 70 species, and Dipodomys Ecological Consulting biologists observed an additional 10 species of native or naturalized plants, including crowned muilla (*Muilla coronata*), which has a CRPR of 4.2, indicating that it has a limited distribution (CNPS 2023b). A list of plant species observed is provided in Appendix D, Plant Compendium.

5.2.2 Wildlife

A total of 30 wildlife species were recorded in the BSA or vicinity during surveys (Appendix E, Wildlife Compendium). All species observed were native to California.

Birds detected on or in the immediate vicinity of the BSA included loggerhead shrike (*Lanius ludovicianus*), western meadowlark (*Sturnella neglecta*), house finch (*Haemorhous mexicanus*), Say's phoebe (*Sayornis saya*), common raven (*Corvus corax*), northern mockingbird (*Mimus polyglottos*), cactus wren (*Campylorhynchus brunneicapillus*), and white-crowned sparrow (*Zonotrichia leucophrys*). Mammals detected consisted of white-tailed antelope squirrel (*Ammospermophilus leucurus*), California ground squirrel (*Otospermophilus beecheyi*), and black-tailed jackrabbit (*Lepus californicus*). Reptiles detected were common side-blotched lizard (*Uta stansburiana*) and tiger whiptail (*Aspidoscelis tigris*).

Dipodomys Ecological Consulting biologists observed six additional species consisting of four mammals: kangaroo rat (*Dipodomys* sp.), bobcat (*Lynx rufus*), desert cottontail (*Sylvilagus audubonii*), and eastern deermouse (*Peromyscus maniculatus*); one reptile: yellow-backed spiny lizard (*Sceloporus uniformis*); and one bird: greater roadrunner (*Geococcyx californianus*) (Appendix E).

5.3 Special-Status and Regulated Resources

Appendix F, Special-Status Plant Species Potentially Occurring within the Biological Survey Area, and Appendix G, Special-Status Wildlife Species Potentially Occurring within the Biological Survey Area, provide tables of all special-status species whose geographic ranges fall within the general BSA vicinity. Special-status species' potential

to occur in the BSA were evaluated based on known species distribution, species-specific habitat preferences, and Dudek biologists' knowledge of regional biological resources. Species potentially occurring in the BSA are identified as having moderate or high potential to occur based on habitat conditions, and species are identified as not expected to occur or having low potential to occur based on little or no suitable habitat.

5.3.1 Special-Status Plants

Special-status plants include those listed, or candidates for listing, as threatened or endangered by USFWS and/or CDFW and those identified as rare by CNPS (particularly CRPR 1A, presumed extinct in California; CRPR 1B, rare, threatened, or endangered throughout its range; and CRPR 2, rare or endangered in California, more common elsewhere).

Dudek biologists performed a desktop review of literature, existing documentation, and GIS data to evaluate the potential for special-status plant species to occur in the BSA. Each special-status plant species was assigned a rating of "not expected," "low," "moderate," or "high" potential to occur based on relative location to known occurrences, vegetation community, soil, and elevation, the results of which are provided in Appendix F. Based on the results of the literature review and database searches, nine special-status plant species were identified as having a moderate or high potential to occur within the BSA and were subject to focused surveys: Mojave milkweed, white-bracted spineflower, Mojave monkeyflower, Booth's evening-primrose, sagebrush loeflingia, short-joint beavertail, beaver dam breadroot, Latimer's woodland-gilia, and western Joshua tree.

There were no additional special-status plant species that were determined to have a moderate or high potential to occur within the BSA based on the soils, vegetation communities (habitat) present, elevation range, and previous known locations (Appendix F); therefore, these species are not discussed further because no significant direct or indirect impacts are expected. Listed species with any potential to occur and non-listed special-status species with a moderate or higher potential to occur are discussed herein.

One special-status plant species, western Joshua tree, was observed in the BSA and is further discussed in Section 5.3.2, Western Joshua Tree (see also Table 3). No other listed or non-listed CRPR 1 or CRPR 2 plants were observed during the 2023 survey efforts. One CRPR 4.2 species, crowned muilla, was incidentally observed by Dipodomys Ecological Consulting biologists during Mohave ground squirrel surveys (Appendix C). In addition, there is no USFWS-designated critical habitat for listed plant species overlapping the BSA (USFWS 2023b).

Table 3. Special-Status Plant Species Observed or with Moderate or High Potential to Occur in the Biological Survey Area

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
Yucca brevifolia	western Joshua tree	None/SC/None	Great Basin grassland, Great Basin scrub, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland, Sonoran desert scrub, valley and foothill grassland/perennial leaf	**Observed**. In total, 972 western Joshua tree individuals were observed within the Joshua tree inventory survey area (Figure 5, Biological Resources). Of the 972 trees found within the Joshua tree inventory survey area, 848 individuals were

Table 3. Special-Status Plant Species Observed or with Moderate or High Potential to Occur in the Biological Survey Area

Scientific Name	Common Name	Status (Federal/ State/CRPR)	Primary Habitat Associations/Life Form/ Blooming Period/Elevation Range (feet)	Potential to Occur
			succulent/Apr–May/ 1,310–6,560	observed within the project site, and the remaining 124 individuals were observed within the 50-foot Joshua tree inventory survey area.

Notes: CRPR = California Rare Plant Rank.
Status Designation
SC: State listed candidate species

5.3.2 Western Joshua Tree

Western Joshua tree is a California State Candidate for Listing. Western Joshua tree is a monocot tree in the asparagus family (Agavaceae) that occurs within Joshua tree woodland, Great Basin grassland and scrub, Mojavean desert scrub, pinyon and juniper woodland, Sonoran desert scrub, and valley and foothill grassland. This species occurs in San Bernardino County and other southern and eastern counties in California from 1,310 to 6,560 feet amsl (CNPS 2023a). This species typically blooms in April and May.

In total, 972 western Joshua tree individuals were observed within the Joshua tree inventory survey area (project site plus off-site improvement areas and associated 50-foot buffer) (Figure 5). Of the 972 trees found within the Joshua tree inventory survey area, 848 western Joshua tree individuals are within the project site, and the remaining 124 western Joshua tree individuals are within the 50-foot Joshua tree inventory survey area buffer.

5.3.3 Desert Native Plants

In addition to western Joshua trees, one desert native plant species, chaparral yucca (*Hesperoyucca whipplei*), was observed in the BSA during the focused desert native plant survey (Figure 5). One chaparral yucca individual was observed in the southeast portion of the project site, with the remaining individuals located within the BSA 100-foot buffer (Figure 5).

5.3.4 Special-Status Wildlife

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

Similar to special-status plants, Dudek biologists performed an extensive desktop review of literature, existing documentation, and GIS data to evaluate the potential for special-status wildlife species to occur within the BSA. Each special-status wildlife species was assigned a rating of “not expected,” “low,” “moderate,” or “high” potential to occur based on relative location to known occurrences and vegetation community/habitat association, the results of which are provided in Appendix G. Listed species with any potential to occur and non-listed special-status species with a moderate or higher potential to occur are discussed herein. Those special-status wildlife species that

are not expected or have low potential to occur in the BSA are also included in Appendix G; however, these species are not discussed further because no significant direct or indirect impacts are expected.

Based on the results of the literature review and database searches, 37 special-status wildlife species were reported in the CNDDB and USFWS databases as occurring in the vicinity of the BSA. Of these, Mojave desert tortoise and Mohave ground squirrel were determined to have a moderate potential to occur based on suitable habitat present and nearby occurrences; therefore, focused protocol-level surveys were conducted for these species. Mojave desert tortoise and Mohave ground squirrel were confirmed absent through focused protocol-level surveys, as further detailed in Section 3.2.4.4 and Section 3.2.4.5; therefore, these species are not expected to occur.

Two special-status wildlife species were determined to have at least a moderate or high potential to occur within the BSA: burrowing owl (*Athene cunicularia*) and LeConte's thrasher (*Toxostoma lecontei*). One special-status species, loggerhead shrike (*Lanius ludovicianus*), was incidentally observed during the 2023 reconnaissance survey and jurisdictional delineation surveys within the BSA. One state candidate for listing as endangered species was determined not expected to occur: Crotch's bumble bee (*Bombus crotchii*). Habitat assessments conducted for American badger and desert kit fox, as further detailed in Section 3.2.4.5, confirmed no suitable burrows were present and diagnostic sign for these species was not observed. Furthermore, in addition to negative pre-construction survey results for these species on other projects located in the vicinity, these species are not expected to occur as further detailed below. These species are detailed in the following discussion and in Table 4.

In addition, there is no USFWS-designated critical habitat for listed wildlife species overlapping the BSA (USFWS 2023c).

Table 4. Special-Status Wildlife Species Observed or with Moderate or High Potential to Occur in the Biological Survey Area

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/SSC, SC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	**Moderate potential to occur.** The biological survey area (BSA) contains suitable open scrub habitat. Additionally, several burrows of suitable size were observed during the 2023 biological reconnaissance survey. The nearest California Natural Diversity Database (CNDDB) record is approximately 0.5 miles south of the BSA where one adult was observed in 1989 (CDFW 2023c). However, no burrowing owls or conclusive burrowing owl sign were observed during 2023 field surveys.
Lanius ludovicianus (nesting)	loggerhead shrike	None/ SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	**Observed.** A loggerhead shrike was observed in the BSA by Dudek biologists on February 17, 2023, during the biological reconnaissance and jurisdictional delineation surveys, and again on May 4, 2023, during the focused desert tortoise survey.

Table 4. Special-Status Wildlife Species Observed or with Moderate or High Potential to Occur in the Biological Survey Area

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Toxostoma lecontei	LeConte's thrasher	BCC/SSC	Nests and forages in desert wash, desert scrub, alkali desert scrub, desert succulent, and Joshua tree habitats; nests in spiny shrubs or cactus	**High potential to occur**. The BSA contains desert wash, desert scrub, and Joshua tree habitat with spiny shrubs, such as *Lycium* ssp. And *Scutellaria* ssp., which are suitable for nesting. The nearest mapped CNDDB record is approximately 6 miles east of the BSA. Although this is a historical record from 1917, there are more current eBird sightings less than 5 miles from the BSA (CDFW 2023c; Cornell Lab of Ornithology 2023).
Taxidea taxus	American badger	None/ SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	**Not expected to occur**. While the BSA contains dry, open, treeless areas and contains the Hesperia soils series, which is described as friable (USDA 2023a), the BSA lacks coastal scrub or agricultural areas. Furthermore, no suitable burrows or diagnostic sign (i.e., tracks, scat, and claw marks along the sides of burrows) were observed during the habitat assessment conducted on February 17, 2023. Additionally, the BSA is located in an urbanized area of Hesperia with U.S. Highway 395 to the east, the California Aqueduct and Phelan Road to the north, in addition to residential development to the west. Furthermore, pre-construction American badger surveys for the Hesperia Commerce Center II Project, located immediately north of the project, were conducted on October 1 and 29, 2024, and were negative. The nearest mapped CNDDB record is approximately 7 miles southeast of the BSA near Silverwood Lake (CDFW 2023c).
Vulpes macrotis arsipus	desert kit fox	None/ None[1]	Sparse vegetated scrub habitats such as creosote scrub communities that support abundant rodent populations (Center for Biological Diversity 2013)	**Not expected to occur**. The BSA contains suitable desert scrub habitat; however, no suitable burrows or diagnostic sign (i.e., scat, tracks, freshly dug dirt) were observed during the habitat assessment conducted on February 17, 2023, nor was the species observed during the camera trap that was deployed as part of the Mohave

Table 4. Special-Status Wildlife Species Observed or with Moderate or High Potential to Occur in the Biological Survey Area

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
				ground squirrel focused surveys. Additionally, the BSA is located in an urbanized area of Hesperia with U.S. Highway 395 to the east, the California Aqueduct and Phelan Road to the north, in addition to residential development to the west. Furthermore, pre-construction desert kit fox surveys for the Hesperia Commerce Center II Project, located immediately north of the project, were conducted on October 1 and 29, 2024, and were negative.
Bombus crotchii	Crotch's bumble bee	None/ SCE	Open grassland and scrub communities supporting suitable floral resources	**Not expected to occur.** Although the BSA does contain open desert scrub communities with *Phacelia, Eschscholzia,* and *Eriogonum* genera, which are some of the Crotch's bumble bee preferred food plants (CDFW 2023c), many of the flower patches are small and disjointed, forming marginal potential habitat for this species. The nearest CNDDB record is approximately 6 miles south of the BSA near Cajon Junction (CDFW 2023c). However, Crotch's bumble bee pre-construction surveys for the Hesperia Commerce Center II Project, located immediately north of the project, were conducted on September 24 and 25, 2024, and were negative.

Notes:

[1] Section 4000 of the California Fish and Game Code defines "kit fox" as a fur-bearing animal.

Status Designations

Federal

BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern

State

SC: State candidate for listing as threatened or endangered
SCE: State candidate for listing as endangered
SSC: California Species of Special Concern

Mojave Desert Tortoise

Mojave desert tortoise is a federally and state-listed threatened species. The range of the Mojave desert tortoise includes portions of the Mojave Desert and the Colorado Desert in Southern California (parts of Inyo, Kern, Los Angeles, San Bernardino, and Riverside Counties), southern Nevada (Clark, Esmeralda, Nye, and Lincoln Counties), northwestern Arizona (Mohave County), and southwestern Utah (Washington County).

Typical habitat for Mojave desert tortoise in the Mojave Desert is creosote bush scrub where annual precipitation ranges from 2 to 8 inches, with a relatively high diversity of perennial plants and high productivity of ephemeral plants. Throughout most of the Mojave Desert, Mojave desert tortoises occur most commonly on gently sloping terrain with sandy gravel soils and where there is sparse cover of low-growing shrubs, which allows for the establishment of herbaceous plants. Soils must be friable enough for digging burrows, but firm enough that burrows do not collapse (USFWS 2008). Although populations of Mojave desert tortoise are not generally known to inhabit elevations much above 4,000 feet amsl, they occur from below sea level to an elevation of 7,300 feet amsl. Occupied habitat varies from flats and slopes dominated by creosote bush scrub at low elevations, to rocky slopes in blackbrush and juniper woodland ecotones at higher elevations (USFWS 2008).

To evaluate the impacts to Mojave desert tortoise, protocol surveys were conducted in accordance with the Pre-project Field Survey Protocol for Potential Desert Tortoise Habitats section included in Preparing for Any Action That May Occur within the Range of the Mojave Desert Tortoise (*Gopherus agassizii*) (USFWS 2010). Biologists surveyed the BSA by walking approximately 10-meter-wide (32.8 feet) transects for 100% coverage. A buffer survey was not conducted because there was no legal access to these areas.

The BSA contains suitable sandy soils and Mojave desert scrub habitat; however, there are several regional barriers to potential population sources around the BSA, such as high traffic roads, including U.S. Highway 395; residential areas; and the California Aqueduct. The nearest CNDDB occurrence was from 2000 and is mapped approximately 2 miles southwest of the BSA (CDFW 2023c). Survey forms are included as Appendix B.

Mojave desert tortoise was not observed during the 2023 focused protocol surveys; therefore, this species is not expected to occur in the BSA and will not be analyzed further.

Burrowing Owl

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

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

A habitat assessment for burrowing owl was conducted on February 17, 2023. The BSA contains suitable open scrub habitat, and the nearest CNDDB record is approximately 0.5 miles south of the BSA where one adult was observed in 1989 (CDFW 2023c). Although no burrowing owl individuals or burrowing owl sign (e.g., feathers, cast pellets, prey remains, whitewash, etc.) were observed during the 2023 habitat assessment, several burrows of suitable size (i.e., greater than 11 centimeters in diameter) were observed (Figure 5). Based on the discussion

above, this species has a moderate potential to occur within the BSA. A burrowing owl relocation plan for the project is provided as Appendix H.

Loggerhead Shrike

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

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

A loggerhead shrike was observed in the BSA by Dudek biologists on February 17, 2023, during the biological reconnaissance and jurisdictional delineation surveys, and again on May 4, 2023, during the focused desert tortoise survey.

LeConte's Thrasher

LeConte's thrasher is a USFWS Bird of Conservation Concern and a California Species of Special Concern. LeConte's thrasher is found from below sea level up to 1,600 meters (5,249 feet) amsl in Southern California deserts in southern Mono County to the Mexican border (Dobkin and Granholm 2005; Sheppard 1996).

Preferred habitat for LeConte's thrasher is open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats. LeConte's thrasher also occurs in western Joshua tree habitat with scattered shrubs (Dobkin and Granholm 2005). This species prefers gently rolling to well-drained slopes occupied by saltbush and joint fir (*Ephedra* sp.) with bare ground or sparse grass (Fitton 2008). These conditions are generally found on bajadas or alluvial fans where the slopes are bisected by dry washes (Fitton 2008). Much of LeConte's thrasher's diet consists of insects found within leaf litter under desert shrubs; therefore, habitat must contain sufficient ground cover (Sheppard 1996).

The BSA supports suitable foraging habitat (desert scrub) and nesting habitat (spiny shrubs and cactus). Although there is a historical record from 1917, there are more current eBird sightings less than 5 miles from the BSA (CDFW 2023c; Cornell Lab of Ornithology 2023). Based on the discussion above, LeConte's thrasher has a high potential to occur in the BSA.

Mohave Ground Squirrel

Mohave ground squirrel is a California threatened species. This species' distribution range is restricted to the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo Counties (Zeiner et al. 1990). Mohave ground

squirrels generally inhabit areas where the soil is friable and sandy or gravelly. Mohave ground squirrels occur in desert scrub habitats dominated by creosote bush and desert saltbush scrub at elevations of 1,800 to 5,000 feet amsl.

This species' known occurrences in the southeastern portion of its range have historically been rare and population densities low. However, a query of the CNDDB for the Baldy Mesa quadrangle and the surrounding eight quadrangles showed that the closest occurrence to the BSA was recorded in 2005 approximately 2 miles north of the BSA (CDFW 2023c). This species and the results of Mohave ground squirrel protocol surveys are discussed further in the Mohave Ground Squirrel Protocol Survey Report (Appendix C).

Mohave ground squirrel was not observed during 2023 focused protocol surveys within the BSA; therefore, this species is not expected to occur in the BSA and will not be analyzed further.

American Badger

American badger is a California Species of Special Concern. American badgers prefer open scrub or grassy areas (USGS 2017).

American badger is not expected to occur within the BSA. While the BSA contains dry, open, treeless areas and contains the Hesperia soils series, which is described as friable (USDA 2023a), the BSA lacks coastal scrub or agriculture areas. Furthermore, no suitable burrows or diagnostic sign (i.e., tracks, scat, and claw marks along the sides of burrows) were observed during the habitat assessment conducted on February 17, 2023. Additionally, the BSA is located in an urbanized area of Hesperia with U.S. Highway 395 to the east, the California Aqueduct and Phelan Road to the north, in addition to residential development to the west. Furthermore, pre-construction American badger surveys for the Hesperia Commerce Center II Project, located immediately north of the project, were conducted on October 1 and 29, 2024, and were negative. The nearest mapped CNDDB record is approximately 7 miles southeast of the BSA near Silverwood Lake (CDFW 2023c). Based on the above discussion, this species is not expected to occur within the BSA.

Desert Kit Fox

Desert kit fox is considered a "fur-bearing mammal," protected from take under the California Fish and Game Commission's Mammal Hunting Regulations (Subdivision 2, Chapter 5), which protects it from hunting pressure. Desert kit fox is not listed by USFWS or CDFW under any special-status designation. Desert kit fox lives in the open desert, on creosote bush flats, and among sand dunes (NPS 2015).

Desert kit fox is not expected to occur in the BSA. The BSA contains suitable desert scrub habitat; however, no suitable burrows or diagnostic sign (i.e., scat, tracks, freshly dug dirt) were observed during the habitat assessment conducted on February 17, 2023, nor was the species observed during the camera trap that was deployed as part of the Mohave ground squirrel focused surveys. Furthermore, the BSA is located in an urbanized area of Hesperia with U.S. Highway 395 to the east, the California Aqueduct and Phelan Road to the north, in addition to residential development to the west. Furthermore, pre-construction desert kit fox surveys for the Hesperia Commerce Center II Project, located immediately north of the project, were conducted on October 1 and 29, 2024, and were negative. Based on the above discussion, this species is not expected to occur within the BSA.

Crotch's Bumblebee

Crotch's bumblebee is a state candidate for listing as endangered. Crotch's bumblebee is distributed in coastal California and east toward the Sierra–Cascade Crest and is less common in western Nevada (Koch et al. 2012). It occurs in grassland and scrub communities that contain *Phacelia, Clarkia, Eriogonum, Eschscholzia*, and *Antirrhinum* species, which have been identified as genera with preferred nectar sources.

Crotch's bumblebee is not expected to occur within the BSA. The BSA does contain open desert scrub communities with *Phacelia, Eschscholzia,* or *Eriogonum* genera, which are some of Crotch's bumble bee's preferred food plants; however, many of the flower patches are small and disjointed, forming marginal potential habitat for this species. The nearest CNDDB record is approximately 6 miles south of the BSA near Cajon Junction (CDFW 2023c). However, pre-construction Crotch's bumble bee surveys for the Hesperia Commerce Center II Project, located immediately north of the project, were conducted on September 24 and 25, 2024, and were negative. Based on the above discussion, this species is not expected to occur within the BSA.

5.3.5 Potential Jurisdictional Aquatic Resources

Based on the aquatic jurisdictional delineation conducted on February 17, 2023, in addition to review of U.S. Geological Survey topographic maps (1:24,000-scale; [USGS 2024]), aerial photographs [Google Earth 2023], the USFWS National Wetlands Inventory database (USFWS 2023a), and the Natural Resource Conservation Service's Web Soil Survey (USDA 2023a), there are no non-wetland waters or wetlands potentially regulated by USACE, RWQCB, or CDFW present in the BSA. The BSA is comprised of upland habitats including Joshua tree woodland and desert almond–Mexican bladdersage scrub, as well as developed and disturbed lands. No hydrophytic vegetation, hydric soils nor hydrology indicators were observed within the BSA. No indictors of OHWM were observed (e.g., defined bed/bank, surface flow, ponding, or sediment deposits). The nearest aquatic resources as depicted on Figure 4 is the Oro Grande Wash which occurs approximately 500 feet southeast of the BSA. Representative photos depicting the upland habitats on the BSA, and absence of hydrophytic vegetation and hydrology indicators, can be found in Appendix A.

5.4 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by ensuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires).

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as stepping stones for dispersal.

The BSA is not mapped as an essential connectivity area, natural landscape block, or linkage for the California Desert Linkage Network. The BSA is mapped as an Area of Conservation Emphasis, Rank 3 (USFWS 2023c).

According to CDFW (2019), Rank 3 is defined as follows:

> [O]ther areas that have been identified as having connectivity importance, but have not been identified as channelized areas, species corridors, or habitat linkages at this time. This may change with future changes in surrounding land use or regional specific information. Hexagons included in this category include areas mapped as "intensified" in the TNC Omniscape study, core habitat areas, and hexagons on the periphery of mapped habitat linkages when not included in the categories above [i.e., Rank 4 and Rank 5].

Additionally, due to the undeveloped land on the BSA, there are opportunities for wildlife to move across the BSA when migrating through the region. However, the BSA does not currently function as a corridor or linkage between two larger habitat blocks. Although the BSA may function as local dispersal habitat for wildlife movement and/or foraging/hunting, the project would not create a significant impediment to wildlife movement that would warrant a wildlife corridor study.

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6 Project Impacts

This chapter addresses direct and indirect impacts to special-status biological resources that would result from implementation of the project. The significance determinations for proposed or potential impacts are described in this chapter, and proposed mitigation is provided in Chapter 7, Mitigation. Cumulative impacts are addressed in the project's forthcoming environmental impact report.

6.1 Explanation of Findings of Significance

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

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

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

Impact BIO-6	Conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan

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

6.2 Definition of Impacts

Direct permanent impacts refer to complete loss of a biological resource. For purposes of this report, it refers to the area where vegetation clearing, grubbing, or grading replaces biological resources. Direct impacts were quantified by overlaying the proposed impact limits on the biological resources map of the BSA. Direct permanent impacts would occur from construction of a 419,700-square-foot industrial/warehouse building and associated off-site improvements, including loading docks, truck and vehicle parking, landscaped areas, and 5,000 square feet of office space.

Direct temporary impacts refer to impacts that would be restored to existing conditions after the project activity is complete. Direct temporary impacts were quantified by overlaying the proposed impact limits on the biological resources map of the BSA. Direct temporary impacts would occur from installation of off-site improvements west of New Caliente Road and installation of a fence along the southern boundary of the project site. All temporary impact areas would be returned to pre-project conditions.

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

Cumulative impacts refer to the combined environmental effects of a project and other relevant projects. These impacts may be minor when analyzed individually but become collectively significant as they occur over time. Cumulative impacts are addressed in the project's forthcoming environmental impact report.

The evaluation of project impacts is organized below using CEQA Guidelines Appendix G.

6.3 Impacts Analysis

The acreage of impacts is provided in Table 5. Figure 6, Impacts to Biological Resources, depicts the areas where permanent and temporary impacts are anticipated to occur.

Table 5. Impacts to Vegetation Communities and Land Cover Types in the Biological Survey Area

Vegetation Community/ Land Cover	Alliance	Association	Total Existing BSA (acres)	On-Site Permanent Impacts (acres)	Off-Site Permanent Impacts (acres)	Off-Site Temporary Impacts (acres)
Scrub						
Desert Almond–Mexican Bladdersage Scrub	*Salazaria mexicana*	*Salazaria mexicana*[1]	0.9	0	0	0
Joshua Tree Woodland	*Yucca brevifolia*[2]	N/A	24.9	17.7	0.8	0.2
Disturbed and Developed						
Disturbed	N/A	N/A	3.9	1.5	0.7	<0.1
Urban/Developed	N/A	N/A	1.9	0	0.5	0
		Total[3]	**31.7**	**19.2**	**2.0**	**0.2**

Notes:
BSA = biological survey area; N/A = not applicable.
1 Association is identified as a high priority for inventory and considered a sensitive biological resource by the California Department of Fish and Wildlife (CDFW) under CEQA (CDFW 2023d).
2 Communities listed by CDFW as high priority for inventory (i.e., State Rank [S] 1, 2, or 3) (CDFW 2023d).
3 Total acreages may not sum exactly due to rounding.

6.3.1 Impact BIO-1: Special-Status Species

The following significance determinations were made based on the impacts from the project. Proposed mitigation measures referenced in this section are provided in Chapter 7.

6.3.1.1 Impacts to Special-Status Plants

6.3.1.1.1 Direct Impacts

One non-listed special-status plant species, crowned muilla, was observed within the BSA. Crowned muilla was not included as a target species for the 2023 focused surveys because it is a CRPR 4.2 species. Species with CRPR 4 are not considered rare, but only limited in distribution or infrequent throughout a broader range in California (e.g., "Watch List" species) (CNPS 2023a). Thus, given that CEQA requires findings of significance for projects that "threaten to … reduce the number or restrict the range of a rare or endangered plant," crowned muilla will not be analyzed further.

No other non-listed special-status plant species were observed or have high or moderate potential to occur within the BSA; therefore, the project would have no direct or indirect impacts to non-listed special-status plant species. In addition, the BSA does not occur within federally designated critical habitat for any special-status plant species, and there would be no direct impacts to critical habitat.

One listed special-status plant species was observed within the BSA: western Joshua tree.

Western Joshua Tree

Western Joshua tree, a candidate for state listing under CESA, was observed and would be directly impacted by the project. Based on the site plan (see Figure 2), implementation of the project would result in direct impacts to 848 western Joshua trees (Figure 7, Impacts to Western Joshua Tree). All ground-disturbing activities are considered permanent impacts to western Joshua trees. Direct impacts to western Joshua trees would be significant absent mitigation under CEQA.

Based on the Western Joshua Tree Conservation Act, California Fish and Game Code Section 1927.3 requires the applicant to mitigate by paying the statutorily prescribed fees. Trees described by California Fish and Game Code Section 1927.3(e) are in the standard fee area; therefore, impacts to western Joshua trees can be mitigated on a per-tree basis as follows:

- 5 meters or greater in height: $2,500
- 1 meter or greater but less than 5 meters in height: $500
- Less than 1 meter in height: $340

The project would result in direct impacts to 33 western Joshua trees that are 5 meters or greater in height, 531 western Joshua trees that are 1 meter or greater but less than 5 meters in height, and 284 western Joshua trees that are less than 1 meter in height (Figure 7).

To mitigate for these impacts, the project requires Mitigation Measure (MM) BIO-1 (Western Joshua Tree Fee Payment) for direct impacts to 848 individuals, their seed bank, and associated habitat. This mitigation would

be fulfilled via payment through the Western Joshua Tree Conservation Act or through payment to a CDFW-approved mitigation bank. Per direction from the City, compliance with state policy (i.e., the Western Joshua Tree Conservation Act) and procurement of a native plant removal permit from the City would meet the requirements of Hesperia Municipal Code Chapter 16.24 to protect, preserve, and mitigate impacts to desert native plants, including western Joshua trees. As such, the fees paid under the Western Joshua Tree Conservation Act to acquire/conserve lands with western Joshua trees fully mitigates the project's direct impacts to western Joshua trees. In addition, relocation may be requested by CDFW following review of the Western Joshua Tree Conservation Act Incidental Take Permit application.

Additionally, as required by MM-BIO-2 (Removal Permit for Desert Native Plants) and in accordance with Hesperia Municipal Code Chapter 16.24, prior to the issuance of grading permits, the project applicant must submit an application and applicable fee to the City for removal of protected native desert plants and must schedule a pre-construction site inspection with the appropriate authority. In addition, a plot plan must be approved by the appropriate City review authority indicating exactly which trees or plants are authorized to be removed. The application must include certification from a qualified western Joshua tree and native desert plant expert to determine that the proposed removal of protected native desert plants is appropriate, supportive of a healthy environment, and in compliance with the Hesperia Municipal Code.

Finally, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (Construction Monitoring Notebook) would reduce potential direct impacts to less than significant.

In summary, implementation of MM-BIO-1 through MM-BIO-6 would reduce potential direct impacts to western Joshua trees to less than significant.

6.3.1.1.2 Indirect Impacts

In total, 73 western Joshua trees were mapped within the 50-foot survey buffer, and the project may result in indirect impacts to western Joshua trees (Figure 7).

Based on the Western Joshua Tree Conservation Act, California Fish and Game Code Section 1927.3 requires the applicant to mitigate by paying the statutorily prescribed fees. Trees described by California Fish and Game Code Section 1927.3(e) are in the standard fee area; therefore, indirect impacts to western Joshua trees can be mitigated on a per-tree basis as follows:

- 5 meters or greater in height: $2,500
- 1 meter or greater but less than 5 meters in height: $500
- Less than 1 meter in height: $340

The project would result in indirect impacts to 73 western Joshua trees (Figure 7). Specifically, the project would result in indirect impacts to 6 western Joshua trees that are 5 meters or greater in height, 54 western Joshua trees that are 1 meter or greater but less than 5 meters in height (within the 50-foot buffer), and 13 western Joshua trees that are less than 1 meter in height (within 25 feet of the project site). Regarding the remaining 51 western Joshua trees, 38 trees within the 50-foot buffer are dead, and 13 trees less than 1 meter in height outside of the 25-foot buffer are not subject to statutorily prescribed fees.

To mitigate for these indirect impacts, the project requires MM-BIO-1 (Western Joshua Tree Fee Payment) for indirect impacts to 73 individuals, their seed bank, and associated habitat. This mitigation would be fulfilled via payment through the Western Joshua Tree Conservation Act or through payment to a CDFW-approved mitigation bank. Construction-related, short-term indirect impacts may include inadvertent spillover impacts outside of the construction footprint, dust accumulation on Joshua trees, chemical spills, stormwater erosion and sedimentation, and increased wildfire risk.

Potential long-term (post-construction) indirect impacts from operation and maintenance activities may include effects of herbicides, changes in water quality, increased wildfire risk, increased demand on the surrounding area, increased traffic and vehicle emissions, and accidental chemical spills. Indirect impacts to Joshua trees and other special-status plants with a moderate potential to occur would be significant absent mitigation.

To reduce these impacts, MM-BIO-3 (Designated Biologist Authority) gives the project's designated biologist the authority to stop work if construction is not compliant with this CEQA document. MM-BIO-4 (Compliance Monitoring) requires that an experienced biologist oversee compliance with the protective measures, including limiting impacts to the project footprint. MM-BIO-5 (Education Program) would provide for construction personnel to receive training related to special-status plants that could potentially occur on or adjacent to the impact footprint. MM-BIO-6 (Construction Monitoring Notebook) provides for documentation that the education program was administered to applicable personnel. MM-BIO-7 (Delineation of Property Boundaries) requires that impacts occur within the fenced, staked, or flagged area that is clearly delineated within the project impact footprint. The construction crew would be responsible for unauthorized impacts from construction activities to special-status plants that are outside the permitted project footprint. Thus, implementation of MM-BIO-3 through MM-BIO-7 would help to avoid and minimize inadvertent spillover impacts outside of the approved impact footprint.

To reduce fugitive dust resulting from project construction and to minimize adverse air quality impacts, the project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction.

MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented and that repair and cleanup of any hazardous waste occurs. Thus, implementation of MM-BIO-8 (Hazardous Waste) would help to avoid and minimize impacts to special-status plants from any construction-related chemical spills.

A stormwater pollution prevention plan (SWPPP) would be prepared and implemented to prevent construction pollutants from contacting stormwater during construction activities, with the intent of keeping sediment and any other pollutants from moving off site and into receiving waters. Best management practices (BMPs) employed on site would include erosion control, sediment control, and non-stormwater good housekeeping. Preparation and implementation of a SWPPP would help to avoid and minimize the potential effects of stormwater erosion during construction.

Construction of the project would introduce potential ignition sources to the project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. However, the project would be required to comply with City and state requirements for fire safety practices to reduce the possibility of fires during construction activities. Further, vegetation would be removed from the site prior to the start of construction. Adherence to City and state regulatory standards during project construction would reduce the risk of wildfire ignition and spread during construction activities. Therefore, short-term construction impacts involving wildland fires would be less than significant.

Implementation of MM-BIO-9 (Herbicides) would limit herbicide use to instances where hand or mechanical efforts are infeasible and when wind speeds are less than 7 miles per hour to prevent drift into off-site western Joshua trees.

Implementation of low-impact-development features and BMPs would, to the maximum extent practicable, reduce the discharge of pollutants into receiving waters, including inadvertent release of pollutants (e.g., hydraulic fluids and petroleum); the improper management of hazardous materials, trash, and debris; and the improper management of portable restroom facilities (e.g., regular service) in accordance with all relevant local and state development standards. In addition, in accordance with California Green Building Standards requirements (CCR Title 24, Part 11), project source controls to improve water quality would be provided for outdoor material storage areas, outdoor trash storage/waste-handling areas, and outdoor loading/unloading areas. Therefore, impacts to western Joshua trees due to changes in water quality would be avoided and minimized through implementation of low-impact-development features and BMPs.

Upon completion of project construction, with adherence to the Hesperia Municipal Code, and because of the low ignitability of the proposed structures and implementation of fire-resistant and irrigated landscaping, the project would not facilitate wildfire spread or exacerbate wildfire risk. Further, given that surrounding off-site fuels consist of moderately spaced vegetation, wildfires in the immediate surrounding area are not common, and it is unlikely that the project site would be exposed to the uncontrolled spread of a wildfire. It is not anticipated that the project, due to slope, prevailing winds, and other factors, would exacerbate wildfire risks or the uncontrolled spread of a wildfire; thus, with adherence to the Hesperia Municipal Code, long-term indirect impacts to special-status plants associated with increased wildlife risk is not expected to occur.

Implementation of MM-BIO-1 (Western Joshua Tree Fee Payment), MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-7 (Delineation of Property Boundaries), MM-BIO-8 (Hazardous Waste), and MM-BIO-9 (Herbicides) would reduce potential indirect impacts to western Joshua trees to less than significant.

6.3.1.2 Impacts to Special-Status Wildlife

6.3.1.2.1 Direct Impacts

Direct impacts can potentially occur to special-status wildlife species from impacts to habitat and impacts to the species from injury or mortality of individuals from construction activities.

Two special-status wildlife species have a moderate to high potential to occur within the BSA (burrowing owl and LeConte's thrasher), and one special-status wildlife species was observed within the BSA (loggerhead shrike). These species are detailed in the following section.

Crotch's bumble bee, American badger, and desert kit fox are not expected to occur within the BSA as discussed in Section 5.3.4 of this report; therefore, these species will not be analyzed further. Focused surveys conducted for Mohave ground squirrel and Mojave desert tortoise were negative; therefore, these species are not expected to occur and will not be analyzed further.

Burrowing Owl

Focused surveys for burrowing owls were not conducted; however, the BSA contains approximately 20.9 acres of suitable open scrub habitat, and the nearest record of this species occurs 0.5 miles south of the BSA (CDFW 2023c).

Additionally, several burrows of suitable size were observed on site during the February 17, 2023, biological reconnaissance survey and habitat assessment for burrowing owl (Figure 5). Therefore, approximately 20.9 acres of suitable habitat exists on site, and the species could eventually occupy the BSA prior to construction. Potential direct and indirect impacts to burrowing owls would be significant absent mitigation under CEQA.

Pursuant to the California Fish and Game Code and MBTA, a pre-construction survey in compliance with the Staff Report on Burrowing Owl Mitigation (CDFG 2012) would be necessary to reevaluate the locations of potential burrowing owl burrows within the BSA so that take of owls and/or active owl nests are avoided. The Staff Report on Burrowing Owl Mitigation (CDFG 2012) outlines the most effective manner for conducting surveys to determine burrowing owl presence according to scientific literature and field experience supports the determination of timing for the surveys. Consistent with MM-BIO-10 (Pre-Construction Surveys for Burrowing Owl and Avoidance), a pre-construction survey for burrowing owls shall be conducted in areas supporting potentially suitable habitat no more than 14 days before initiation of site preparation or grading activities, and a second survey shall be completed within 24 hours of the start of site preparation or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the project site shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (prepared by the California Department of Fish and Game [now California Department of Fish and Wildlife; CDFW]) in 2012 or current version. If burrowing owl is not observed during the pre-construction survey, no further mitigation would be required.

As further described in MM-BIO-10, if burrowing owls are detected, and if impacts to burrowing owl cannot be feasibly avoided, the project applicant will consult with CDFW and obtain appropriate take authorization from the CDFW through the CESA Incidental Take Permit process. A Draft Burrowing Owl Relocation Plan has been prepared to facilitate implementation of this mitigation measure, if needed, and is attached to this report as Appendix H. The Draft Burrowing Owl Relocation Plan shall be reviewed and approved by CDFW prior to implementation. Furthermore, implementation of Draft Burrowing Owl Relocation Plan is likely to require a permit (e.g., Scientific Collection Permit or ITP). In the event an Incidental Take Permit is needed, mitigation for direct impacts to burrowing owl shall be fulfilled through compensatory mitigation at a minimum 1:1 habitat replacement of equal or better functions and values to those impacted by the project, through the purchase of credits at a CDFW approved mitigation bank or other conservation mechanism approved by CDFW, or as otherwise determined through the Incidental Take Permit process as further detailed in MM-BIO-10.

As required by MM-BIO-11 (Restoration of Temporary Impacts), temporarily disturbed areas would be recontoured to natural grade (if the grade was modified during the temporary disturbance activity). The project would not include revegetation or restoration of temporary impacts after project completion. However, natural vegetation would be allowed to regenerate in temporarily disturbed areas. Furthermore, if topsoil were to be removed during construction, the segregated topsoil would be replaced and the native seed allowed to regenerate naturally. In addition, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO 6 (Construction Monitoring Notebook) would reduce potential direct impacts to less than significant. Therefore, direct impacts to burrowing owl would be less than significant with mitigation incorporated.

Implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-10 (Pre-Construction Surveys for Burrowing Owl and Avoidance), and MM-BIO-11 (Restoration of Temporary Impacts) would reduce potential direct impacts to burrowing owls to less than significant.

Loggerhead Shrike

Loggerhead shrike was incidentally observed during the February 17, 2023, biological reconnaissance survey and again on May 4, 2023, during the focused desert tortoise survey. Suitable nesting habitat, particularly western Joshua trees, is present within the BSA.

The project would result in the loss of 18.7 acres of suitable habitat for loggerhead shrike (i.e., impacts to Joshua tree woodland). These potential direct impacts to loggerhead shrike habitat are considered significant absent mitigation under CEQA.

To avoid potential impacts to nesting loggerhead shrike, vegetation removal activities would be conducted outside of the general bird nesting season (February 1 through August 31). If vegetation cannot be removed outside the bird nesting season, a pre-construction nesting bird survey by a qualified biologist is required prior to vegetation removal. This requirement is outlined in MM-BIO-12 (Pre-Construction Nesting Bird Surveys and Avoidance).

As required by MM-BIO-1 (Western Joshua Tree Fee Payment), mitigation for direct impacts to 893 western Joshua trees would be fulfilled through conservation of western Joshua trees through payment of applicable fees consistent with the Western Joshua Tree Conservation Plan or through payment to a CDFW-approved mitigation bank. The fees would contribute to the conservation of western Joshua trees, with a focus on the conservation of large, interconnected Joshua tree woodlands on lands where edge effects are limited, versus lands in urban settings that are subject to habitat fragmentation and edge effects, such as the project site. Mitigation for impacts to western Joshua trees would also provide suitable habitat for loggerhead shrike.

Implementation of MM-BIO-1 (Western Joshua Tree Fee Payment) and MM-BIO-12 (Pre-Construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to loggerhead shrike to less than significant.

LeConte's Thrasher

The BSA supports suitable foraging habitat (desert scrub) and nesting habitat (spiny shrubs and cactus) for LeConte's thrasher.

The project would result in the loss of approximately 18.7 acres of suitable habitat for LeConte's thrasher (i.e., impacts to Joshua tree woodland). These potential direct impacts to LeConte's thrasher habitat are considered significant absent mitigation under CEQA.

To avoid potential impacts to nesting LeConte's thrasher, vegetation removal activities would be conducted outside of the general bird nesting season (February 1 through August 31). If vegetation cannot be removed outside the bird nesting season, a pre-construction nesting bird survey by a qualified biologist is required prior to vegetation removal. This requirement is outlined in MM-BIO-12 (Pre-Construction Nesting Bird Surveys and Avoidance).

As required by MM-BIO-1 (Western Joshua Tree Fee Payment), mitigation for direct impacts to 893 western Joshua trees would be fulfilled through payment of applicable fees consistent with the Western Joshua Tree Conservation Plan or through payment to a CDFW-approved mitigation bank. The fees would contribute to conservation of western Joshua trees, which would also provide habitat for LeConte's thrashers. Thus, mitigation for impacts to western Joshua trees would also mitigate for impacts to loss of suitable habitat for LeConte's thrasher.

Implementation of MM-BIO-1 (Western Joshua Tree Fee Payment) and MM-BIO-12 (Pre-Construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to LeConte's thrasher to less than significant.

Nesting Migratory Birds and Raptors

Similar to most other sites containing trees, shrubs, and other vegetation, the BSA contains opportunities for birds of prey (raptors) and other avian species to nest on site. Native nesting bird species with potential to occur in the BSA are protected by California Fish and Game Code Sections 3503 and 3503.5 and by the federal MBTA (16 USC 703–711). In particular, California Fish and Game Code Section 3503 provides that it is unlawful to take, possess, or needlessly destroy the active nests or eggs of any bird in California; Section 3503.5 protects all raptors and their eggs and active nests; and the MBTA prohibits the take (including killing, capturing, selling, trading, and transport) of native migratory bird species throughout the United States. Currently, California considers any nest that is under construction or modification, or is supporting eggs, nestlings, or juveniles, as "active." Therefore, impacts to nesting migratory birds and raptors would be significant absent mitigation under CEQA.

To ensure compliance with the California Fish and Game Code and MBTA, and to avoid potential impacts to nesting birds, vegetation removal activities will be conducted outside the general bird nesting season (February 1 through August 31, depending on the species), and if vegetation cannot be removed outside the bird nesting season, a pre-construction nesting bird survey by a qualified biologist is required prior to vegetation removal. This requirement is outlined in MM-BIO-12 (Pre-Construction Nesting Bird Surveys and Avoidance). With the incorporation of mitigation, impacts associated with nesting birds, including raptors, would be less than significant.

Implementation of MM-BIO-12 (Pre-Construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to nesting migratory birds and raptors to less than significant.

6.3.1.2.2 Indirect Impacts

Indirect impacts to special-status wildlife species are those that occur during construction to species present near the site but not within the construction zone. These impacts include fugitive dust and trash and debris that can degrade habitat and result in health implications for wildlife species; noise and vibration that can stress wildlife species or cause them to leave an area of otherwise suitable habitat, or that can result in disruption of bird nesting and abandonment of nests; increased human presence, which can also disrupt daily activities of wildlife and cause them to leave an area; nighttime lighting, which can disrupt the activity patterns of nocturnal species, including many mammals and some birds, amphibians, and reptiles; and release of chemical pollutants, such as from oil leaks from construction vehicles and machinery.

The project site could result in significant, indirect impacts to three special-status wildlife species: burrowing owl, loggerhead shrike, and LeConte's thrasher; therefore, these species are further discussed below.

Burrowing Owl

Focused surveys for burrowing owls were not conducted; however, the BSA contains suitable open scrub habitat, and the nearest record of this species occurs 0.5 miles south of the BSA (CDFW 2023c). Additionally, several burrows of suitable size were observed on site during the February 17, 2023, biological reconnaissance survey. Therefore, suitable habitat exists on site, and the species may colonize an area quickly and continue to have a high potential to occur before construction begins. A pre-construction survey is needed to confirm burrowing owl absence prior to construction. Should burrowing owls occur on site, construction (short-term) activities have the potential to result in

indirect impacts to burrowing owls and their habitat. Those impacts could include dust, noise and vibration, trash and debris, increased human presence, vehicle collisions, chemical spills, and nighttime lighting. These potential short-term or temporary indirect impacts to burrowing owls would be significant absent mitigation under CEQA.

Post-construction (long-term) activities have the potential to result in indirect impacts to burrowing owls and their habitat. Long-term impacts that could result from development within or adjacent to burrowing owl habitat include nighttime lighting and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to burrowing owls would be significant absent mitigation under CEQA.

Burrowing owls are considered absent until pre-construction surveys further confirm so, so impacts to burrowing owls associated with the project would be less than significant under CEQA.

MM-BIO-10 (Pre-Construction Surveys for Burrowing Owl and Avoidance) requires pre-construction burrowing owl surveys and would result in establishment of construction buffers around any burrowing owl burrows found, thus limiting effects from most short-term indirect impacts, including noise and vibration, increased human presence, nighttime lighting, and vehicle collisions. MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (Construction Monitoring Notebook) require that all workers complete Worker Environmental Awareness Program (WEAP) training and require ongoing biological monitoring and compliance with all biological resource mitigation. MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented and that repair and cleanup of any hazardous waste occurs. To reduce fugitive dust resulting from project construction and to minimize adverse air quality impacts, the project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which would limit the amount of fugitive dust generated during construction. MM-BIO-13 (Trash and Debris) requires trash and debris to be removed regularly and requires animal-resistant trash receptacles to avoid attracting urban-related predator species. MM-BIO-14 (Lighting) requires nighttime lighting during construction within 50 feet of habitat for special-status species to be shielded downward.

Potential long-term indirect impacts that could result from development within or adjacent to burrowing owl habitat include nighttime lighting and increased invasive plant species that may degrade habitat. MM-BIO-15 (Invasive Plant Management) requires that landscape plants within 200 feet of native vegetation communities not be on the most recent version of the California Invasive Plant Council (Cal-IPC) California Invasive Plant Inventory (Cal-IPC 2006). MM-BIO-14 (Lighting) requires nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward.

Implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-8 (Hazardous Waste), MM-BIO-10 (Pre-Construction Surveys for Burrowing Owl and Avoidance), MM-BIO-13 (Trash and Debris), MM-BIO-14 (Lighting), and MM-BIO-15 (Invasive Plant Management) would reduce potential indirect (short-term and long-term) impacts to burrowing owl to less than significant.

Loggerhead Shrike

Loggerhead shrike was incidentally observed during the during 2023 biological surveys within the BSA, and suitable nesting habitat, particularly western Joshua trees, is present within the BSA. Therefore, construction (short-term) activities have the potential to result in indirect impacts to loggerhead shrike and their habitat. Those impacts could include dust, noise and vibration, increased human presence, vehicle collisions, chemical spills, and nighttime

lighting. These potential short-term or temporary indirect impacts to loggerhead shrike would be significant absent mitigation under CEQA.

Post-construction (long-term) activities have the potential to result in indirect impacts to loggerhead shrike and their habitat. Long-term impacts that could result from development within or adjacent to loggerhead shrike habitat include nighttime lighting and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to loggerhead shrike would be significant absent mitigation under CEQA.

MM-BIO-12 (Pre-Construction Nesting Bird Surveys and Avoidance) requires nesting bird surveys and would result in establishment of construction buffers around nests, thus limiting effects from most short-term indirect impacts, including noise and vibration, increased human presence, nighttime lighting, and vehicle collisions. MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (Construction Monitoring Notebook) require that all workers complete WEAP training and require ongoing biological monitoring and compliance with all biological resource mitigation. MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills be implemented and that repair and cleanup of any hazardous waste occurs. To reduce fugitive dust resulting from construction and to minimize adverse air quality impacts, the project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which would limit the amount of fugitive dust generated during construction. MM-BIO-14 (Lighting) requires nighttime lighting during construction within 50 feet of habitat for special-status species to be shielded downward.

Potential long-term indirect impacts that could result from development within or adjacent to loggerhead shrike habitat include nighttime lighting and increased invasive plant species that may degrade habitat. MM-BIO-15 (Invasive Plant Management) requires that landscape plants within 200 feet of native vegetation communities not be on the most recent version of Cal-IPC's Inventory of Invasive Plants (Cal-IPC 2006). MM-BIO-14 (Lighting) requires nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward.

Implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-8 (Hazardous Waste), MM-BIO-12 (Pre-Construction Nesting Bird Surveys and Avoidance), MM-BIO-14 (Lighting), and MM-BIO-15 (Invasive Plant Management) would reduce potential indirect (short-term and long-term) impacts to loggerhead shrike to less than significant.

LeConte's Thrasher

The BSA supports suitable foraging habitat (desert scrub) and nesting habitat (spiny shrubs and cactus) for LeConte's thrasher; therefore, construction (short-term) activities have the potential to result in indirect impacts to LeConte's thrasher and its habitat. Those impacts could include dust, noise and vibration, increased human presence, vehicle collisions, chemical spills, and nighttime lighting. These potential short-term or temporary indirect impacts to LeConte's thrasher would be significant absent mitigation under CEQA.

Post-construction (long-term) activities have the potential to result in indirect impacts to LeConte's thrashers and their habitat. Long-term impacts that could result from development within or adjacent to LeConte's thrasher habitat include nighttime lighting and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to LeConte's thrasher would be significant absent mitigation under CEQA.

MM-BIO-12 (Pre-Construction Nesting Bird Surveys and Avoidance) requires nesting bird surveys and would result in establishment of construction buffers around nests, thus limiting effects from most short-term indirect impacts, including noise and vibration, increased human presence, nighttime lighting, and vehicle collisions. MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (Construction Monitoring Notebook) require that all workers complete WEAP training and require ongoing biological monitoring and compliance with all biological resource mitigation requirements. MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills be implemented and that repair and cleanup of any hazardous waste occurs. To reduce fugitive dust resulting from construction and to minimize adverse air quality impacts, the project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which would limit the amount of fugitive dust generated during construction. MM-BIO-14 (Lighting) requires nighttime lighting during construction within 50 feet of habitat for special-status species to be shielded downward.

Potential long-term indirect impacts that could result from development within or adjacent to LeConte's thrasher habitat include nighttime lighting and increased invasive plant species that may degrade habitat. MM-BIO-15 (Invasive Plant Management) requires that landscape plants within 200 feet of native vegetation communities not be on the most recent version of Cal-IPC's Inventory of Invasive Plants (Cal-IPC 2006). MM-BIO-14 (Lighting) requires nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward.

Implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-8 (Hazardous Waste), MM-BIO-12 (Pre-Construction Nesting Bird Surveys and Avoidance), MM-BIO-14 (Lighting), and MM-BIO-15 (Invasive Plant Management) would reduce potential indirect (short-term and long-term) impacts to LeConte's thrasher to less than significant.

Nesting Migratory Birds and Raptors

Construction activities have the potential to result in indirect impacts to nesting migratory birds and raptors and their habitats. Those impacts could include the loss of a nest through increased dust, noise and vibration, increased human presence, and nighttime lighting. These potential short-term or temporary indirect impacts to these species would be significant absent mitigation under CEQA.

To ensure compliance with the California Fish and Game Code and MBTA and to avoid potential indirect impacts to nesting birds, vegetation removal activities would be conducted outside of the general bird nesting season (February 1 through August 31, depending on the species), and if vegetation cannot be removed outside the bird nesting season, a pre-construction nesting bird survey (MM-BIO-12) by a qualified biologist would be required prior to vegetation removal. Nighttime lighting, an indirect impact, would be offset through implementation of MM-BIO-14 (Lighting), which requires nighttime lighting during construction within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (Construction Monitoring Notebook) require that all workers complete WEAP training and require ongoing biological monitoring and compliance with all biological resource mitigation requirements. To reduce fugitive dust resulting from project construction and to minimize adverse air quality impacts, the project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which would limit the amount of fugitive dust generated during construction.

Implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-12 (Pre-Construction Nesting Bird Surveys and Avoidance), and MM-BIO-14 (Lighting) would reduce potential indirect (short-term and long-term) impacts to nesting migratory birds and raptors to less than significant.

6.3.2 Impact BIO-2: Sensitive Vegetation Communities

6.3.2.1 Direct Impacts

The project site contains Joshua tree woodland, a sensitive vegetation community under CEQA with a CDFW ranking of S3. A total of 18.7 acres would be directly impacted from the project (Figure 6). As stated in Section 5.1, Vegetation Communities and Land Covers, and Section 6.3, Impacts Analysis, CDFW state rankings of 1, 2, and 3 are considered high priority for inventory or special status, and impacts to these communities typically require mitigation. Joshua tree woodland is considered a sensitive biological resource by CDFW under CEQA; therefore, impacts to 18.7 acres (i.e., permanent impacts to 18.5 acres and temporary impacts to 0.2 acres) would be a significant impact under CEQA absent mitigation.

Impacts to sensitive vegetation communities would be mitigated through the preservation of comparable habitat. As required by MM-BIO-1 (Western Joshua Tree Fee Payment), mitigation for direct impacts to 848 western Joshua trees would be mitigated through payment of fees under the Western Joshua Tree Conservation Act, California Fish and Game Code Section 1927.3. Under the Western Joshua Tree Conservation Act, all in-lieu fees collected will be deposited into the Western Joshua Tree Conservation Fund for appropriation to CDFW solely for the purposes of acquiring, conserving, and managing western Joshua tree conservation lands and completing other activities to conserve western Joshua tree. Conservation efforts for western Joshua trees would focus on the conservation of large, interconnected Joshua tree woodlands on lands where edge effects are limited, versus lands in urban settings that are subject to habitat fragmentation and edge effects, such as the project site. Mitigation for impacts to western Joshua trees would also mitigate for impacts to 18.7 acres of Joshua tree woodland. Therefore, implementation of MM-BIO-1 (Western Joshua Tree Fee Payment) would reduce potential direct impacts to sensitive vegetation communities (i.e., Joshua tree woodland) to less than significant.

Additionally, the BSA contains 0.9 acres of desert almond–Mexican bladdersage scrub. Although the overall desert almond–Mexican bladdersage scrub alliance is ranked as an S4 alliance, more data is needed to assess the rank of the associations within this alliance. As such, all associations within this alliance are currently considered sensitive by CDFW under CEQA. However, this community occurs entirely in the 100-foot buffer north of Phelan Road and will not be directly impacted by project implementation.

Implementation of MM-BIO-1 (Western Joshua Tree Fee Payment) would reduce potential direct impacts to sensitive vegetation communities (i.e., Joshua tree woodland) to less than significant.

6.3.2.2 Indirect Impacts

The BSA contains 6.3 acres of Joshua tree woodland and 0.9 acres of desert almond–Mexican bladdersage scrub within the 100-foot buffer of the project site, as stated in Section 5.1 and Table 2 of this report. Therefore, implementation of the project may result in indirect impacts to these sensitive vegetation communities.

Construction-related indirect impacts may include inadvertent spillover impacts outside of the construction footprint, dust accumulation on Joshua tree woodland, chemical spills, stormwater erosion and sedimentation, and increased wildfire risk. Potential long-term (post-construction) indirect impacts from operation and maintenance activities may include effects of herbicides, changes in water quality, increased wildfire risk, increased demand on the surrounding area, increased traffic and vehicle emissions, and accidental chemical spills. Indirect impacts to Joshua tree woodland are considered significant absent mitigation.

Implementation of MM-BIO-3 (Designated Biologist Authority) gives the project's designated biologist the authority to stop work if construction is not compliant with this CEQA document. MM-BIO-4 (Compliance Monitoring) requires that an experienced biologist oversee compliance with the protective measures, including limiting impacts to the project impact footprint. MM-BIO-5 (Education Program) would provide construction personnel with training related to sensitive vegetation communities that occur adjacent to the impact footprint. MM-BIO-6 (Construction Monitoring Notebook) provides for documentation that the education program was administered to applicable personnel. MM-BIO-7 (Delineation of Property Boundaries) requires that impacts occur within the fenced, staked, or flagged area that is clearly delineated within the project impact footprint. Thus, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook) and MM-BIO-7 (Delineation of Property Boundaries) would enable the project to avoid and minimize inadvertent spillover impacts outside of the approved impact footprint.

To reduce fugitive dust resulting from project construction and to minimize adverse air quality impacts, the project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which would limit the amount of fugitive dust generated during construction.

MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented and that repair and cleanup of any hazardous waste occurs. Thus, implementation of MM-BIO-8 (Hazardous Waste) would help to avoid and minimize indirect impacts to sensitive vegetation communities that could occur adjacent to the impact footprint from any construction-related chemical spills.

A SWPPP would be prepared and implemented to prevent all construction pollutants from contacting stormwater during construction activities, with the intent of keeping sediment and any other pollutants from moving off site and into receiving waters. BMP categories employed on site would include erosion control, sediment control, and non-stormwater good housekeeping. Preparation and implementation of a SWPPP would help to avoid and minimize the potential effects of stormwater erosion during construction.

Construction of the project would introduce potential ignition sources to the project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. However, the project would be required to comply with City and state requirements for fire safety practices to reduce the possibility of fires during construction activities. Further, vegetation would be removed from the site prior to the start of construction. Adherence to City and state regulatory standards during project construction would reduce the risk of wildfire ignition and spread during construction activities. Therefore, short-term construction impacts involving wildland fires would not be substantial.

MM-BIO-9 (Herbicides) would limit herbicide use to instances where hand or mechanical efforts are infeasible and would only be applied when wind speeds are less than 7 miles per hour to prevent drift into off-site adjacent areas that may potentially contain sensitive vegetation communities.

Implementation of low-impact-development features and BMPs would, to the maximum extent practicable, reduce the discharge of pollutants into receiving waters, including inadvertent release of pollutants (e.g., hydraulic fluids and petroleum), the improper management of hazardous materials, the release of trash and debris, and the improper management of portable restroom facilities (e.g., regular service) in accordance with all relevant local and state development standards. In addition, in accordance with California Green Building Standards requirements (CCR Title 24, Part 11), project source controls to improve water quality would be provided for outdoor material storage areas, outdoor trash storage/waste-handling areas, and outdoor loading/unloading areas. Therefore, impacts to the Joshua tree woodland occurring adjacent to the impact footprint due to changes in water quality would be avoided and minimized through implementation of low-impact-development features and BMPs.

Upon completion of project construction, with adherence to the Hesperia Municipal Code and because of the low ignitability of the proposed structures and implementation of fire-resistant and irrigated landscaping, the project would not facilitate wildfire spread or exacerbate wildfire risk. Further, given that surrounding off-site fuels consist of moderately spaced vegetation, wildfires in the immediate surrounding area are not common, and it is unlikely that the project site would be exposed to the uncontrolled spread of a wildfire. It is not anticipated that the project, due to slope, prevailing winds, and other factors, would exacerbate wildfire risks or the uncontrolled spread of a wildfire; thus, with adherence to the Hesperia Municipal Code, long-term indirect impacts to Joshua tree woodland occurring adjacent to the impact footprint associated with increased wildlife risk is not expected to occur.

Implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-7 (Delineation of Property Boundaries), MM-BIO-8 (Hazardous Waste), and MM-BIO-9 (Herbicides) would reduce potential indirect impacts to sensitive vegetation communities that occur adjacent to the impact footprint to less than significant.

6.3.3 Impact BIO-3: State or Federally Protected Wetlands

No state or federal wetlands or waters are present in the BSA as further discussed in Section 5.3.5 of this report. Therefore, no impacts to jurisdictional wetlands or waters would occur.

6.3.3.1 Indirect Impacts

The Oro Grande Wash occurs approximately 500 feet southeast of the BSA. Absent mitigation, project implementation may have indirect impacts on this jurisdictional aquatic resource.

Construction-related (short-term) indirect impacts may include inadvertent spillover impacts outside of the construction footprint, chemical spills, and stormwater erosion and sedimentation. These potential short-term or temporary indirect impacts to jurisdictional aquatic resources that lie outside of the project footprint (i.e., the Oro Grande Wash southeast of the project site) would be significant absent mitigation under CEQA.

Post-construction (long-term) indirect impacts from operations and maintenance activities may include effects of herbicides, changes in water quality, and accidental chemical spills. These potential long-term indirect impacts to jurisdictional aquatic resources outside of the project footprint would be significant absent mitigation under CEQA.

Potential short-term indirect impacts would be significant absent mitigation. Implementation of MM-BIO-3 (Designated Biologist Authority) gives the project's designated biologist the authority to stop work if construction is not compliant with this CEQA document. MM-BIO-4 (Compliance Monitoring) requires that an experienced biologist

oversee compliance with the protective measures, including limiting impacts within the project footprint. MM-BIO-5 (Education Program) would provide construction personnel with training related to waters of the state that are present on and adjacent to the impact footprint. MM-BIO-6 (Construction Monitoring Notebook) provides for documentation that the education program was administered to applicable personnel. MM-BIO-7 (Delineation of Property Boundaries) requires that impacts occur within the fenced, staked, or flagged area that is clearly delineated within the project impact footprint. The construction crew would be responsible for unauthorized impacts from construction activities to waters of the state that are outside the permitted project footprint, if applicable. Thus, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook) and MM-BIO-7 (Delineation of Property Boundaries)would enable the project to avoid and minimize inadvertent spillover impacts outside of the approved impact footprint.

MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented and that repair and cleanup of any hazardous waste occurs. Thus, implementation of MM-BIO-8 (Hazardous Waste) would help to avoid and minimize impacts to waters of the state from any construction-related chemical spills.

A SWPPP would be prepared and implemented to prevent construction pollutants from contacting stormwater during construction activities, with the intent of keeping sediment and any other pollutants from moving off site and into receiving waters. BMP categories employed on site would include erosion control, sediment control, and non-stormwater good housekeeping. Preparation and implementation of a SWPPP would help to avoid and minimize the potential effects of stormwater erosion during construction.

Potential long-term (post-construction) indirect impacts from operations and maintenance activities may include changes in water quality and accidental chemical spills. Implementation of low-impact-development features and BMPs would, to the maximum extent practicable, reduce the discharge of pollutants into receiving waters, including inadvertent release of pollutants (e.g., hydraulic fluids and petroleum); the improper management of hazardous materials; trash and debris; and the improper management of portable restroom facilities (e.g., regular service) in accordance with all relevant local and state development standards. In addition, in accordance with California Green Building Standards requirements (CCR Title 24, Part 11), project source controls to improve water quality would be provided for outdoor material storage areas, outdoor trash storage/waste-handling areas, and outdoor loading/unloading areas. Therefore, impacts to jurisdictional aquatic resources due to changes in water quality would be avoided and minimized through implementation of low-impact-development features and BMPs.

MM-BIO-8 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented and that repair and cleanup of any hazardous waste occurs. Thus, implementation of MM-BIO-8 (Hazardous Waste) would help to avoid and minimize impacts to jurisdictional aquatic resources from any operations-related chemical spills.

MM-BIO-9 (Herbicides) would limit herbicide use to instances where hand or mechanical efforts are infeasible and would only be applied when wind speeds are less than 7 miles per hour to prevent drift into off-site adjacent areas that may potentially contain jurisdictional aquatic resources.

As discussed above, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-7 (Delineation of Property Boundaries), MM-BIO-8 (Hazardous Waste), and MM-BIO-9 (Hazardous Waste) would reduce potential indirect (short-term and long-term) impacts to jurisdictional aquatic resources to less than significant.

6.3.4 Impact BIO-4: Wildlife Corridors and Habitat Linkages

6.3.4.1 Direct Impacts

No significant direct permanent impacts would occur to wildlife movement or use of native wildlife nursery sites associated with project activities. Existing nearby habitat linkages and wildlife corridor functions would remain intact while construction activities are conducted and following project completion. Wildlife movement may be temporarily disrupted during the construction phase of the project, although this effect would be both localized and short term. Nearby corridors that could support wildlife movement in the region, such as the Oro Grande Wash, which is approximately 500 feet southeast of the BSA, and the Mojave River, which is approximately 9 miles east of the BSA, would not be directly impacted by the project. Further, the project site does not contain nursery sites, such as bat colony roosting sites or colonial bird nesting areas. Therefore, impacts associated with wildlife movement, wildlife corridors, and wildlife nursery sites would be less than significant under CEQA.

6.3.4.2 Indirect Impacts

Construction-related short-term noise and work in the vicinity would be temporary and would not be expected to significantly disrupt wildlife movement due to ambient noise conditions or to disrupt the ability of wildlife to continue to move around the construction area and upland portions of the BSA during and after construction. Temporary disturbance to local species may occur but would not substantially degrade the quality or use of the vegetation communities in the vicinity. Work activities are not currently proposed during night hours. Therefore, implementation of the project would not result in significant short-term indirect impacts to wildlife corridors or migratory routes.

Potential long-term (post-construction) indirect impacts from operations and maintenance activities could disrupt wildlife movement around the project site due to increased lighting from buildings. MM-BIO-14 (Lighting) would ensure that all lighting during operations and occurring within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife be directed away from natural areas.

Implementation of MM-BIO-14 (Lighting) would reduce potential indirect impacts to wildlife movement to less than significant.

6.3.5 Impact BIO-5: Associated with Local Policies and Ordinances

6.3.5.1 California Desert Native Plants and Western Joshua Tree

A total of 972 western Joshua tree individuals were observed within the Joshua tree inventory survey area (project site, off-site improvement area, and a 50-foot buffer) (Figure 5). Of the 972 trees within the Joshua tree inventory survey area, 848 western Joshua tree individuals are within the project site and would be directly impacted by project implementation (Figure 6). In addition to western Joshua trees, one desert native plant, chaparral yucca, was observed within the BSA. Only one chaparral yucca would be directly removed by project activities (Figure 6). Therefore, because the focused desert native plant survey was positive for western Joshua tree and chaparral yucca, and in accordance with the CDNPA and Hesperia Municipal Code Chapter 16.24, a native plant removal permit must be obtained from the City prior to the removal of these individuals.

Pursuant to MM-BIO-2 (Removal Permit for Desert Native Plants), the project applicant will submit an application and applicable fee paid to the City for removal of protected native desert plants under Hesperia Municipal Code Chapter 16.24. The application will include certification from a qualified Joshua tree and native desert plant expert that proposed removal of protected native desert plants are appropriate, supportive of a healthy environment, and in compliance with the Hesperia Municipal Code.

Pursuant to MM-BIO-1 (Western Joshua Tree Fee Payment), mitigation for direct impacts to 848 western Joshua trees would be fulfilled through payment of fees consistent with the Western Joshua Tree Conservation Plan or through payment to a CDFW-approved mitigation bank. Conservation efforts for western Joshua trees would focus on the conservation of large, interconnected Joshua tree woodlands on lands where edge effects are limited, versus lands in urban settings that are subject to habitat fragmentation and edge effects, such as the project site.

Per direction from the City, compliance with state policy (consisting of the Western Joshua Tree Conservation Act) and procurement of a native plant removal permit from the City would meet the requirements of Hesperia Municipal Code Chapter 16.24 to protect, preserve, and mitigate impacts to desert native plants, including western Joshua trees.

The project would result in significant impacts to native desert plants and western Joshua trees protected by state and local plant and tree preservation regulations, absent mitigation. Implementation of MM-BIO-1 (Western Joshua Tree Fee Payment) and MM-BIO-2 (Removal Permit for Desert Native Plants) would reduce potential impacts to California desert native plants and western Joshua tree to less than significant.

6.3.6 Impact BIO-6: Habitat Conservation Plans

The project site is within the California Desert Conservation Area Plan area (BLM 1980). The project is also within the Draft West Mojave Plan area (BLM 2005) and the Desert Renewable Energy Conservation Plan area (BLM 2016). The West Mojave Plan and Desert Renewable Energy Conservation Plan are amendments to the California Desert Conservation Area Plan. The U.S. Bureau of Land Management issued a Record of Decision for the West Mojave Plan in 2006, although the West Mojave Plan has not been formally adopted. The project would not conflict with the conservation criteria associated with the California Desert Conservation Area Plan or Desert Renewable Energy Conservation Plan. Therefore, the project would not conflict with the conservation criteria associated with the California Desert Conservation Area Plan or Desert Renewable Energy Conservation Plan. Therefore, the project would not be in conflict with any habitat conservation plans

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7 Mitigation

MM-BIO-1 Western Joshua Tree Fee Payment. Mitigation for direct impacts to 848 western Joshua tree (*Yucca brevifolia*) individuals and indirect impacts to 73 western Joshua tree individuals shall be fulfilled through payment of the elected fees as described in Section 1927.3 of the Western Joshua Tree Conservation Act. In conformance with the fee schedule, mitigation shall consist of payment of $2,500 for each western Joshua tree 5 meters or greater in height, $500 for each tree 1 meter or greater but less than 5 meters in height, and $340 for each western Joshua tree less than 1 meter in height. The California Department of Fish and Wildlife (CDFW) shall determine the final fee and may charge fees for indirect impacts to western Joshua trees. Alternatively, mitigation shall occur through off-site conservation or through a CDFW-approved mitigation bank, or as required by a Section 2081 Incidental Take Permit, if received.

Other local regulations (i.e., Hesperia Municipal Code Chapter 16.24 and San Bernardino County Development Code Chapter 88.01) also require permitting or notification prior to removal of western Joshua trees. Therefore, the project must submit an application to the City of Hesperia prior to the removal or relocation of western Joshua trees in accordance with the City of Hesperia 2009 Protected Plant Policy. Additionally, the project applicant shall submit an application for a Tree or Plant Removal Permit for all western Joshua trees to be removed in compliance with San Bernardino County Development Code Chapter 88.01.050 prior to the issuance of grading permits.

MM-BIO-2 Removal Permit for Desert Native Plants. Prior to the issuance of grading permits, the project applicant shall submit an application and applicable fee paid to the City of Hesperia for removal of protected native desert plants under Hesperia Municipal Code Chapter 16.24 and shall schedule a pre-construction site inspection with the Planning Division and the Building Division. The application shall include certification from a qualified western Joshua tree (*Yucca brevifolia*) and native desert plant expert to show that proposed removal or relocation of protected native desert plants are appropriate, supportive of a healthy environment, and in compliance with the Hesperia Municipal Code. Protected plants subject to Hesperia Municipal Code Chapter 16.24 may be relocated on site and incorporated into the on-site landscaping or within a designated storage area for plants to be adopted later.

Per direction from the City of Hesperia, compliance with state policy (i.e., the Western Joshua Tree Conservation Act) and procurement of a native plant removal permit from the City of Hesperia would meet the requirements of Hesperia Municipal Code Chapter 16.24 to protect, preserve, and mitigate impacts to desert native plants, including western Joshua trees.

MM-BIO-3 Designated Biologist Authority. The designated biologist shall have authority to immediately stop any activity that does not comply with the biological resources mitigation measures and/or to order any reasonable measure to avoid the unauthorized take of an individual western Joshua tree (*Yucca brevifolia*).

MM-BIO-4 Compliance Monitoring. The designated biologist shall be on site daily when impacts occur. The designated biologist shall conduct compliance inspections to minimize incidental take of western Joshua trees (*Yucca brevifolia*) and impacts to other sensitive biological resources; prevent

unlawful take of western Joshua trees; and ensure that signs, stakes, and fencing are intact and that impacts are only occurring within the permitted impact footprint. Weekly written observation and inspection records that summarize oversight activities, compliance inspections, and monitoring activities required by the Incidental Take Permit shall be prepared.

MM-BIO-5 Education Program. An education program (Worker Environmental Awareness Program [WEAP]) for all persons employed or otherwise working in the project area shall be administered before performing impacts. The WEAP shall consist of a presentation from the designated biologist that includes a discussion of the biology and status of western Joshua trees (*Yucca brevifolia*), burrowing owls (*Athene cunicularia*), loggerhead shrikes (*Lanius ludovicianus*), and other biological resource mitigation measures described in the California Environmental Quality Act document. Interpretation for non-English-speaking workers shall be provided, and the same instruction shall be provided to all new workers before they are authorized to perform work in the project area. Upon completion of the WEAP, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees who will be conducting work in the project area.

MM-BIO-6 Construction Monitoring Notebook. The designated biologist shall maintain a construction monitoring notebook on site throughout the construction period that shall include a copy of the biological resources mitigation measures with attachments and a list of signatures of all personnel who have successfully completed the education program. The permittee shall ensure that a copy of the construction monitoring notebook is available for review at the project site upon request by the California Department of Fish and Wildlife.

MM-BIO-7 Delineation of Property Boundaries. Before beginning activities that would cause impacts, the contractor shall, in consultation with the designated biologist, clearly delineate the boundaries with fencing, stakes, or flags, consistent with the grading plan, within which project impacts will take place. All impacts outside the fenced, staked, or flagged areas shall be avoided, and all fencing, stakes, and flags shall be maintained until the completion of impacts in that area.

MM-BIO-8 Hazardous Waste. The applicant shall immediately stop work and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and cleanup by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so.

MM-BIO-9 Herbicides. The applicant shall limit herbicide use for invasive plant species and shall use herbicides only if it has been determined that hand or mechanical efforts are infeasible. To prevent drift, the permittee shall apply herbicides only when wind speeds are less than 7 miles per hour. All herbicide application shall be performed by a licensed applicator and in accordance with all applicable federal, state, and local laws and regulations.

MM-BIO-10 Pre-Construction Surveys for Burrowing Owl and Avoidance. One pre-construction burrowing owl survey shall be completed no more than 14 days before initiation of site preparation or grading activities and a second survey shall be completed within 24 hours of the start of site preparation or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the project site shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the Staff Report on Burrowing Owl

Mitigation (prepared by the California Department of Fish and Game [now California Department of Fish and Wildlife; CDFW]) in 2012 or current version.

If burrowing owls are detected, and if impacts to burrowing owl cannot be feasibly avoided, the project applicant will consult with California Department of Fish and Wildlife (CDFW) and obtain appropriate take authorization from the CDFW through the California Endangered Species Act (CESA) Incidental Take Permit process.

In the event an Incidental Take Permit is needed, mitigation for direct impacts to burrowing owl shall be fulfilled through compensatory mitigation at a minimum 1:1 habitat replacement of equal or better functions and values to those impacted by the project, or as otherwise determined through the Incidental Take Permit process. Mitigation shall be accomplished either through off-site conservation or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank, and lands are conserved separately, a cost estimate shall be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source shall be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount shall be established following the completion of a project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record shall take into account all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

MM-BIO-11 Restoration of Temporary Impacts. Site construction areas subjected to temporary ground disturbance from the off-site improvement areas shall be recontoured to natural grade (if the grade was modified during the temporary disturbance activity). The project does not include revegetation or restoration of temporary impacts after project completion. However, natural vegetation will be allowed to regenerate in temporarily disturbed areas. Furthermore, if topsoil is removed during construction, the segregated topsoil will be replaced, and the native seed will be allowed to regenerate naturally. This measure does not apply to areas that are urban/developed that are temporarily impacted and will be returned to an urban/developed land use.

MM-BIO-12 Pre-Construction Nesting Bird Surveys and Avoidance. Construction activities shall avoid the migratory bird nesting season (typically February 1 through August 31) to reduce any potential significant impact to birds that may be nesting in the biological survey area. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the project site and within 500 feet of all impact areas must be conducted to determine the presence/absence of protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans, along with an appropriate buffer established around the nest, which shall be determined by the biologist based on the species' sensitivity to disturbance (typically 300 feet for passerines and 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing. On-site construction monitoring shall be conducted when construction

occurs in close proximity to an active nest buffer. No project activities shall encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until is determined that the nestlings have fledged and the nest is no longer active.

MM-BIO-13 Trash and Debris. The following avoidance and minimization measures shall be implemented during project construction:

- Fully covered trash receptacles that are animal-proof shall be installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash contained within the receptacles shall be removed at least once a week from the project site.
- Construction work areas shall be kept clean of debris, such as cable, trash, and construction materials. All construction/contractor personnel shall collect all litter, vehicle fluids, and food waste from the project site on a daily basis.

MM-BIO-14 Lighting. Lighting for construction activities and operations within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife shall be directed away from natural areas.

MM-BIO-15 Invasive Plant Management. To reduce the spread of invasive plant species, landscape plants within 200 feet of native vegetation communities shall not be on the most recent version of the California Invasive Plant Council's Inventory of Invasive Plants (http://www.cal-ipc.org/ip/inventory/index.php). Post-construction, the project applicant shall continually remove invasive plant species on site by hand or mechanical methods, as feasible.

8 Level of Significance After Mitigation

All direct and indirect impacts to sensitive and special-status biological resources that would result from implementation of the proposed project would be either less than significant or less than significant after mitigation.

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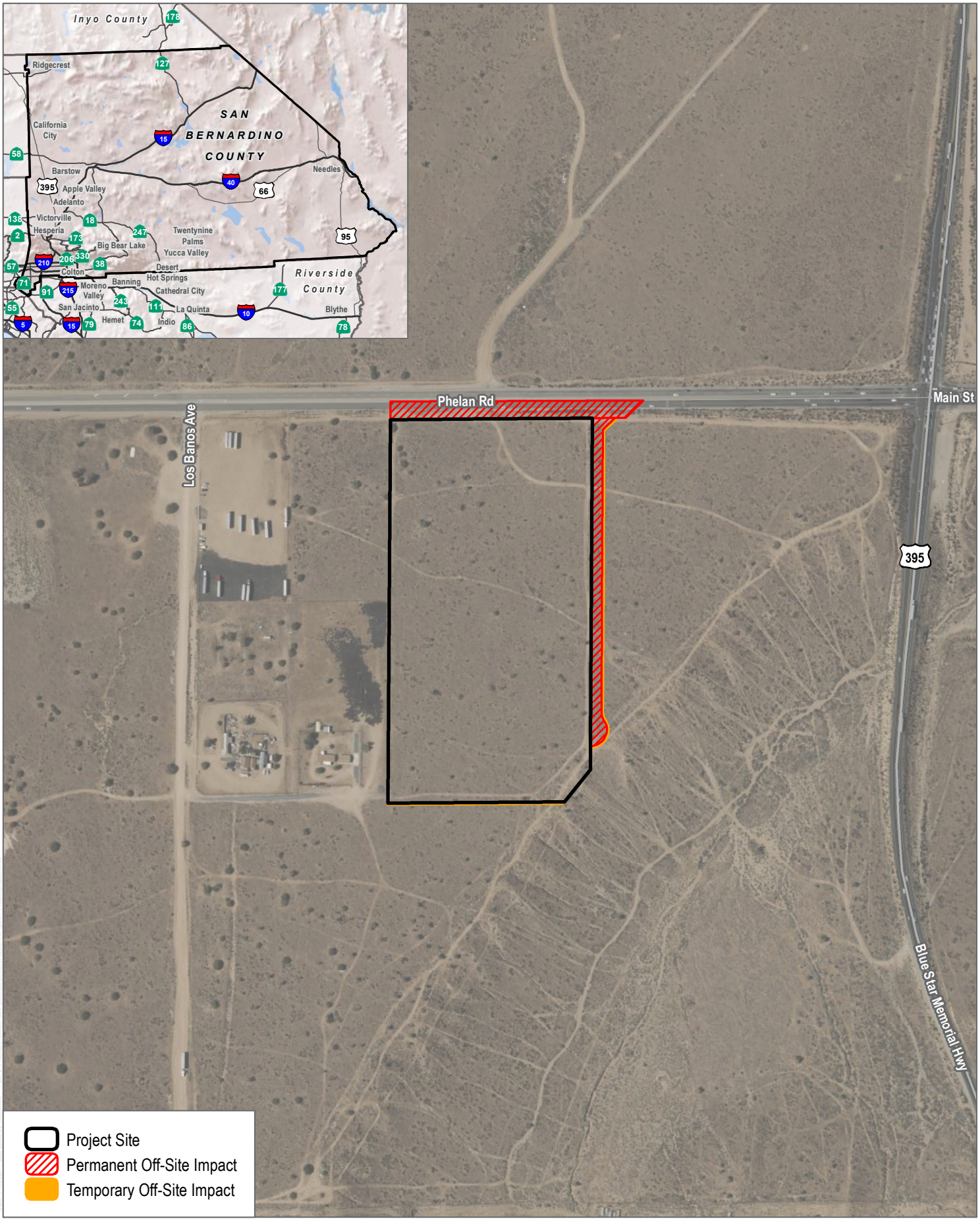
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SOURCE: Bing Imagery 2022

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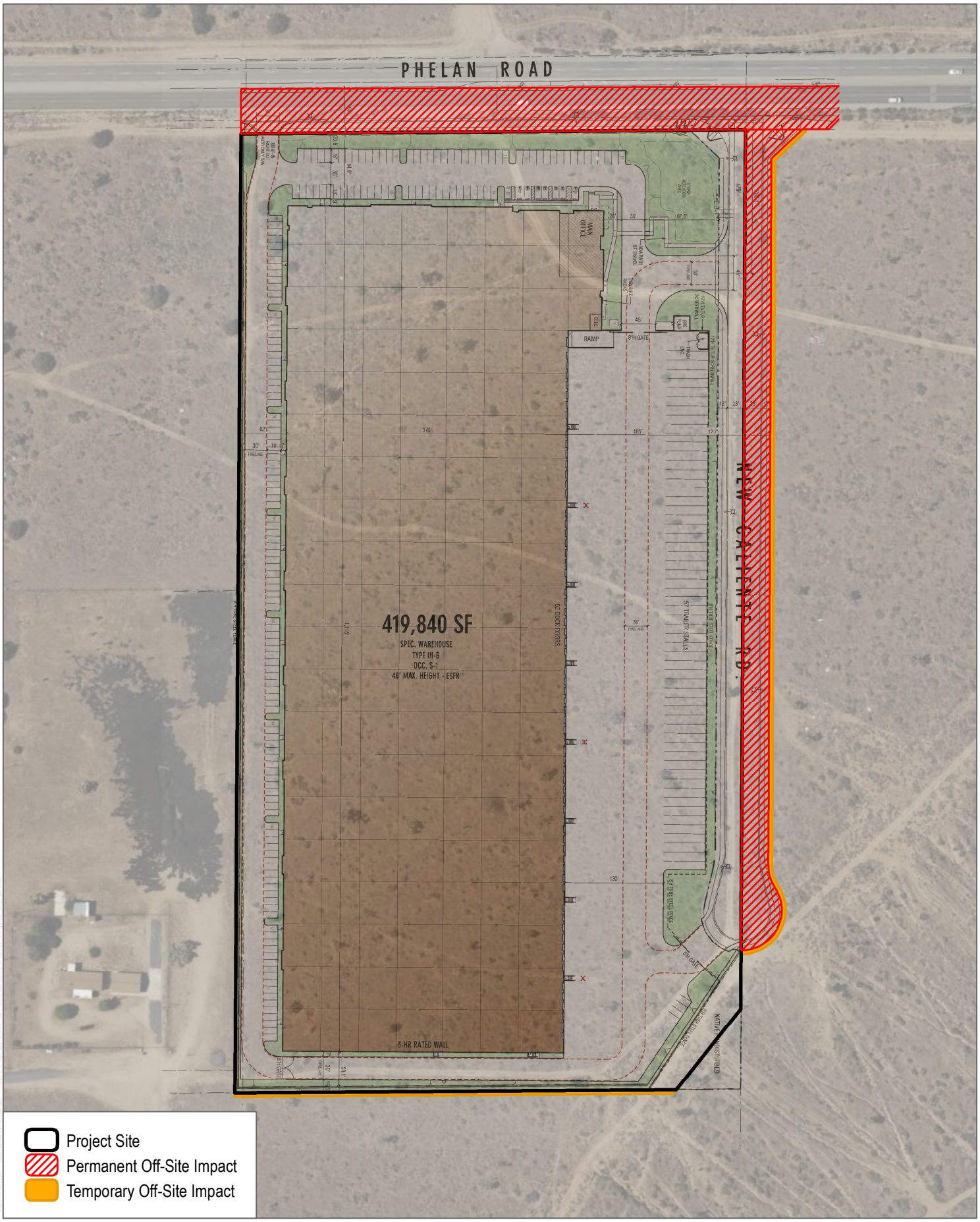
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FIGURE 1

Project Location

Phelan 20 Project

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SOURCE: Bing Imagery 2022

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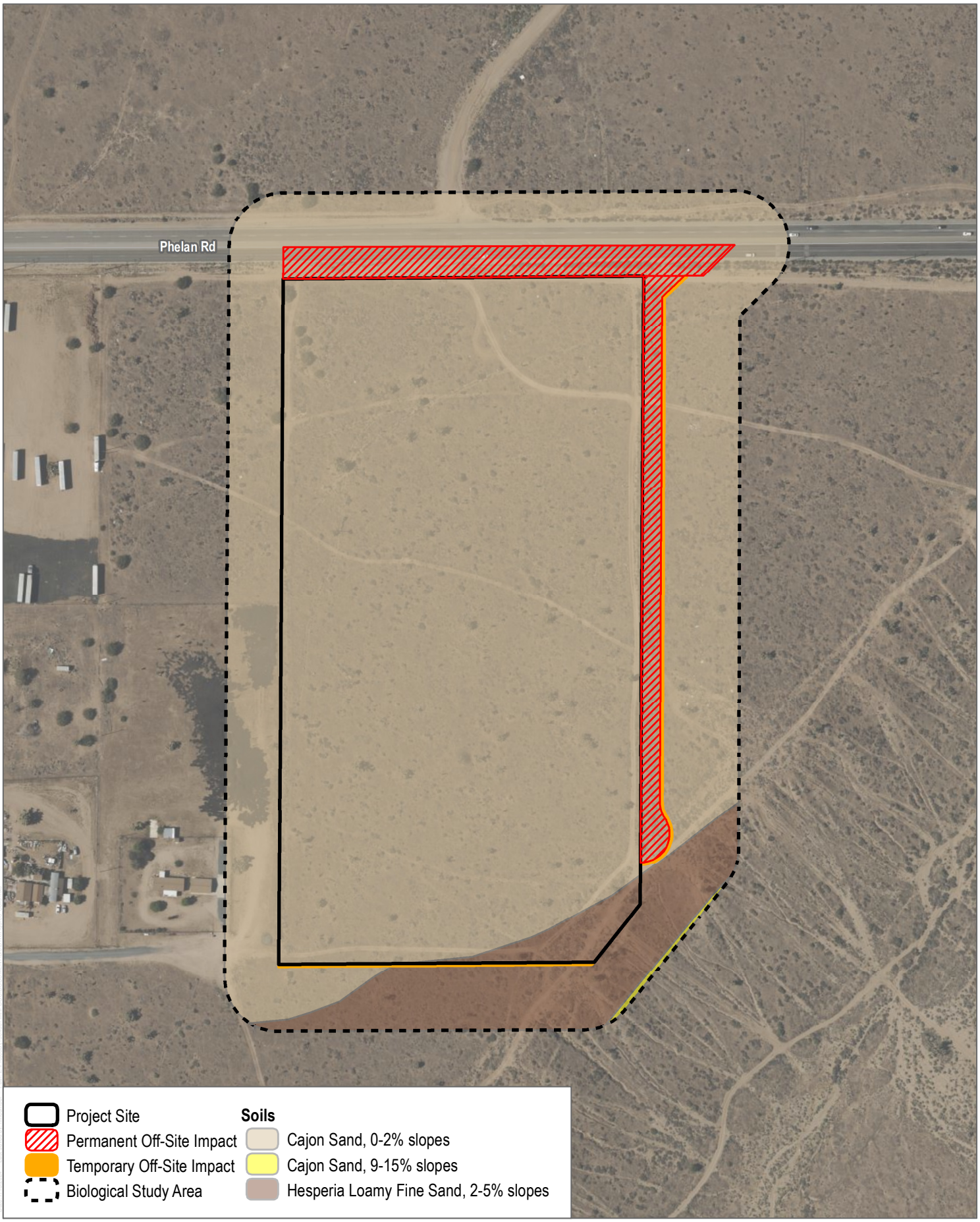
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FIGURE 2

Site Plan

Phelan 20 Project

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SOURCE: Bing Imagery 2022, USDA Soils

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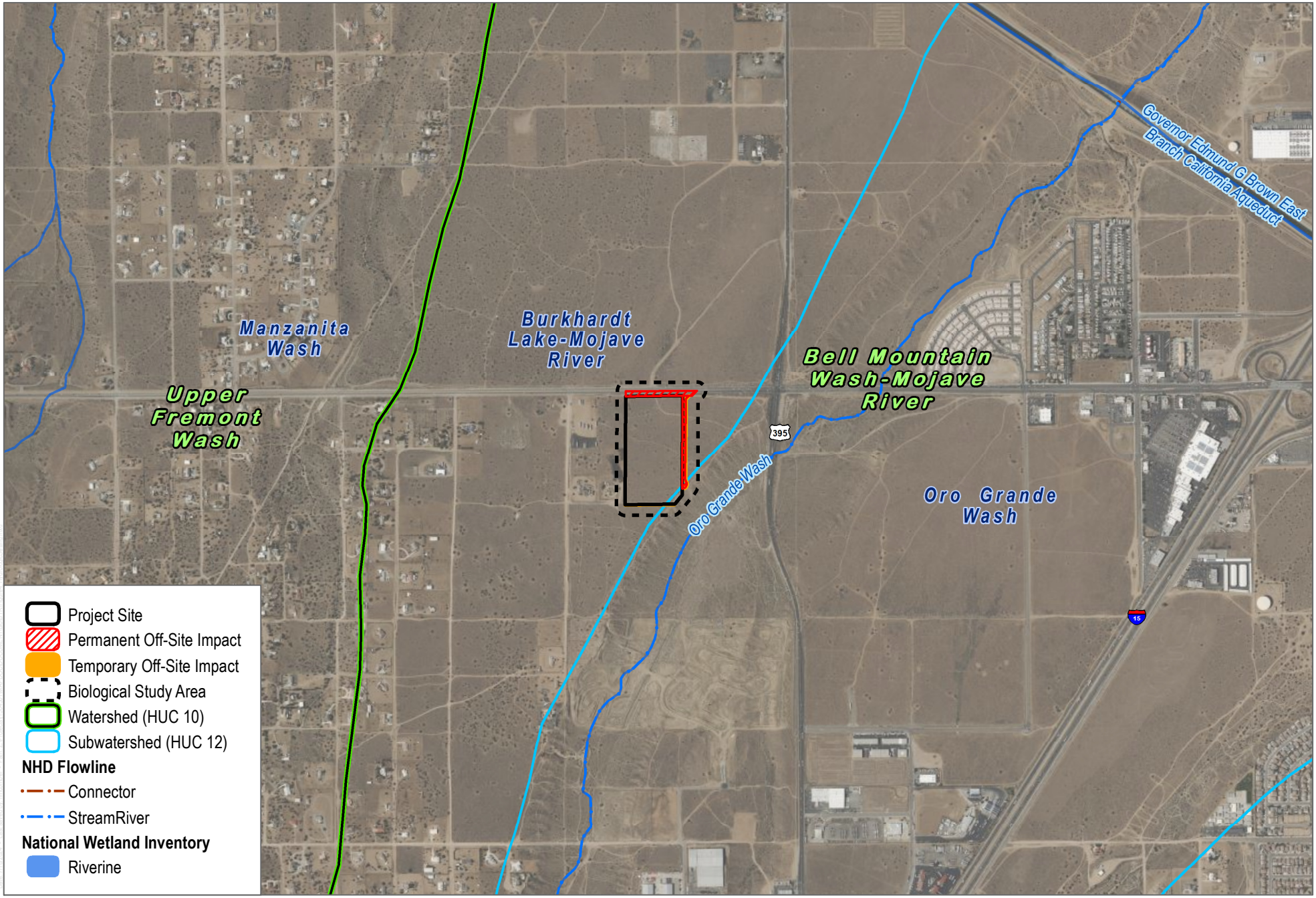
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FIGURE 3

Soils

Phelan 20 Project

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SOURCE: Bing Imagery 2022, USFWS 2019, USGS 2019

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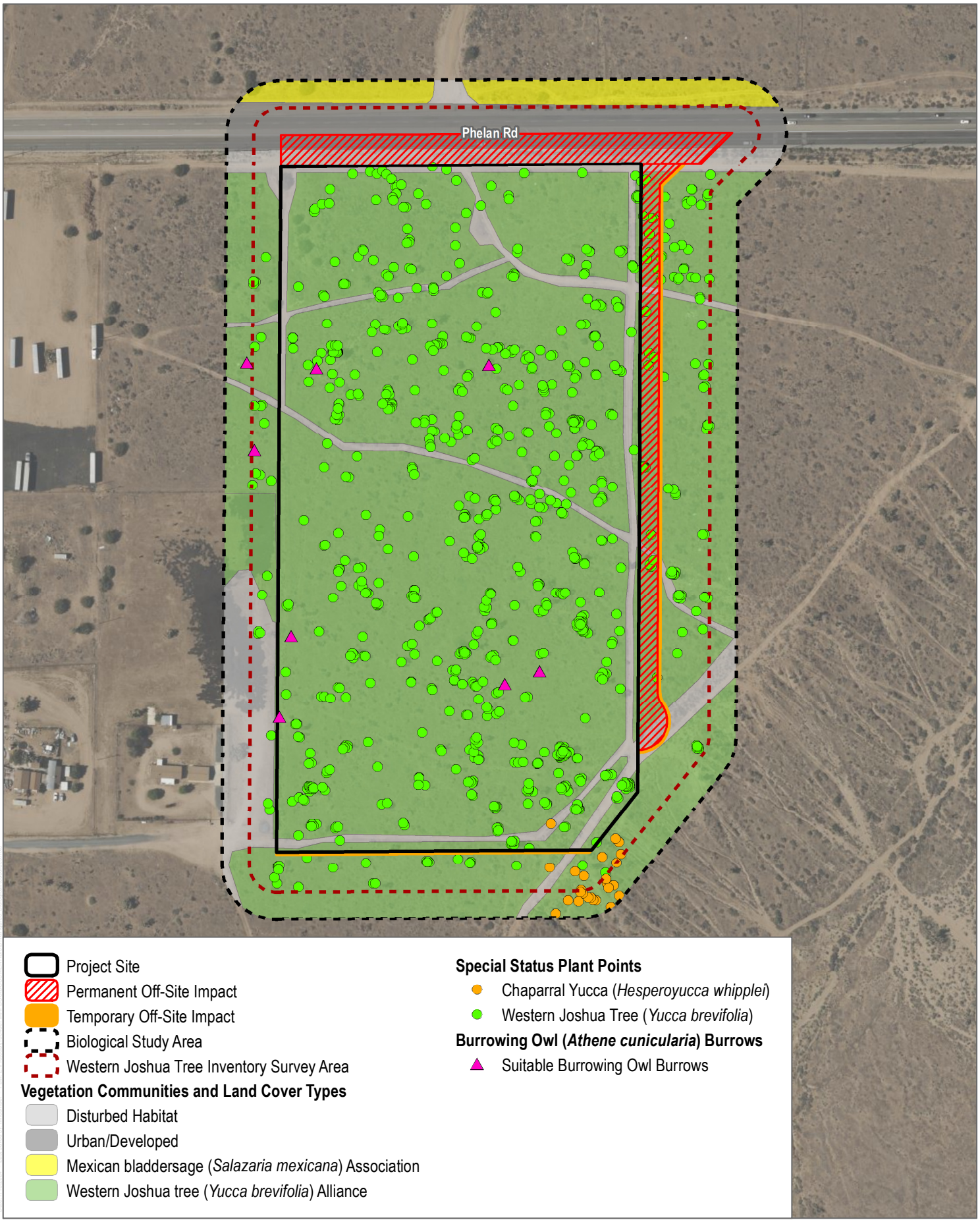
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FIGURE 4

Hydrologic Setting

Phelan 20 Project

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SOURCE: Bing Imagery 2022

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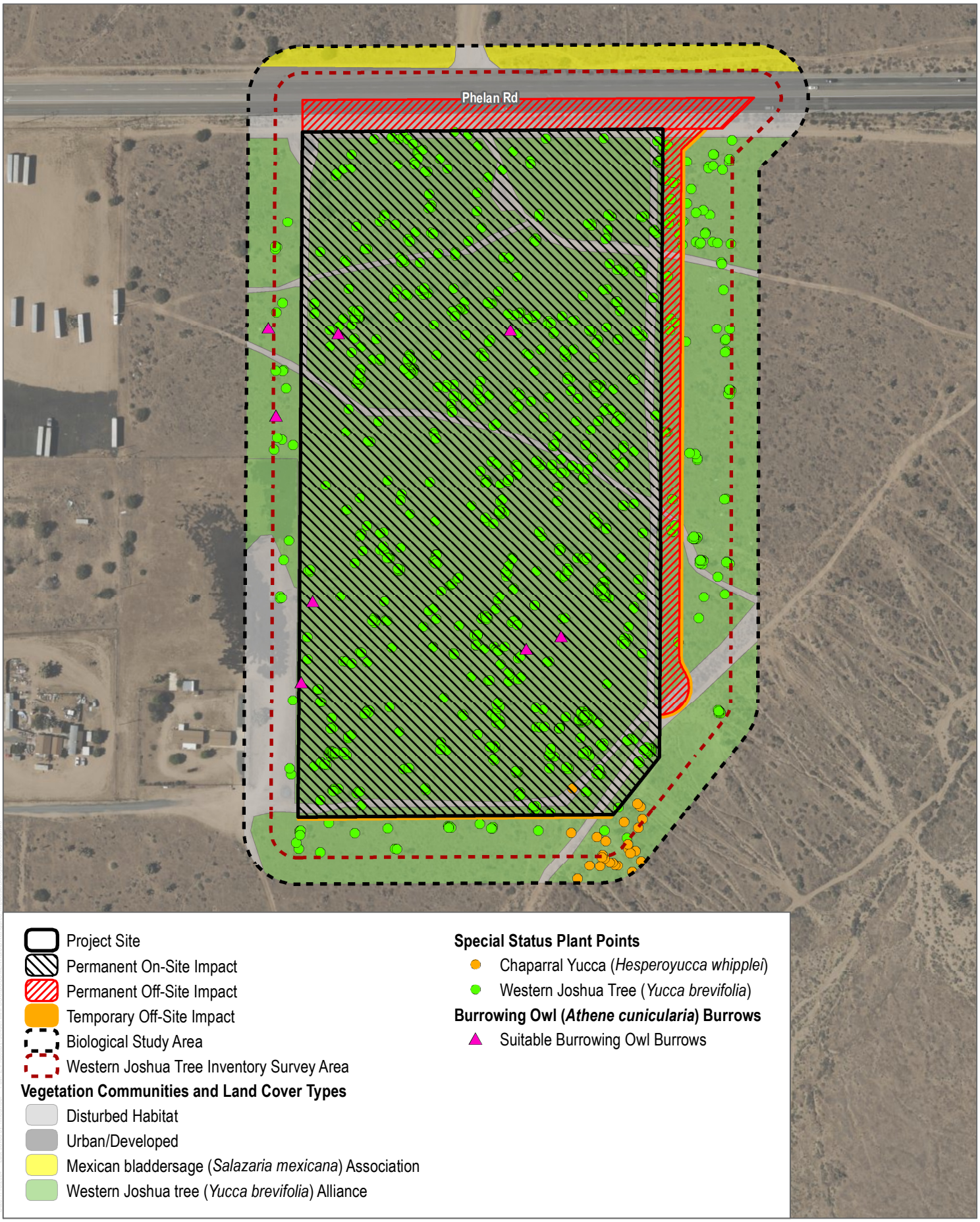
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FIGURE 5

Biological Resources

Phelan 20 Project

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SOURCE: Bing Imagery 2022

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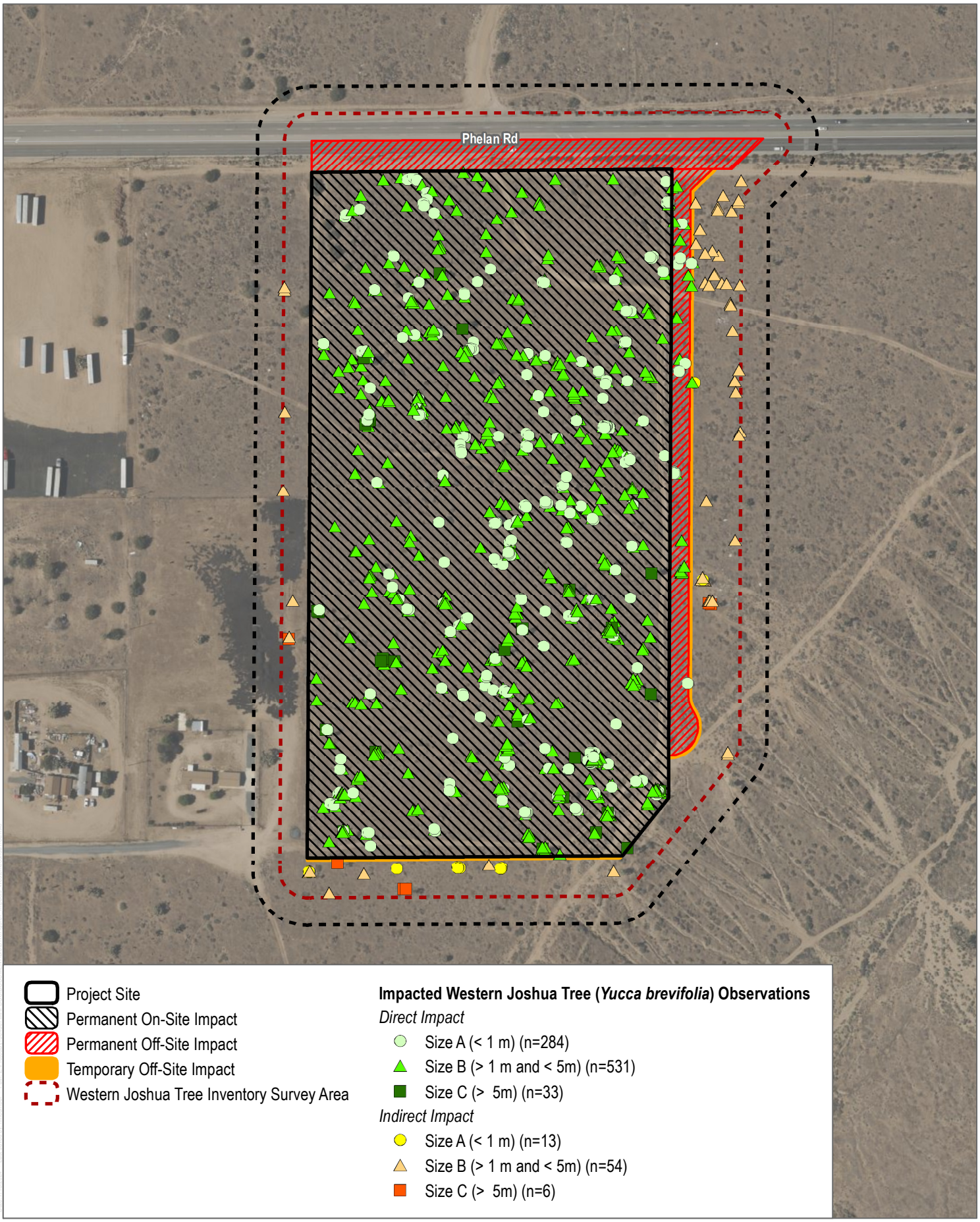
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FIGURE 6

Impacts to Biological Resources

Phelan 20 Project

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SOURCE: Bing Imagery 2022

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FIGURE 7

Impacts to Western Joshua Tree

Phelan 20 Project

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Appendix A
Photo Documentation



Photo 1. Dirt road and Joshua tree woodland vegetation community in northern portion of the project site, facing southeast.

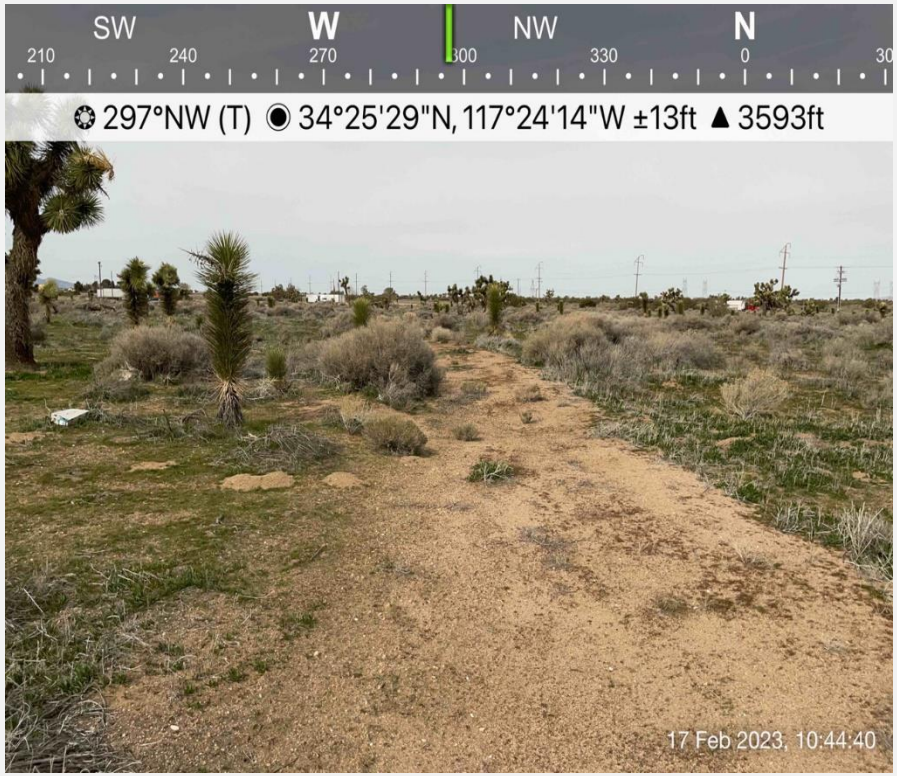


Photo 2. Dirt road and Joshua tree woodland vegetation community in eastern portion of the project site, facing northwest.



Photo 3. Non-jurisdictional erosional feature on hillside in southeast corner of the project site, facing north.



Photo 4. Tire marks on hillside in southeast corner of the project site, facing east.

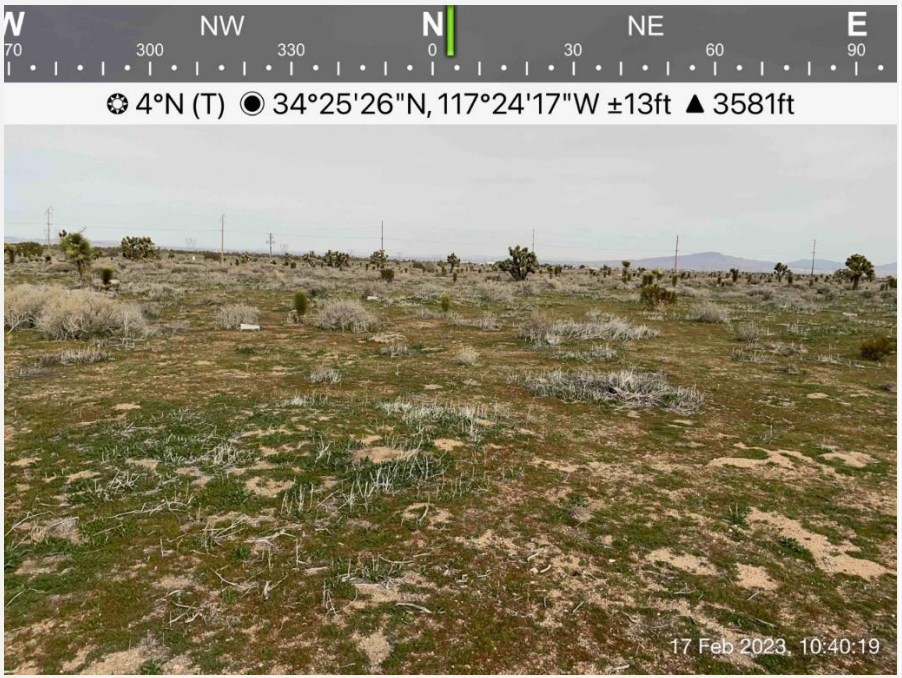


Photo 5. Joshua tree woodland vegetation community with understory of forbs in the southern portion of the project site, facing north.



Photo 6. Dirt road adjacent to fence and disturbed Joshua tree woodland vegetation community in the western portion of the project site, facing south.

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Appendix B

Mojave Desert Tortoise Data Sheet

Date of survey: 21/04/23 (day, month, year) Survey biologist(s): Eilleen Salas, Zarina Pringle (name, email, and phone number)

Site description: Phelan 20, 20 acres, Hesperia, CA (project name and size; general location)

County: San Bernardino Quad: Baldy Mesa Location: 34.422896, -117.405788 (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 20 Transect #: 36 Transect length: Variable

GPS Start-point: 34.426545, -117.408404 (easting, northing, elevation in meters) Start time: 9:09 am/pm

GPS End-point: 34.426511, -117.404725 (easting, northing, elevation in meters) End time: 3:16 am/pm

Start Temp: 15 °C End Temp: 24.4 °C

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	34.421432	-117.4075012	Burrow	Somewhat DETO shaped but caved in & overgrown. Class 5.
2	34.4226601	-117.4064707	Burrow	Somewhat DETO shaped, but a bit filled in. Class 5
4				
5				
6				
7				
8				

- No DETO sign observed
- No individual DETO observed

Phelan 60 - Day 2

Version: October 26, 2018

Date of survey: 4-May-23 (day, month, year) Survey biologist(s): Shana Carey, Tracy Park, Sarah Greely (name, email, and phone number)

Site description: Phelan 60, 60 acres, Hesperia, CA (project name and size; general location)

County: San Bernardino Quad: Baldy Mesa Location: 462885E, 3809055N (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage ~~or Sampling~~ Area size to be surveyed: 60 acres Transect #: 44 Transect length: variable ~1/2 mi.

GPS Start-point: 462823E, 3809522N, 1091m (easting, northing, elevation in meters) Start time: 8:29 am/pm

GPS End-point: 462622E, 3808755N, 1107m (easting, northing, elevation in meters) End time: 12:35 am/pm

Start Temp: 5 °C End Temp: 9.4 °C

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1				
2				
3				
4				
5				
6				
7				
8				

- No DETO sign observed
- No individual DETO observed
- No DETO burrows observed

Appendix C

Mohave Ground Squirrel Protocol Survey Report

August 8, 2023

Britney Schultz
Dudek
605 Third Street
Encinitas, CA 92024
Via email: bschultz@dudek.com

Subject: Results of Mohave Ground Squirrel Protocol Surveys for the Phelan 60 Project, Hesperia, San Bernardino County, California

Dear Ms. Schultz:

The purpose of this report is to document the results of a California Department of Fish and Wildlife (CDFW) protocol survey for Mohave ground squirrel (*Xerospermophilus mohavensis*; MGS) conducted by Dipodomys Ecological Consulting LLC (DEC) for the Phelan 60 Project (project). Presented in this report are a description of the project, project location, the biological setting of the site, MGS natural history, survey methodology, results of trapping efforts for MGS, and conclusions.

Project Description and Location

Cambria 60 Partners, LLC proposes to develop a speculative distribution warehouse on a 60-acre parcel. The 60-acre project is located within the City of Hesperia in San Bernardino County, California. The project is bordered by Phelan Road on the north, Nielson Road on the south and Los Banos Ave on the west. The eastern boundary of the project is bordered by undeveloped desert land (**Figures 1 and 2**). Surrounding land use includes residential development on the northwest corner. The southern and eastern portions of the site are surrounded by undeveloped desert land. The primary source of disturbance is past and current off-highway vehicle (OHV) activity. The project sites can be found on U.S. Geological Survey (USGS) 7.5-minute Baldy Mesa topographic quadrangle map within Section 21, Township 4 North and Range 5 West, as shown in **Figure 1**, Project Location.

Biological Setting

Two vegetation communities were identified within the project site including: disturbed Joshua tree woodland (CDFW CA Code 33.170.00) and rubber rabbitbrush scrub (35.310.00). Dominant plants present include Joshua tree (*Yucca brevifolia*), California juniper (*Juniperus californica)*, Cooper's boxthorn (*Lycium cooperi*), Andreson's thornbush (*Lycium andersonii*), bladdersage (*Scutellaria mexicana*), spiny hopsage (*Grayia spinosa*), cheesebush (*Ambrosia salsola*), Cooper's goldenbush (*Ericameria cooperi*), rubber rabbitbrush (*Ericameria nauseosa*),creosote bush (*Larrea tridentata*), Nevada jointfir (*Ephedra nevadensis*), black elderberry (*Sambucus nigra*), four-wing saltbush (*Atriplex canescens*), cottonthorn (*Tetradymia stenolepis*),California buckwheat (*Eriogonum fasciculatum*), Great Basin sagebrush (*Artemisia tridentata*), chaparral yucca (*Hesperoyucca whipplei*), winterfat (*Krascheninnikovia lanata*), beavertail (*Opuntia basilaris*), and silver cholla (*Cylindropuntia*

echinocarpa). Herbaceous plants include fiddleneck (*Amsinckia tessellata*), red-stemmed filaree (*Erodium cicutarium*), rattlesnake weed (*Euphorbia albomarginata*), common phacelia (*Phacelia distans*), cryptantha (*Cryptantha* sp.), white fiesta flower (*Pholistoma membranaceum*), Russian thistle (*Salsola tragus*), short podded mustard (*Hirschfeldia incana*), London rocket (*Sisymbrium irio*), crowned muilla (*Muilla coronata*), Mediterranean grass (*Schismus barbatus*), cheatgrass (*Bromus tectorum*) and foxtail brome (*Bromus madritensis*). Soil consists of sandy dunes and Cajon sand and Hesperia loamy fine sand (WebSoil 2023). The project site is located at an elevation of approximately feet 3,488 above mean sea level (amsl).

Mohave Ground Squirrel Natural History

Mohave ground squirrels are medium-sized (210-230mm, 85-130g), diurnal squirrels. Their dorsal pelage is light gray to cinnamon-brown, while their ventral side is creamy. Unlike round-tailed ground squirrels (*Xerospermophilus tereticaudus*), which occur sympatrically in the southeast portion of their range, MGS have a short, flat tail that is light-colored on its underside, and have brown cheeks instead of white.

MGS inhabit a small geographic area in the western Mojave Desert. This species ranges from Palmdale in the southwest, the Lucerne Valley in the southeast, Olancha in the northwest, and the Avawatz Mountains in the northeast (Gustafson 1993). Although occurrences in the southern portion of their range are rare, occurrences have been documented on the California Natural Diversity Database (CNDDB) as recently as 2011 (Figure 3). Vegetation communities (as classified by the California Native Plant Society) typically associated with MGS include Mojave Creosote Scrub, Shadscale Scrub, Desert Saltbush Scrub, Desert Sink Scrub, and Joshua Tree Woodland. MGS feed primarily on the leaves and seeds of forbs and shrubs. In the northern portion of their range, MGS have been found to feed on spiny hopsage, winterfat (*Krascheninnikovia lanata*) and saltbush (*Atriplex* sp.), especially in early spring when forbs are unavailable, during summer when forbs have dried out, and during drought conditions (Leitner and Leitner 1998). Recent studies have also indicated that MGS feed on the following forbs and shrubs: freckled milkvetch (*Astragalus lentiginosus*), Mojave lupine (*Lupinus odoratus*), buckwheat (*Eriogonum* sp.), white mallow (*Eremalche exilis*), fiddleneck, Russian thistle, desert pincushion (*Chaenactis* sp.), Cryptantha (*Cryptantha pterocarya*), Coreopsis (*Leptosyne bigelovii*), Valley lessingia (*Lessingia glandulifera*), desert dandelion (*Malacothrix glabrata*), Phacelia (*Phacelia* sp.), wire lettuce (*Stephanomeria* sp.) Anderson's desert thorn, spiny horsebrush (*Tetradimya spinosa*), and Joshua tree (Leitner and Leitner 2017).

MGS have adapted to live in hot desert environments by limiting their activity aboveground through estivation and hibernation. The timing of emergence from hibernation varies by location: in the northern portion of their range male MGS emerge mid-March (Leitner and Leitner 1998); however, in the southern portion of their range, MGS may emerge as early as mid-January (Recht 1977). Throughout their active period, MGS store fat in preparation for estivation, which typically occurs between July and September, but may occur as early as April or May during drought conditions (Leitner et al. 1995). MGS reproduction is dependent on fall and winter rains and individuals may forgo breeding entirely if low rainfall (<80mm) results in reduced herbaceous plants (Leitner and Leitner 2017).

Throughout the range of MGS, they may co-occur with antelope ground squirrels (*Ammospermophilus leucurus*), round-tailed ground squirrels (**Table 1**), and California ground squirrels (*Otospermophilus beecheyi*). MGS may be misidentified with round-tailed ground squirrels, but this is unlikely to occur with antelope ground squirrels, because the latter species has white dorsal stripes that makes them

resemble a chipmunk more than an MGS. California ground squirrels are also notably larger and are not typically confused with MGS.

MGS are classified as threatened and are protected under the California Endangered Species Act. Primary threats to MGS include limited distribution, low abundance, and habitat loss from by converting suitable habitat to urban, suburban, agricultural, and military land uses (Gustafson 1993, Leitner and Leitner 2017).

TABLE 1
RTGS AND MGS CHARACTERISTICS

	RTGS	MGS
Head and body length (mm)	130-181	128-165
Tail length (mm)	70-112	50-72
Weight (g)	110-200	70-300
Back pelage appearance	Back dull gray brown or pale cinnamon	Back pale pinkish brown finely flecked with white
Tail appearance	Tail long and narrow, round in profile	Tail narrow at base, tufted and somewhat banded near tip, flattened in profile
Tail color	Edge and underside pale brown	Edge and underside of tail white
Social structure	Semi-colonial	Solitary except when breeding

From: Peterson Field Guide-Mammals of North America F. Reid 4th Edition (2006)

Methods

Mohave ground squirrel (MGS) Protocol surveys for the Phelan 60 Project MGS were conducted in accordance with the 2010 CDFW MGS Survey Guidelines and consisted of an initial visual survey followed by live trapping and camera trapping efforts. Details for each survey type are described below.

Visual Survey

An initial review of the California Natural Diversity Database (CNDDB) was conducted prior to the visual assessment to determine the historical recorded occurrences of MGS near the project site (**Figure 3**). The visual survey was conducted by Principal Investigator Karla Flores (MOU and Scientific Collection Permit SC-10572) and Principal Investigator Karl Fairchild (SCP S-182820007-18333-001) on March 14, 2023. The visual survey consisted of driving and walking throughout the project site to identify suitable habitat for MGS. This included identifying plants known to provide forage material for MGS such as spiny hopsage, winterfat, Cooper's boxthorn, Anderson's desert thorn, and Joshua tree (Leitner 2022). Areas supporting suitable habitat for MGS where these plants are concentrated were recorded on an aerial map. Suitable soil types for burrowing and burrow densities were also noted.

Live Trapping

Live trapping surveys were conducted by Karla Flores and Karl Fairchild and consisted of setting up two 50-trap 5x10 survey grids (140mx315m) within the northern and southern portions of the project parcel. Both grids encompassed representative habitat types. Coordinate locations for the northern and southern grids are listed in **Table 2**. Traps in each grid were spaced 35 meters apart and utilized XLK Sherman live-traps (3x3.75x12") with accompanying A-frame cardboard shade covers staked to the ground with

metal tent stakes. All traps were baited with 4-way livestock feed and peanut butter powder and were opened within one hour of sunrise and were checked no more than every four hours. All traps were closed within hour of sunset. Trapping was conducted when temperatures were between 50- and 90-degrees Fahrenheit, and inclement conditions (rain, thunderstorms) were not present. All animals captured were released at their capture location, and the following information recorded for each capture: species, weight, age, sex, and reproductive condition. Live-trapping surveys were conducted for a period of five days in each of the three survey windows established by the MGS survey guidelines (1st: March 15-April 3; 2nd May 1-31;3rd June 15-July 15). Details for each survey period are presented in **Table 3.** MGS Survey and Trapping Forms, including weather details, are presented in **Attachment A** and **Attachment B**.

TABLE 2
UTM COORDINATES FOR CORNERS OF LIVE TRAPPING GRID

Grid	Corner	Zone	Easting	Northing
North	SW	11	462740	3809175
North	NW	11	462740	3809490
North	SE	11	462880	3809175
North	NE	11	462880	3809490
South	SW	11	462500	3808805
South	NW	11	462500	3809120
South	SE	11	462640	3808805
South	NE	11	462640	3809120

*Datum: WGS 1984

TABLE 3
MOHAVE GROUND SQUIRREL SURVEY DATE AND TYPE

Session	Date	Survey Type
1	March 24-28, 2023	LT/CT
2	May 27-31, 2023	LT/CT
3	July 10-14, 2023	LT/CT

LT: Live Trapping CT: Camera Trapping

Camera Trapping

Camera trapping surveys were used to supplement live-trapping efforts and consisted of setting up five camera trapping stations throughout the project site (**Figure 2**). Each camera trap station consisted of a Bushnell Core Low Glow Trail Camera (Model 1199932CB) secured to a 36-inch U-post facing a bait station. The bait station consisted of a feeding tube filled with 4-way livestock feed staked to the ground with a 12-inch railroad spike. Cameras operated 24 hours a day, concurrent with live-trapping surveys, and followed the set-up specifications described in Delaney et al. 2017. Coordinate locations for each camera trap station are listed below in **Table 4**.

Photos from the camera trap stations were downloaded and reviewed by the Principal Investigator after every five-day trapping session. A list of species detected at the camera trap stations is included in **Table 5**.

TABLE 4
COORDINATE LOCATIONS FOR CAMERA TRAP STATIONS

Camera	Zone	Easting	Northing
1	11	462811	3809260
2	11	462594	3809040
3	11	462596	3808875
4	11	462807	3808779
5	11	462863	3808920

*Datum: WGS 1984

Results

Visual Survey

Based on the habitat data collected during the visual survey, MGS habitat is present onsite. Primary MGS food plants such as spiny hopsage are present onsite. Other plants also associated with MGS in microhistology and metabarcoding studies (Leitner 2022) are present onsite, these include: creosote bush, fourwing saltbush, Joshua tree, Cooper's boxthorn, Anderson's thornbush, red-stemmed filaree and fiddleneck. Visual observations of burrows and burrow complexes showed that soil onsite is suitable for burrowing.

Live Trapping

Live-trapping captures consisted of white-tailed antelope ground squirrel, California ground squirrel, cactus wren (*Campylorhynchus brunneicapillus*), yellow-backed spiny lizard (*Sceloporus uniformis*), and Great Basin whiptail (*Aspidoscelis tigris*) (**Table 5; Figure 4**).

TABLE 5
RESULTS OF MOHAVE GROUND SQUIRREL PROTOCOL SURVEYS

Common name	Scientific name	Session			Total
		1	2	3	
White-tailed antelope ground squirrel	*Ammospermophilus leucurus*	15	6	4	25
California ground squirrel	*Otospermophilus beecheyi*	37	67	88	192
Cactus wren	*Campylorhynchus brunneicapillus*	0	1	2	3
Yellow-backed spiny lizard	*Sceloporus uniformis*	0	1	1	2
Great Basin Whiptail	*Aspidoscelis tigris*	0	3	0	3
	Total	52	78	95	**225**

Camera Trapping

No Mohave ground squirrels were detected in the images collected during the camera trapping surveys. Twelve species were observed utilizing the camera trap stations: white-tailed antelope ground squirrel, California quail (*Callipepla californica*), common raven (*Corvus corax*), kangaroo rat (*Dipodomys* sp.), greater roadrunner (*Geococcyx californianus*), bobcat (*Lynx rufus*), northern mockingbird (*Mimus polyglottos*), California ground squirrel, deer mouse (*Peromyscus maniculatus*), desert cottontail

(*Sylvilagus audubonii*), mourning dove (*Zenaida macroura*), and white-crowned sparrow (*Zonotrichia leucophrys*) (**Table 6**).

TABLE 6
RESULTS OF MOHAVE GROUND SQUIRREL CAMERA TRAPPING

Common Name	Scientific Name
White-tailed antelope ground squirrel	*Ammospermophilus leucurus*
California quail	*Callipepla californica*
Common raven	*Corvus corax*
Kangaroo rat sp.	*Dipodomys sp.*
Greater roadrunner	*Geococcyx californianus*
Bobcat	*Lynx rufus*
Northern mockingbird	*Mimus polyglottos*
California ground squirrel	*Otospermophilus beecheyi*
Deer mouse	*Peromyscus maniculatus*
Desert cottontail	*Sylvilagus audubonii*
Mourning dove	*Zenaida macroura*
White-crowned sparrow	*Zonotrichia leucophrys*

Conclusions

The Phelan 60 Project is located within the southern portion of the MGS range where MGS occurrences are rare, and population densities have historically been low. Additionally, the site is located outside of the MGS core population areas, peripheral population areas and linkage areas described in the 2019 CDFW MGS Conservation Strategy. California Natural Diversity Database (CNDDB) occurrence details for MGS in the vicinity of the project site (**Figure 3**), indicate that MGS are generally extirpated from the general area. The nearest and most recent MGS occurrence to the project site was recorded 1.6 miles north from the project site in 2005, and north of the California Aqueduct, which may act as a barrier to MGS dispersal.

Although somewhat suitable habitat is present within the project, no MGS were captured or detected during the live trapping or camera trapping surveys. Furthermore, the distance from core population areas and significant barriers to dispersal between the project site and documented recent occurrences make it unlikely that colonization from core MGS populations will occur in the near future. Based on the results of this survey, the CDFW survey guidelines indicate that the department will stipulate that no MGS occur on the project site. This stipulation will expire one year from the last day of trapping, July 14, 2023.

I hereby certify that the information in this report is true, and that it conforms to accepted biological standards. Please feel free to contact Karla Flores by phone at (619) 972-4319 or by email at kflores@dipodomysecological.com or Karl Fairchild by phone at (541) 609-1038 or by email at kfairchild@dipodomysecological.com, with any questions regarding this report.

Sincerely,

Karla L. Flores
Principal Investigator

Karl Fairchild
Principal Investigator

Figures and Attachments
Figure 1-Project Location
Figure 2-Survey Area
Figure 3- Historical MGS Occurrences
Figure 4- Results

Attachment A-CDFW Mohave Ground Squirrel Survey and Trapping Form(s)
Attachment B-Weather Details
Attachment C-Species Compendium
Attachment D-Representative Photographs

References

California Department of Fish and Game. Mohave Ground Squirrel Survey Guidelines. July 2010.

California Department of Fish and Wildlife. California Natural Diversity Database Rarefind. July 14, 2023.

Delaney D.K., Leitner, P. and D. Hacker. 2017. Use of Cameras in Mohave ground Squirrel Studies.

Gustafson, J.R. 1993. A Status Review of the Mohave Ground Squirrel (Spermophilus mohavensis). Department of Fish and Game. Nongame Bird and Mammal Report 93-9.

Leitner, P. and B.M. Leitner. 1998. Coso grazing exclosure monitoring study, Mohave ground squirrel study Coso Known Geothermal Resource Area, Major Findings 1988-1996. Final Report.

Leitner, P. and B.M. Leitner. 2017. Diet of the Mohave ground squirrel (*Xerospermophilus mohavensis*) in relation to season and rainfall. *Western North American Naturalist*, 77(1), 1-13.

Leitner, B. 2022. Primary Food Items Consumed by Mohave Ground Squirrels based on visual observations of MGS and microhistology and metabarcoding of fecal pellets from 1988-2021.

Recht, M.A. 1977. The biology of the Mohave ground squirrel, *Spermophilus mohavensis*. Ph.D. Dissertation, University of California, Los Angeles. 117 pp.

Reid, Fiona. A Field Guide to Mammals of North America, 4th ed., Houghton Mifflin Co., 2006.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: http://websoilsurvey.sc.egov.usda.gov/. Accessed [07/14/2023].



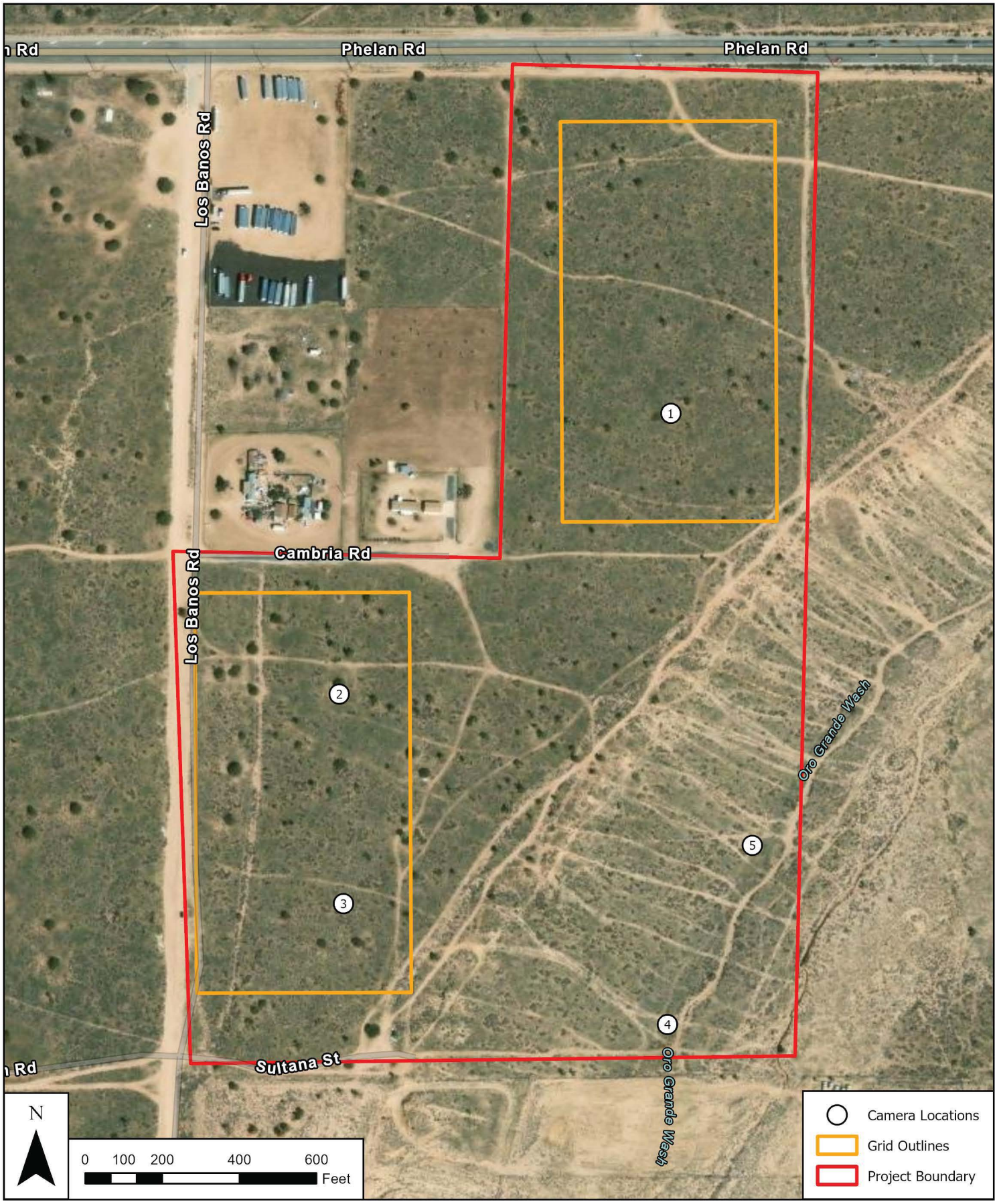
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DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Phelan 60 Project

Figure 1

Project Location



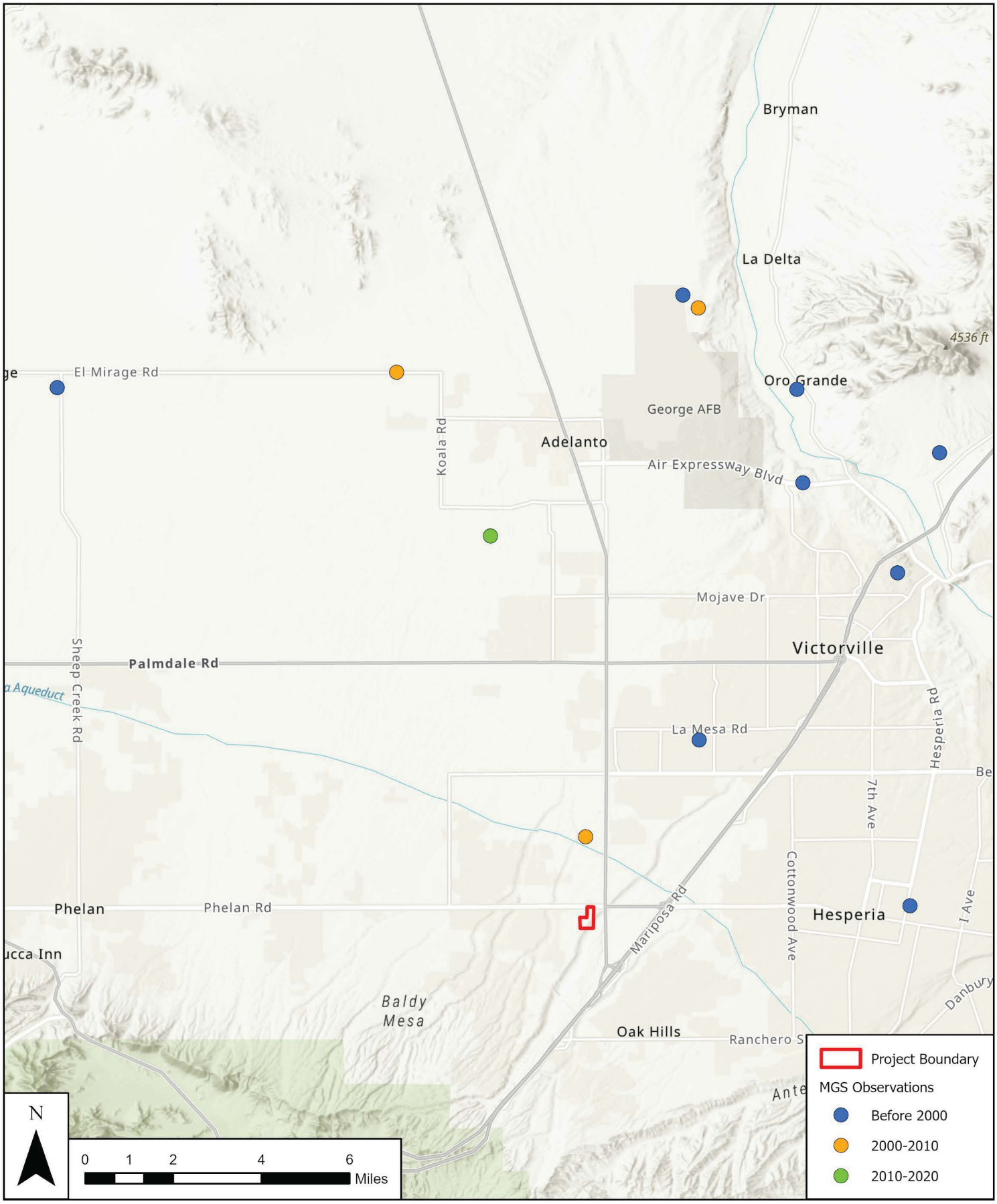
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DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Phelan 60 Project

Figure 2

Survey Area



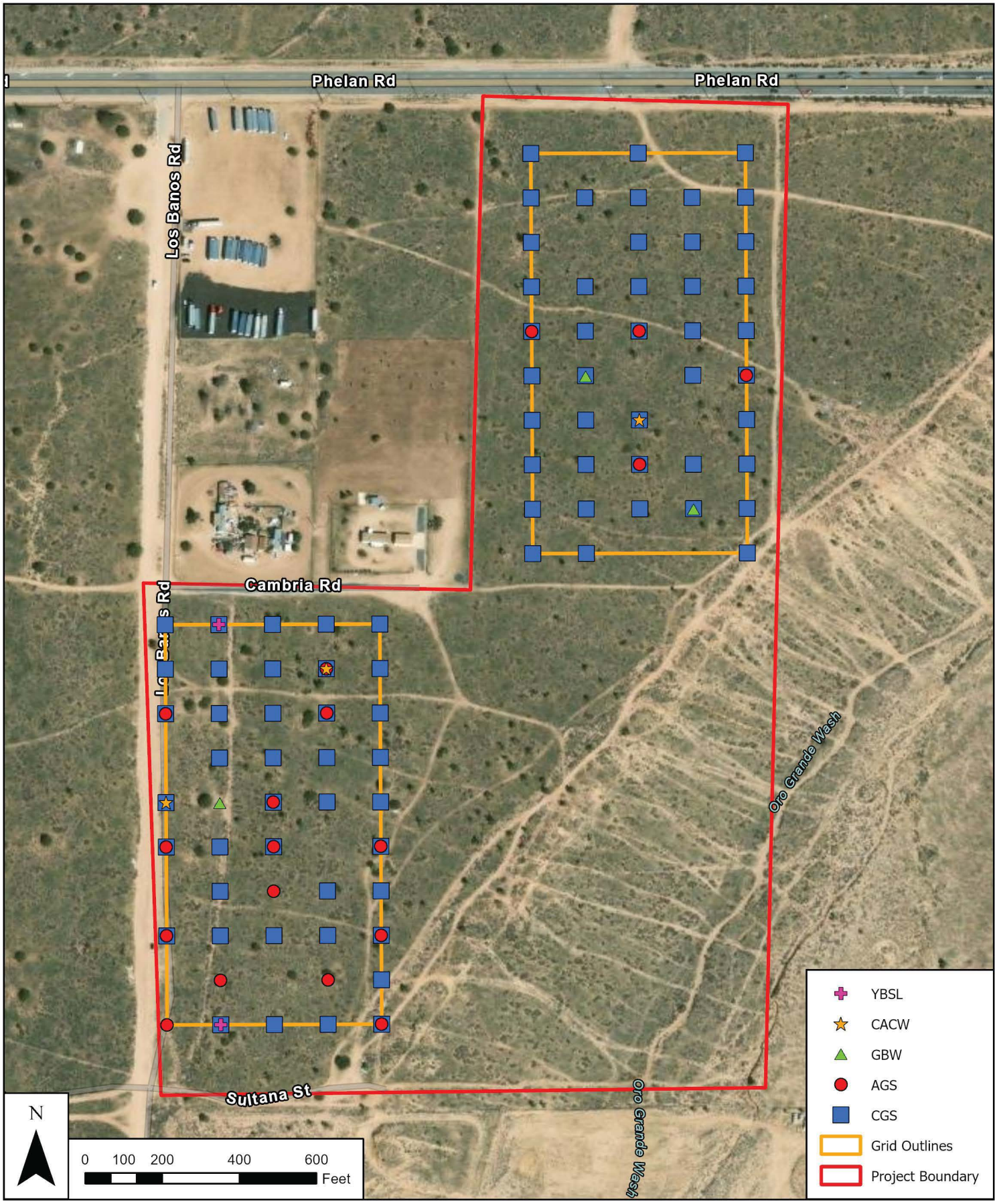
SOURCE: ESRI

Phelan 60 Project

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Figure 3

Historical MGS Occurrences



SOURCE: ESRI

DIPODOMYS
ECOLOGICAL CONSULTING, LLC

Phelan 60 Project

Figure 4

Trapping Results

Attachment A

Mohave Ground Squirrel (MGS) Survey and Trapping Form (photocopy as needed)

PART I - PROJECT INFORMATION (use a separate form for each sampling grid)

Project name: Phelan 60-North Grid Property owner: Cambria 60 Partners, LLC

Location: Township 04N; Range 05W; Section 21 ; ¼ Section _____

Quad map/series: Baldy Mesa UTM coordinates: SW 462740 3809175 NW 462740 3809490 SE 462880 3809175 NE 462880 3809490
GPS coordinates of trapping-grid corners

Acreage of Project Site: 60 Acreage of potential MGS habitat on site: 60

Total acreage visually surveyed on project site: 60 Date(s): March 14, 2023
visual surveys

Visual surveys conducted by: Karla Flores and Karl Fairchild
names of all persons by date (use back of form, if needed)

Total acres trapped: 60 Number of sampling grids: 2

Trapping conducted by: Karla Flores and Karl Fairchild
names of all persons by sampling term and sampling grid (use back of form, if needed)

Dates of sampling term(s): FIRST March 24-28, 2023 SECOND May 27-31, 2023 THIRD July 10-14, 2023
if required if required

PART II - GENERAL HABITAT DESCRIPTION (use back of form, if needed)
Vegetation: dominant perennials: Joshua tree, California juniper, Cooper's boxthorn
other perennials: spiny hopsage,cheesebush, bladdersage, Cooper's goldenbush, Anderson's thornbush, rubber rabbitbrush, silver cholla
dominant annuals: fiddleneck, red-stemmed filaree, common phacelia
other annuals: white-fiesta flower, cryptantha, Mediterranean grass, foxtail brome, short-podded mustard, london rocket

Land forms (mesa, bajada, wash): Mesa, wash

Soils description: Cajon sand, Hesperia loamy fine sand

Elevation: 3,488 feet Slope: 0-15%

PART III - WEATHER (report measurements in the following categories for each day of visual survey and each day of trapping; using 24-hour clock, indicate time of day that each measurement was made; use a separate blank sheet for each day)

Temperature: AIR minimum and maximum; SOIL minimum and maximum; Cloud Cover: % in AM and % in PM; Wind Speed: in AM and in PM

Mohave Ground Squirrel (MGS) Survey and Trapping Form (photocopy as needed)

PART I - PROJECT INFORMATION (use a separate form for each sampling grid)

Project name: Phelan 60-South Grid Property owner: Cambria 60 Partners, LLC

Location: Township 04N ; Range 05W ; Section 21 ; ¼ Section _____

Quad map/series: Baldy Mesa UTM coordinates: SW 462500 3808805 NW 462500 3809120 SE 462640 3808805 NE 462640 3809120
GPS coordinates of trapping-grid corners

Acreage of Project Site: 60 Acreage of potential MGS habitat on site: 60

Total acreage visually surveyed on project site: 60 Date(s): March 14, 2023
visual surveys

Visual surveys conducted by: Karla Flores and Karl Fairchild
names of all persons by date (use back of form, if needed)

Total acres trapped: 60 Number of sampling grids: 2

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names of all persons by sampling term and sampling grid (use back of form, if needed)

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dominant annuals: fiddleneck, red-stemmed filaree, common phacelia
other annuals: white-fiesta flower, cryptantha, Mediterranean grass, foxtail brome, short-podded mustard, london rocket

Land forms (mesa, bajada, wash): Mesa, wash

Soils description: Cajon sand, Hesperia loamy fine sand

Elevation: 3,488 feet Slope: 0-15%

PART III - WEATHER (report measurements in the following categories for each day of visual survey and each day of trapping; using 24-hour clock, indicate time of day that each measurement was made; use a separate blank sheet for each day)

Temperature: AIR minimum and maximum; SOIL minimum and maximum; Cloud Cover: % in AM and % in PM; Wind Speed: in AM and in PM

Attachment B

Attachment B: Weather details for California Department of Fish and Wildlife (CDFW) Mohave ground squirrel (*Xerospermophilus mohavensis*) protocol surveys. Details include date, survey (1-3), air temperature (min-max ° Fahrenheit), soil temperature (min-max ° Fahrenheit), wind speed (mph) and percent cloud cover (%).

Date		Air Temperature (°F)		Soil temperature (°F)		Wind (mph)		Cloud Cover (%)	
		Min	Max	Min	Max	Start	End	Start	End
3/24/2023	1	50.6	55.7	39	51.7	3.7	10.5	5	5
3/25/2023	1	47.6	51.6	37.7	49	8.3	12.6	0	5
3/26/2023	1	45.2	51.7	36.7	46.2	14.3	10.9	1	50
3/27/2023	1	49.9	57.8	36.3	52.9	4.5	5.8	20	10
3/28/2023	1	59.8	65	38.5	52	3.1	17.8	1	10
5/27/2023	2	57.8	78.9	62.6	89.1	1.5	9	0	1
5/28/2023	2	62.3	74.6	65.8	92.1	3.7	16.4	0	1
5/29/2023	2	57.8	73.3	65.1	90.7	9	8.1	10	10
5/30/2023	2	56.3	67.9	64.6	82.2	10.7	13.6	15	60
5/31/2023	2	63	70.1	59.2	66	8.6	15.1	5	5
7/10/2023	3	69.8	89.4	78.8	75.2	3.8	9.6	0	0
7/11/2023	3	76.4	90.5	78.8	77.9	4.6	14	0	0
7/12/2023	3	75.7	89.8	80.8	81.5	6.2	8.2	5	5
7/13/2023	3	72.2	90.8	80.4	81.5	5.6	4.8	10	5
7/14/2023	3	69.9	88.3	79	78.8	1.4	1.3	0	0

Attachment C

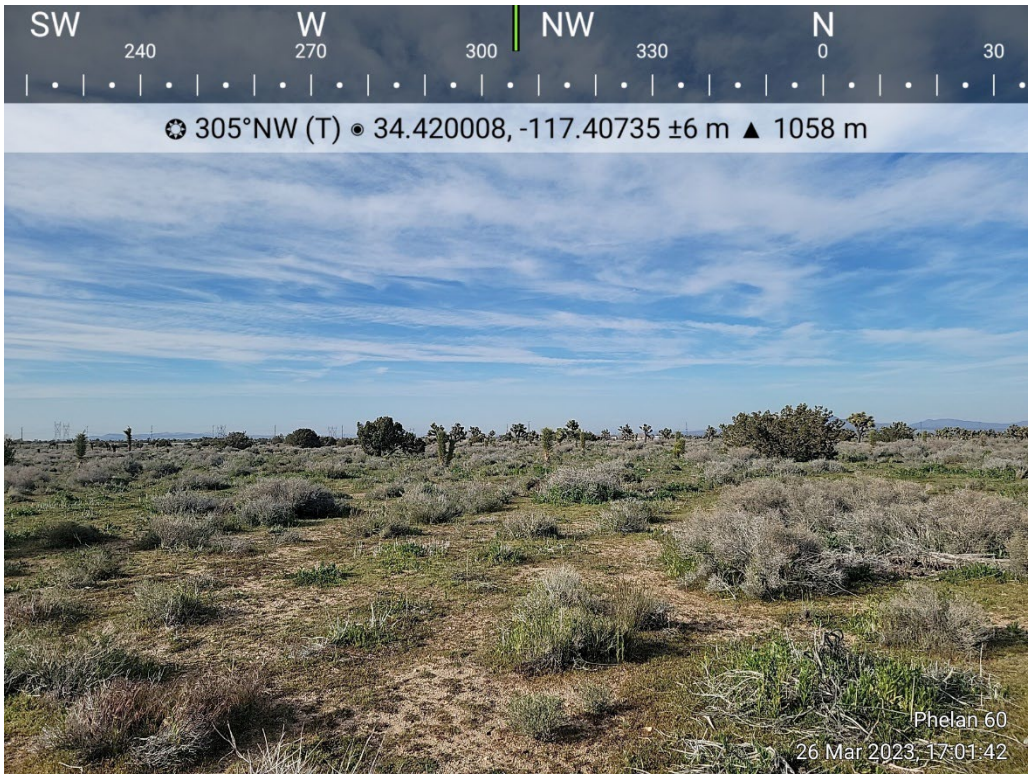
Common name	Scientific name	Special Status
Plants		
cheesebush	*Ambrosia salsola*	
fiddleneck	*Amsinckia tessellata*	
Great Basin sagebrush	*Artemisia tridentata*	
four-wing saltbush	*Atriplex canescens*	
fox tail brome	*Bromus madritensis*	
cheatgrass	*Bromus tectorum*	
cryptantha	*Cryptantha sp.*	
silver cholla	*Cylindropuntia echinocarpa*	
Nevada jointfir	*Ephedra nevadensis*	
Cooper's goldenbush	*Ericameria cooperi*	
rubber rabbitbrush	*Ericameria nauseosa*	
California buckwheat	*Eriogonum fasciculatum*	
red-stemmed filaree	*Erodium cicutarium*	
spiny hopsage	*Grayia spinosa*	
short-podded mustard	*Hirschfeldia incana*	
California juniper	*Juniperus californica*	
creosote	*Larrea tridentata*	
Cooper's boxthorn	*Lycium cooperi*	
Anderson's thornbush	*Lycyum andersonii*	
crowned muilla	*Muilla coronata*	CRPR 4.2
beavertail	*Opuntia basilaris*	
white fiesta flower	*Pholistoma membranaceum*	
elderberry	*Sambucus*	
bladdersage	*Scutellaria mexicana*	
london rocket	*Sisymbrium irio*	
cottonthorn	*Tetradymia stenolepis*	
Joshua tree	*Yucca brevifolia*	
chaprarral yucca	*Yucca schidigera*	
Birds		
Bell's sparrow	*Artemisiospiza belli*	
oak titmouse	*Baeolophus inornatus*	
red-tailed hawk	*Buteo jamaicensis*	
Swaninson's hawk	*Buteo swainsoni*	Y
California quail	*Callipepla californica*	
cactus wren	*Campylorhynchus brunneicapillus*	
turkey vulture	*Cathartes aura*	
rock pigeon	*Columba livia*	
ruby crowned kinglet	*Corthylio calendula*	
common raven	*Corvus corax*	
ladder-backed woodpecker	*Dryobates scalaris*	
American kestrel	*Falco sparverius*	
greater roadrunner	*Geococcyx californianus*	

Common name	Scientific name	Special Status
house finch	*Haemorhous mexicanus*	
loggerhead shrike	*Lanius ludovicianus*	Y
California towhee	*Melozone crissalis*	
northern mockingbird	*Mimus polyglottos*	
cliff swallow	*Myiarchus cinerascens*	
ash-throated flycatcher	*Myiarchus cinerascens*	
house sparrow	*Passer domesticus*	
yellow-rumped warbler	*Setophaga coronata*	
mountain bluebird	*Sialia currucoides*	
Lawrence's goldfinch	*Spinus lawrencei*	
Brewer's sparrow	*Spizella breweri*	
western meadowlark	*Sturnella neglecta*	
western meadowlark	*Sturnella neglecta*	
European starling	*Sturnus vulgaris*	
California thrasher	*Toxostoma redivivum*	
western kingbird	*Tyrannus verticalis*	
white-crowned sparrow	*Zonotrichia leucophrys*	
Mammals		
white-tailed antelope ground squirrel	*Ammospermophilus leucurus*	
Panamint kangaroo rat	*Dipodomys panamintinus*	
black-tailed jackrabbit	*Lepus californicus*	
bobcat	*Lynx rufus*	
California ground squirrel	*Otospermophilus beecheyi*	
deer mouse	*Peromyscus maniculatus*	
desert cottontail	*Sylvilagus audubonii*	
Reptiles		
Great Basin whiptail	*Aspidoscelis tigris*	
Yellow-backed spiny lizard	*Sceloporus uniformis*	
Side-blotched lizard	*Uta stansburiana*	

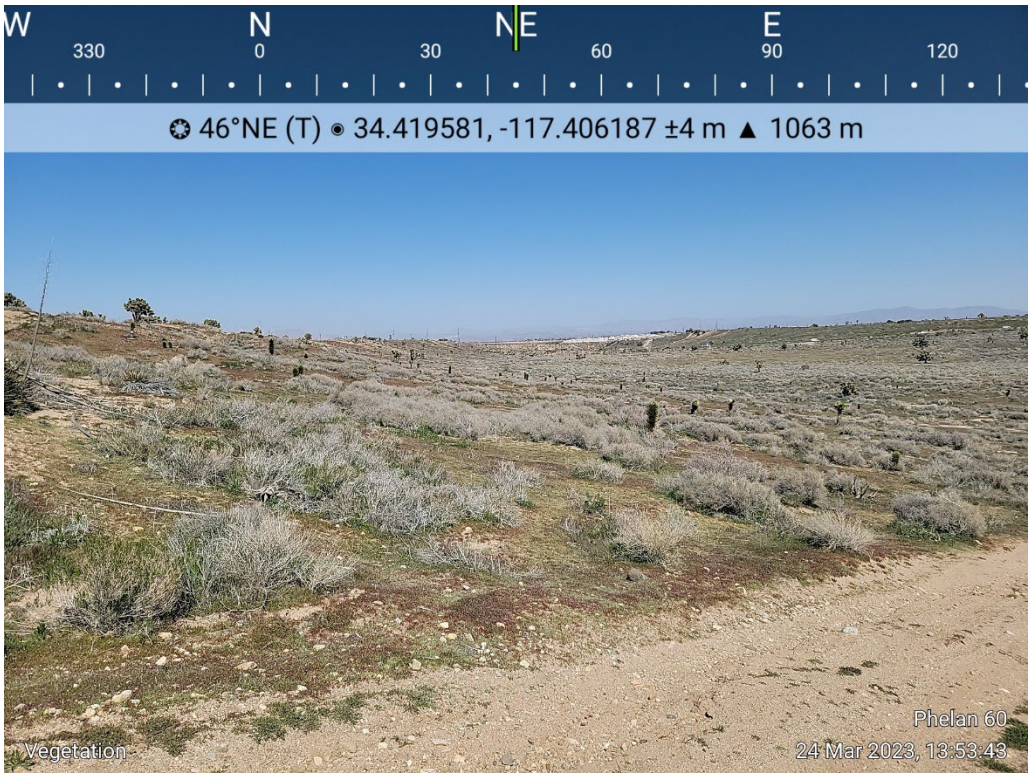
Attachment D



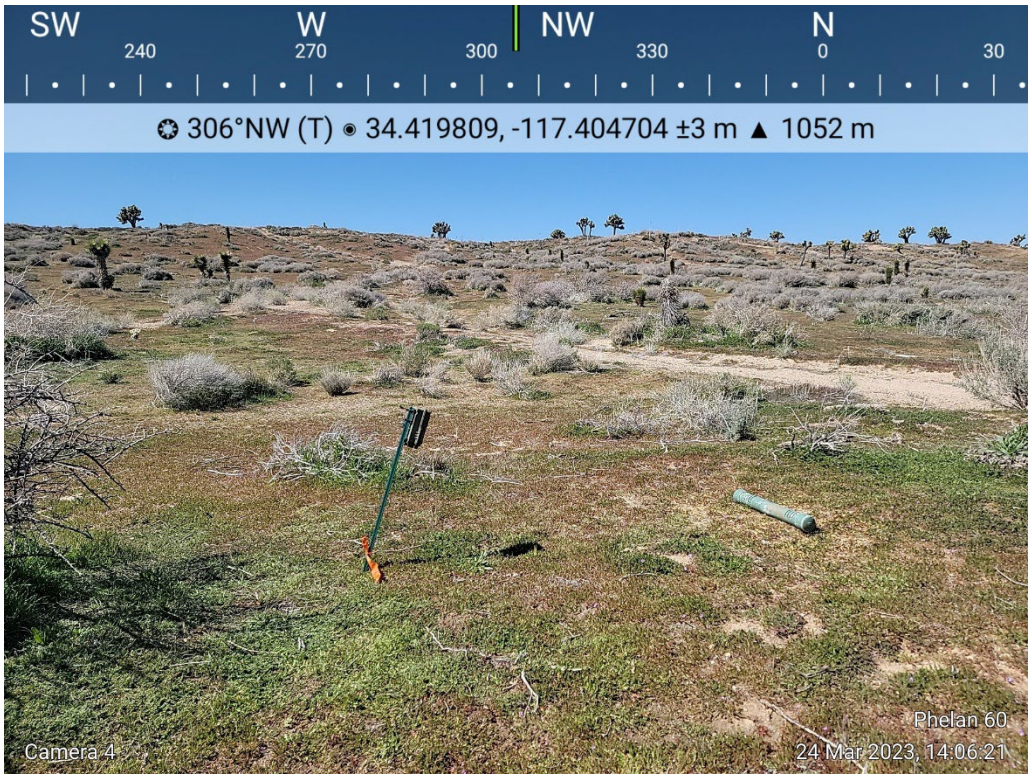
Photograph 1: Representative vegetation on North grid, facing south.



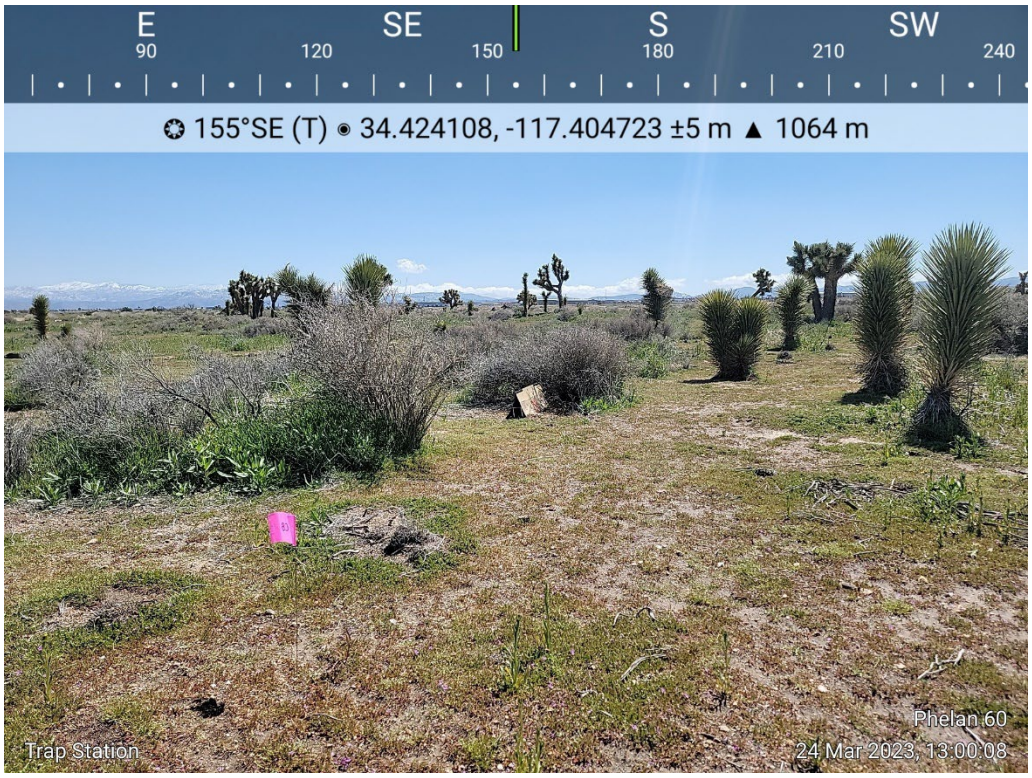
Photograph 2: Representative vegetation on South grid, facing northwest.



Photograph 3: Representative vegetation on slope and wash in southeast part of project, facing northeast.



Photograph 4: Representative camera trap station.



Photograph 5: Representative live-trap station.



Photograph 6: White-tailed antelope ground squirrel *(Ammospermophilus leucurus*) captured in live-trap.



Photograph 7: Cactus wren (*Campylorhynchus brunneicapillus*) captured in live-trap.



Photograph 8: Bobcat (*Lynx rufus*) visiting camera trap station.



Photograph 9: California ground squirrel (*Otospermophilus beecheyi*) visiting camera trap station.



Photograph 10: California quail (*Callipepla californica*) visiting camera trap station.

Appendix D
Plant Compendium

Vascular Species

Eudicots

ANACARDIACEAE – SUMAC OR CASHEW FAMILY

* *Pistacia vera* – pistachio nut

APIACEAE – CARROT FAMILY

Lomatium mohavense – Mojave desertparsley

APOCYNACEAE – DOGBANE FAMILY

Asclepias vestita – woolly milkweed

ASTERACEAE – SUNFLOWER FAMILY

Ambrosia acanthicarpa – flatspine bur ragweed
Ambrosia salsola – cheesebush
Artemisia tridentata – big sagebrush
Chrysothamnus viscidiflorus – yellow rabbitbrush
Ericameria cooperi – Cooper's goldenbush
*Erica*meria *linearifolia* – narrowleaf goldenbush
Ericameria nauseosa – rubber rabbitbrush
Ericameria pinifolia – pinebush
Eriophyllum pringlei – Pringle's woolly sunflower
Gutierrezia californica – California match weed
Lasthenia gracilis – needle goldfields
Malacothrix glabrata – smooth desertdandelion
Stephanomeria parryi – Parry's wirelettuce
Tetradymia stenolepis – Mojave cottonthorn
Uropappus lindleyi – Lindley's silverpuffs

BORAGINACEAE – BORAGE FAMILY

Amsinckia intermedia – common fiddleneck
Amsinckia tessellata – bristly fiddleneck
Greeneocharis circumscissa var. *circumscissa* – cushion cryptantha
Pectocarya linearis ssp. *ferocula* – sagebrush combseed
Pectocarya linearis – sagebrush combseed
Phacelia distans – distant phacelia
Pholistoma membranaceum – white fiestaflower
Plagiobothrys arizonicus – Arizona popcornflower

BRASSICACEAE – MUSTARD FAMILY

Caulanthus lasiophyllus – California mustard
* *Hirschfeldia incana* – shortpod mustard
* *Sisymbrium irio* – London rocket
* *Sisymbrium orientale* – Indian hedgemustard

CACTACEAE – CACTUS FAMILY

Cylindropuntia echinocarpa – silver cholla
Cylindropuntia ramosissima – branched pencil cholla
Opuntia basilaris var. *basilaris* – beavertail pricklypear

CHENOPODIACEAE – GOOSEFOOT FAMILY

Atriplex canescens – fourwing saltbush
Chenopodium californicum – California goosefoot
Grayia spinosa – spiny hop sage
Krascheninnikovia lanata – winterfatland
* *Salsola tragus* – prickly Russian thistle

EUPHORBIACEAE – SPURGE FAMILY

Euphorbia albomarginata – whitemargin sandmat

FABACEAE – LEGUME FAMILY

Acmispon glaber var. *glaber* – common deerweed
Acmispon strigosus – strigose bird's-foot trefoil
Lupinus bicolor – miniature lupine
Lupinus sparsiflorus – Coulter's lupine

GERANIACEAE – GERANIUM FAMILY

* *Erodium cicutarium* – redstem stork's bill

LAMIACEAE – MINT FAMILY

Salvia carduacea – thistle sage
Salvia columbariae – chia
Scutellaria mexicana – Mexican bladdersage
Trichostema lanceolatum – vinegarweed

MONTIACEAE – MONTIA FAMILY

Calandrinia menziesii – red maids

NYCTAGINACEAE – FOUR O'CLOCK FAMILY

Mirabilis laevis var. *crassifolia* – California four o'clock

ONAGRACEAE – EVENING PRIMROSE FAMILY

Camissonia strigulosa – sandysoil suncup
Camissoniopsis confusa – San Bernardino suncup
Camissoniopsis pallida – paleyellow suncup

PAPAVERACEAE – POPPY FAMILY

Eschscholzia minutiflora – pygmy poppy

POLEMONIACEAE – PHLOX FAMILY

Linanthus parryae – sandblossoms

POLYGONACEAE – BUCKWHEAT FAMILY

Eriogonum fasciculatum var. *polifolium* – California buckwheat
Rumex hymenosepalus – canaigre dock

ROSACEAE – ROSE FAMILY

* *Prunus dulcis* – sweet almond

SOLANACEAE – NIGHTSHADE FAMILY

Lycium andersonii – Anderson's boxthorn
Lycium cooperi – peach thorn

VIBURNACEAE – MUSKROOT FAMILY

Sambucus mexicana – blue elderberry

ZYGOPHYLLACEAE – CALTROP FAMILY

Larrea tridentata – creosote bush

Gymnosperms and Gnetophytes

CUPRESSACEAE – CYPRESS FAMILY

Juniperus californica – California juniper

EPHEDRACEAE – EPHEDRA FAMILY

Ephedra nevadensis – Nevada joint fir
Ephedra viridis – Mormon tea

Monocots

AGAVACEAE – AGAVE FAMILY

Hesperoyucca whipplei – chaparral yucca
Yucca brevifolia – Joshua tree

LILIACEAE – LILY FAMILY

Calochortus kennedyi var. *kennedyi* – desert mariposa lily

MELANTHIACEAE – FALSE HELLEBORE FAMILY

Toxicoscordion brevibracteatum – desert deathcamas

POACEAE – GRASS FAMILY

* *Bromus diandrus* – ripgut brome
* *Bromus rubens* – red brome
* *Bromus tectorum* – cheatgrass
* *Elymus elymoides* – squirreltail
* *Hordeum murinum* – mouse barley

Melica imperfecta – smallflower melicgrass

Poa secunda – onesided bluegrass

* *Schismus barbatus* – common Mediterranean grass

Stipa speciosa – desert needlegrass

THEMIDACEAE – BRODIAEA FAMILY

Dipterostemon capitatus – bluedicks

Muilla coronata – crowned muilla

* signifies introduced (non-native) species

Appendix E
Wildlife Compendium

Birds

Blackbirds, Orioles and Allies

ICTERIDAE – BLACKBIRDS

Sturnella neglecta – western meadowlark

Cardinals, Grosbeaks and Allies

CARDINALIDAE – CARDINALS AND ALLIES

Piranga ludoviciana – western tanager

Finches

FRINGILLIDAE – FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus – house finch

Spinus psaltria – lesser goldfinch

Flycatchers

TYRANNIDAE – TYRANT FLYCATCHERS

Sayornis saya – Say's phoebe

Hawks

ACCIPITRIDAE – HAWKS, KITES, EAGLES, AND ALLIES

Buteo jamaicensis – red-tailed hawk

Jays, Magpies and Crows

CORVIDAE – CROWS AND JAYS

Corvus corax – common raven

Mockingbirds and Thrashers

MIMIDAE – MOCKINGBIRDS AND THRASHERS

Mimus polyglottos – northern mockingbird

Toxostoma redivivum – California thrasher

New World Quail

ODONTOPHORIDAE – NEW WORLD QUAIL

Callipepla californica – California quail

Pigeons and Doves

COLUMBIDAE – PIGEONS AND DOVES

Zenaida macroura – mourning dove

Roadrunners and Cuckoos

CUCULIDAE – CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus – greater roadrunner

Shrikes

LANIIDAE – SHRIKES

Lanius ludovicianus – loggerhead shrike

Thrushes

TURDIDAE – THRUSHES

Sialia currucoides – mountain bluebird

Woodpeckers

PICIDAE – WOODPECKERS AND ALLIES

Colaptes auratus – northern flicker

Wrens

TROGLODYTIDAE – WRENS

Campylorhynchus brunneicapillus – cactus wren

New World Sparrows

PASSERELLIDAE – NEW WORLD SPARROWS

Melozone crissalis – California towhee

Spizella breweri – Brewer's sparrow

Spizella passerina – chipping sparrow

Zonotrichia leucophrys – white-crowned sparrow

Mammals

Cats

FELIDAE – CATS

Lynx rufus – bobcat

Hares and Rabbits

LEPORIDAE – HARES AND RABBITS

Lepus californicus – black-tailed jackrabbit

Sylvilagus audubonii – desert cottontail

Kangaroo Rats

HETEROMYIDAE – POCKET MICE AND KANGAROO RATS

Dipodomys sp. – kangaroo rat

Squirrels

SCIURIDAE – SQUIRRELS

Ammospermophilus leucurus – white-tailed antelope squirrel

Otospermophilus beecheyi – California ground squirrel

Rats, Mice, and Voles

CRICETIDAE – RATS, MICE, AND VOLES

Peromyscus maniculatus – eastern deermouse

Reptiles

Lizards

PHRYNOSOMATIDAE – IGUANID LIZARDS

Sceloporus uniformis – yellow-backed spiny lizard

Uta stansburiana – common side-blotched lizard

TEIIDAE – WHIPTAIL LIZARDS

Aspidoscelis tigris – tiger whiptail

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Appendix F

Special-Status Plants Potentially Occurring within the Biological Survey Area

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur[1]
Asclepias nyctaginifolia	Mojave milkweed	None/None/2B.1	Mojavean desert scrub, pinyon and juniper woodland/perennial herb/ May–June/2,870–5,575	**Not expected to occur.** The biological survey area (BSA) is within the species known elevation range, and there is suitable Mojavean desert scrub vegetation present to support this species. However, the BSA is outside of the species' geographic range, with the majority of records occurring northeast, near the Castle Mountains National Monument (CCH 2023). Additionally, this species was not detected during spring 2023 focused rare plant surveys.
Astragalus lentiginosus var. *antonius*	San Antonio milk-vetch	None/None/1B.3	Lower montane coniferous forest, upper montane coniferous forest/ perennial herb/Apr–July/4,920–8,530	**Not expected to occur.** The BSA is outside of the species' known elevation range, and there is no suitable lower or upper coniferous forest vegetation present to support this species.
Botrychium ascendens	upswept moonwort	None/None/2B.3	Lower montane coniferous forest, meadows and seeps; mesic/ perennial rhizomatous herb/ (June)July–Aug/3,655–9,990	**Not expected to occur.** Although the BSA is within the species' known elevation range, there is no suitable lower montane coniferous forest, meadows, or seeps vegetation present to support this species.
Botrychium crenulatum	scalloped moonwort	None/None/2B.2	Bogs and fens, lower montane coniferous forest, marshes and swamps, meadows and seeps, upper montane coniferous forest/perennial rhizomatous herb/June–Sep/ 4,160–10,760	**Not expected to occur.** The BSA is outside of the species' known elevation range, and there is no suitable bog, fen, coniferous forest, marsh, swamp, or seep vegetation present to support this species.
Calochortus palmeri var. *palmeri*	Palmer's mariposa-lily	None/None/1B.2	Chaparral, lower montane coniferous forest, meadows and seeps; mesic/ perennial bulbiferous herb/Apr–July/ 2,325–7,840	**Not expected to occur.** Although the BSA is within the species' known elevation range, there is no suitable chaparral, coniferous forest, meadow, or seep vegetation present to support this species.
Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover	None/None/1B.2	Chaparral, meadows and seeps, pebble (pavement) plain, riparian woodland, upper montane coniferous	**Not expected to occur.** The BSA is outside of the species' known elevation range, and there is no suitable chaparral, meadow, seep,

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur[1]
			forest; mesic/annual herb (hemiparasitic)/May–Aug/ 4,265–7,840	pebble pavement, riparian woodland, or upper montane coniferous forest vegetation present to support this species.
Chorizanthe xanti var. *leucotheca*	white-bracted spineflower	None/None/1B.2	Coastal scrub, Mojavean desert scrub, pinyon and juniper woodland; gravelly (sometimes), sandy (sometimes)/ annual herb/Apr–June/985–3,935	**Not expected to occur.** The BSA is within the species known elevational range and contains suitable Mojavean desert scrub vegetation. However, the BSA appears to be outside the known geographic range of the species, with the majority of records occurring within or south of the Transverse Ranges (CCH 2023). Additionally, this species was not detected during spring 2023 focused rare plant surveys.
Claytonia peirsonii ssp. *peirsonii*	Peirson's spring beauty	None/None/1B.2	Subalpine coniferous forest, upper montane coniferous forest; granitic, metamorphic, scree, talus/ perennial herb/(Mar)May–June/ 4,950–9,005	**Not expected to occur.** The BSA is outside of the species' known elevation range, and there is no suitable coniferous vegetation present to support this species.
Deinandra mohavensis	Mojave tarplant	None/SE/1B.3	Chaparral, coastal scrub, riparian scrub; mesic/annual herb/ (Jan–May)June–Oct/2,095–5,245	**Not expected to occur.** Although the BSA is within the species' known elevation range, there is no suitable chaparral, coastal scrub, or riparian scrub vegetation present to support this species.
Diplacus mohavensis	Mojave monkeyflower	None/None/1B.2	Joshua tree "woodland," Mojavean desert scrub; gravelly (sometimes), sandy (sometimes), washes (often)/ annual herb/Apr–June/1,965–3,935	**Not expected to occur.** The BSA is within the species' known elevation range, and there is suitable Joshua tree woodland and Mojavean desert scrub vegetation present to support this species. Additionally, the BSA contains sandy soils and washes (USDA 2023). However, the site appears to be outside the known geographic range of the species, with the majority of records occurring northeast of the BSA, near Barstow (CCH 2023). Additionally, this species was not detected

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur[1]
				during spring 2023 focused rare plant surveys.
Eremothera boothii ssp. *boothii*	Booth's evening-primrose	None/None/2B.3	Joshua tree "woodland," pinyon and juniper woodland/annual herb/ Apr–Sep/2,670–7,870	**Not expected to occur.** The BSA is within the species' known elevation range and contains suitable Joshua tree woodland vegetation. However, most records of this species are north of the BSA near the Mojave River. The nearest mapped California Natural Diversity Database (CNDDB) record is approximately 12 miles northeast of the BSA (CDFW 2023). Additionally, this species was not detected during spring 2023 focused rare plant surveys.
Helianthus nuttallii ssp. *parishii*	Los Angeles sunflower	None/None/1A	Marshes and swamps/perennial rhizomatous herb/Aug–Oct/35–5,000	**Not expected to occur.** Although the BSA is within the species' known elevation range, there is no suitable marsh or swamp vegetation present to support this species.
Heuchera parishii	Parish's alumroot	None/None/1B.3	Alpine boulder and rock field, lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest; carbonate (sometimes), rocky/perennial rhizomatous herb/June–Aug/ 4,920–12,465	**Not expected to occur.** The BSA is outside of the species' known elevation range, and there is no suitable alpine or coniferous forest vegetation present to support this species.
Lilium parryi	lemon lily	None/None/1B.2	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest; mesic/perennial bulbiferous herb/ July–Aug/4,000–9,005	**Not expected to occur.** The BSA is outside of the species' known elevation range, and there is no suitable coniferous forest, meadow, seep, or riparian forest vegetation present to support this species.
Linanthus concinnus	San Gabriel linanthus	None/None/1B.2	Chaparral, lower montane coniferous forest, upper montane coniferous forest; openings, rocky/annual herb/ Apr–July/4,985–9,185	**Not expected to occur.** The BSA is outside of the species' known elevation range, and there is no suitable chaparral or coniferous forest vegetation present to support this species.

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur[1]
Loeflingia squarrosa var. *artemisiarum*	sagebrush loeflingia	None/None/2B.2	Desert dunes, Great Basin scrub, Sonoran desert scrub; sandy/annual herb/Apr–May/2,295–5,295	**Not expected to occur.** The BSA is within the species' known elevation range and contains suitable Great Basin scrub vegetation. However, the majority of records of this species are south of the Transverse Ranges or north of Lancaster (CCH 2023). Additionally, this species was not detected during spring 2023 focused rare plant surveys.
Lycium parishii	Parish's desert-thorn	None/None/2B.3	Coastal scrub, Sonoran desert scrub/perennial shrub/Mar–Apr/ 445–3,280	**Not expected to occur.** The BSA is outside of the species' known elevation range, and there is no suitable coastal scrub or Sonoran desert scrub vegetation present.
Monardella australis ssp. *jokerstii*	Jokerst's monardella	None/None/1B.1	Chaparral, lower montane coniferous forest; alluvial terraces, drainages, scree, slopes, talus, washes/ perennial rhizomatous herb/July–Sep/ 4,425–5,740	**Not expected to occur.** The BSA is outside of the species' known elevation range, and there is no suitable chaparral or coniferous forest vegetation present.
Opuntia basilaris var. *brachyclada*	short-joint beavertail	None/None/1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland/perennial stem/ Apr–June(Aug)/1,390–5,905	**Not expected to occur.** The BSA is within the species' known elevation range and contains suitable Joshua tree woodland and Mojavean desert scrub vegetation. Additionally, there is a CNDDB record less than 1 mile southeast of the BSA (CDFW 2023). However, this species was not detected during spring 2023 focused rare plant surveys.

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur[1]
Oreonana vestita	woolly mountain-parsley	None/None/1B.3	Lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest; gravelly (sometimes), talus (sometimes)/ perennial herb/Mar–Sep/ 5,295–11,480	**Not expected to occur.** The BSA is outside of the species' known elevation range, and there is no suitable coniferous forest vegetation present.
Orobanche valida ssp. *valida*	Rock Creek broomrape	None/None/1B.2	Chaparral, pinyon and juniper woodland; granitic/perennial herb (parasitic)/May–Sep/3,375–6,560	**Not expected to occur.** Although the BSA is within the species' known elevation range, there is no suitable chaparral or pinyon and juniper woodland vegetation present to support this species.
Pediomelum castoreum	Beaver Dam breadroot	None/None/1B.2	Joshua tree woodland, Mojavean desert scrub; roadsides, sandy, washes/perennial herb/Apr–May/ 2,000–5,000	**Not expected to occur.** The BSA is within the species' known elevation range and contains suitable Joshua tree woodland and Mojavean desert scrub vegetation, as well as sandy washes (USDA 2023). However, most records of this species occur north of Victorville (CCH 2023). Additionally, this species was not detected during spring 2023 focused rare plant surveys.
Saltugilia latimeri	Latimer's woodland-gilia	None/None/1B.2	Chaparral, Mojavean desert scrub, pinyon and juniper woodland; granitic (often), rocky (sometimes), sandy (sometimes), washes (sometimes)/ annual herb/Mar–June/1,310–6,230	**Not expected to occur.** The BSA is within the species' known elevation range and contains suitable Mojavean desert scrub vegetation, as well as sandy soil and washes. However, the majority of records of this species occur in the foothills of the San Bernardino Mountains. Additionally, this species was not detected during spring 2023 focused rare plant surveys.
Schoenus nigricans	black bog-rush	None/None/2B.2	Marshes and swamps/perennial herb/Aug–Sep/490–6,560	**Not expected to occur.** Although the BSA is within the species' known elevation range, there is no suitable marsh or swamp vegetation present to support this species.

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur[1]
Scutellaria bolanderi ssp. *austromontana*	southern mountains skullcap	None/None/1B.2	Chaparral, cismontane woodland, lower montane coniferous forest; mesic/perennial rhizomatous herb/June–Aug/1,390–6,560	**Not expected to occur**. Although the BSA is within the species' known elevation range, there is no suitable chaparral, cismontane woodland, or coniferous forest vegetation present to support this species.
Symphyotrichum defoliatum	San Bernardino aster	None/None/1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, meadows and seeps, valley and foothill grassland; streambanks/perennial rhizomatous herb/July–Nov/5–6,690	**Not expected to occur**. Although the BSA is within the species' known elevation range, there is no suitable cismontane woodland, coastal scrub, coniferous forest, marsh, swamp, or grassland vegetation present to support this species.
Symphyotrichum greatae	Greata's aster	None/None/1B.3	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, riparian woodland; mesic/perennial rhizomatous herb/June–Oct/985–6,590	**Not expected to occur**. Although the BSA is within the species' known elevation range, there is no suitable broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, or riparian woodland vegetation present to support this species.
Yucca brevifolia	Western Joshua tree	None/SC/None	Great Basin grassland, Great Basin scrub, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland, Sonoran desert scrub, valley and foothill grassland/ perennial leaf succulent/Apr–May/ 1,310–6,560	**Observed**. In total, 972 western Joshua tree individuals were observed within the Joshua tree inventory survey area. Of the 972 trees found within the Joshua tree inventory survey area, 893 individuals were observed within the project site; the remaining 79 individuals were observed within the 50-foot Joshua tree inventory survey area.

Notes:

[1] **Determinations:**

Not expected to occur: The biological survey area (BSA) is outside the known geographic or elevational range of the species and/or the site does not contain suitable habitat for the species, or the species was not detected after completion of focused rare plant surveys.

Observed: Species was observed within the BSA during focused rare plant surveys.

Status Legend

SC: State candidate for listing

SE: State listed as endangered

California Rare Plant Rank (CRPR)

1A: Plants presumed extirpated in California and either rare or extinct elsewhere

1B: Plants rare, threatened, or endangered in California and elsewhere

2B: Plants rare, threatened, or endangered in California but more common elsewhere

- 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)

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Appendix G

Special-Status Wildlife Potentially Occurring within the Biological Survey Area

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur[1]
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 biological survey area (BSA) contains semi-arid areas near washes and Joshua tree woodland habitat. The BSA does not include any stream channels that would support breeding habitat for this species. Local records of this species are associated with the Mojave River (CDFW 2023).
Rana draytonii	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	**Not expected to occur.** The BSA lacks perennial water features necessary to support this species.
Rana muscosa	mountain yellow-legged frog	FE/SE, WL	Lakes, ponds, meadow streams, isolated pools, and open riverbanks; rocky canyons in narrow canyons and in chaparral	**Not expected to occur.** The BSA lacks perennial water features necessary to support this species.
Reptiles				
Aspidoscelis tigris stejnegeri	San Diegan tiger whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	**Not expected to occur**. The BSA lacks chaparral, woodland, or riparian habitat necessary to support this species. The nearest California Natural Diversity Database (CNDDB) occurrence is approximately 10 miles south of the BSA near Cajon Wash (CDFW 2023).
Charina umbratica	southern rubber boa	None/ST	Montane oak–conifer and mixed-conifer forests, montane chaparral, wet meadows; usually in vicinity of streams or wet meadows	**Not expected to occur.** The BSA lacks montane oak–conifer, mixed-conifer forest, montane chaparral, or wet meadow habitat necessary to support this species. Additionally, there are no streams within the BSA to support this species.
Emys marmorata	western pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	**Not expected to occur.** The BSA lacks perennial water features necessary to support this species.

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur[1]
Gopherus agassizii	Mojave desert tortoise	FT/ST	Arid and semi-arid habitats in Mojave and Sonoran Deserts, including sandy or gravelly locations along riverbanks, washes, sandy dunes, canyon bottoms, desert oases, rocky hillsides, creosote flats, and hillsides	**Not expected to occur**. Mojave desert tortoise was not observed during the 2023 focused protocol-level surveys. The BSA contains arid habitats in Mojave desert habitat. The nearest CNDDB record is 2 miles southwest of the BSA near Bellflower Street where one adult was observed in 2000 (CDFW 2023). The BSA is immediately adjacent to Phelan Road, which has a high traffic volume, which increases the likelihood that resident tortoises would have suffered mortality due to vehicle strikes. Additionally, on a regional level, there are barriers to movement (residential development, the California Aqueduct, and roads with high-volume traffic, including Phelan Road and U.S. Highway 395) from potential population sources found in large undeveloped areas of suitable habitat.
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	**Low potential to occur**. The BSA contains sandy soils (USDA 2023) but lacks coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, or annual grassland habitats. There are several CNDDB records within 5 miles of the BSA; however, they are historical, extirpated, or have no date associated (CDFW 2023).
Thamnophis hammondii	two-striped gartersnake	None/SSC, SCE	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	**Not expected to occur**. The BSA lacks perennial water features necessary to support this species.
Birds				
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	**Not expected to occur**. The BSA lacks emergent wetland vegetation used by tricolored blackbird as nesting habitat.

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur[1]
Aquila chrysaetos (nesting and wintering)	golden eagle	None/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	**Not expected to nest, moderate potential to forage**. Although the BSA contains open shrubland that may be used for foraging, it lacks large trees or cliffs for nesting.
Asio otus (nesting)	long-eared owl	BCC/SSC	Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats	**Not expected to occur**. The BSA lacks riparian, live oak thicket, dense tree stands, or coniferous forest nesting habitat for this species.
Athene cunicularia (burrow sites and some wintering sites)	burrowing owl	BCC/SSC, SC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	**Moderate potential to occur**. The BSA contains suitable open scrub habitat. Additionally, several burrows of suitable size were observed during the 2023 biological reconnaissance survey. The nearest CNDDB record is approximately 0.5 miles south of the BSA where one adult was observed in 1989 (CDFW 2023). However, no burrowing owls or conclusive burrowing owl sign were observed during 2023 field surveys.
Buteo swainsoni (nesting)	Swainson's hawk	None/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	**Not expected to occur**. The BSA lacks woodland, savanna, or riparian habitat used for nesting. Additionally, the BSA lacks grassland or agricultural areas used as foraging habitat. Most records of this species are located to the south in the transverse ranges, or north near Mojave Narrows regional park (Cornell Lab or Ornithology 2023).
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	**Not expected to occur**. The BSA lacks riparian woodland or forest habitat to support this species.

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur[1]
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	**Not expected to occur**. The BSA lacks riparian habitat or perennial water features to support this species.
Haliaeetus leucocephalus (nesting and wintering)	bald eagle	FPD/FP, SE	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	**Not expected to occur**. There are no large bodies of water in the vicinity of the BSA that could support suitable nesting habitat for this species. All local CNDDB records of this species are associated with Silverwood Lake (CDFW 2023).
Icteria virens (nesting)	yellow-breasted chat	None/SSC	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	**Not expected to occur**. The BSA lacks riparian woodland or forest habitat to support this species.
Lanius ludovicianus (nesting)	loggerhead shrike	None/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	**Observed**. A loggerhead shrike was observed on site by Dudek biologists on February 17, 2023, during the biological reconnaissance and jurisdictional delineation surveys, and again on May 4, 2023, during the focused desert tortoise survey.
Piranga rubra (nesting)	summer tanager	None/SSC	Nests and forages in mature desert riparian habitats dominated by cottonwoods and willows	**Not expected to occur**. The BSA lacks cottonwood and willow desert riparian habitat to support this species.
Setophaga petechia (nesting)	yellow warbler	None/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	**Not expected to occur.** The BSA lacks riparian, oak woodland, montane chaparral, ponderosa pine, or mixed-conifer habitats that the yellow warbler uses for nesting and foraging.

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur[1]
Toxostoma lecontei	LeConte's thrasher	BCC/SSC	Nests and forages in desert wash, desert scrub, alkali desert scrub, desert succulent, and Joshua tree habitats; nests in spiny shrubs or cactus	**High potential to occur**. The BSA contains desert wash, desert scrub, and Joshua tree habitat with spiny shrubs such as *Lycium* ssp. and *Scutellaria* ssp., which are suitable for nesting. The nearest mapped CNDDB record is approximately 6 miles east of the BSA. Although this is a historical record from 1917, there are more current eBird sightings less than 5 miles from the BSA (CDFW 2023; Cornell Lab of Ornithology 2023).
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	**Not expected to occur**. The BSA lacks stream and riparian habitat necessary for nesting and foraging to support this species.
Vireo vicinior (nesting)	gray vireo	None/SSC	Nests and forages in pinyon–juniper woodland, oak, and chamise and redshank chaparral	**Not expected to occur**. The BSA lacks pinyon–juniper woodland, oak, or chamise and redshank chaparral habitat to support this species.
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in human-made structures and trees	**Not expected to roost, low potential to forage**. The BSA contains shrubland habitat but lacks rocky outcrops, human-made structures, or trees typically used for roosting. The nearest mapped CNDDB record is approximately 9 miles northwest of the BSA, near the Mojave River (CDFW 2023).

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur[1]
Chaetodipus fallax pallidus	pallid San Diego pocket mouse	None/SSC	Desert wash, desert scrub, desert succulent scrub, and pinyon–juniper woodland	**Low potential to occur.** The BSA contains suitable desert scrub habitat. Additionally, the BSA contains sandy soils (USDA 2023) with herbaceous areas, consistent with the microhabitat needs of the species. The nearest mapped CNDDB record is approximately 9 miles northwest, near the Mojave River; however, this is a historical record (CDFW 2023). Additionally, this species was not detected during 2023 live trapping or camera trapping surveys for Mohave ground squirrel conducted by Dipodomys Ecological Consulting (DEC 2023).
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, human-made structures, and tunnels	**Not expected to occur.** The BSA lacks riparian, coniferous, or deciduous forest habitat. Additionally, the BSA lacks limestone caves, lava tubes, human-made structures, or tunnels used for roosting.
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.** Although the BSA contains desert scrub habitat, it lacks rocky canyons, cliffs, trees, or tunnels used for roosting.
Glaucomys oregonensis californicus	San Bernardino flying squirrel	None/SSC	Coniferous and deciduous forests, including riparian forests	**Not expected to occur.** The BSA lacks forested habitat necessary to support this species.
Microtus californicus mohavensis	Mojave river vole	None/SSC	Wet, weedy, herbaceous areas along the Mojave River	**Not expected to occur.** The BSA contains ephemeral washes, which become dry after the rainy season. It lacks consistently wet herbaceous habitat necessary to support this species.

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur[1]
Ovis canadensis nelsoni	Nelson's bighorn sheep	None/FP	Steep slopes and cliffs, rough and rocky topography, sparse vegetation; also canyons, washes, and alluvial fans	**Not expected to occur**. The BSA lacks rocky topography, cliffs, or canyons. The only CNDDB record of this species in the nine U.S. Geological Survey quadrangles containing the BSA is near Mount Baldy (CDFW 2023).
Spermophilus (Xerospermophilus) mohavensis	Mohave ground squirrel	None/ST	Desert scrub habitats including those dominated by creosote bush and burrobush, desert sink scrub, and desert saltbush scrub	**Not expected to occur**. Mohave ground squirrel was not observed during the 2023 focused protocol surveys. The BSA contains desert scrub habitat, but almost all local records of the species are associated with creosote bush, which was very minimal within the BSA. Additionally, the BSA lacks saltbush scrub, desert sink scrub, or burrobush. The nearest mapped CNDDB record is approximately 2 miles north of the BSA (CDFW 2023).

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur[1]
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	**Not expected to occur**. While the BSA contains dry, open, treeless areas and contains the Hesperia soils series, which is described as friable (USDA 2023a), the BSA lacks coastal scrub or agricultural areas. Furthermore, no suitable burrows or diagnostic sign (i.e., tracks, scat, and claw marks along the sides of burrows) were observed during the habitat assessment conducted on February 17, 2023. Additionally, the BSA is located in an urbanized area of Hesperia with U.S. Highway 395 to the east, the California Aqueduct and Phelan Road to the north, in addition to residential development to the west. Furthermore, pre-construction American badger surveys for the Hesperia Commerce Center II Project, located immediately north of the project, were conducted on October 1 and 29, 2024, and were negative. The nearest mapped CNDDB record is approximately 7 miles southeast of the BSA near Silverwood Lake (CDFW 2023).

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur[1]
Vulpes macrotis arsipus	desert kit fox	None/None[2]	Sparse vegetated scrub habitats such as creosote scrub communities that support abundant rodent populations (Center for Biological Diversity 2013)	**Not expected to occur.** The BSA contains suitable desert scrub habitat; however, no suitable burrows or diagnostic sign (i.e., scat, tracks, freshly dug dirt) were observed during the habitat assessment conducted on February 17, 2023, nor was the species was observed during the camera trap that was deployed as part of the Mohave ground squirrel focused surveys. Furthermore, the BSA is located in an urbanized area of Hesperia with U.S. Highway 395 to the east, the California Aqueduct and Phelan Road to the north, in addition to residential development to the west. Furthermore, pre-construction desert kit fox surveys for the Hesperia Commerce Center II Project, located immediately north of the project, were conducted on October 1 and 29, 2024, and were negative.

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur[1]
Invertebrates				
Bombus crotchii	Crotch's bumble bee	None/SCE	Open grassland and scrub communities supporting suitable floral resources	**Not expected to occur.** Although the BSA does contain open desert scrub communities with *Phacelia, Eschscholzia,* and *Eriogonum* genera, which are some of the Crotch's bumble bee preferred food plants (CDFW 2023c), many of the flower patches are small and disjointed, forming marginal potential habitat for this species. The nearest CNDDB record is approximately 6 miles south of the BSA near Cajon Junction (CDFW 2023c). However, Crotch's bumble bee pre-construction surveys for the Hesperia Commerce Center II Project, located immediately north of the project, were conducted on September 24 and 25, 2024, and were negative. Based on the above discussion, this species is not expected to occur within the BSA.
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. The BSA lacks forblands, grassland, coastal scrub, or chaparral habitat. Additionally, soils within the BSA are sandy and without cryptogamic crusts (USDA 2023).

Scientific Name	Common Name	Status (Federal/State)	Primary Habitat Associations	Potential to Occur[1]
Danaus plexippus pop. 1	monarch - California overwintering population	FC/None	Wind-protected tree groves with nectar sources and nearby water sources	**Not expected to occur**. The BSA lacks wind-protected tree groves with nectar sources and nearby water sources. Additionally, most records of overwintering populations are located within proximity to the ocean, where temperatures are more moderate.

Notes:

[1] **Determinations:**
High potential to occur: The species has not been documented within the biological survey area (BSA) but is known to recently occur in the vicinity and suitable habitat is present.
Moderate potential to occur: The species has not been documented within the BSA or in the vicinity, but the BSA is located within the known range of the species and suitable habitat for the species is present.
Low potential to occur: The species has not been documented within the BSA or in the vicinity, but the BSA is within the known range of the species; however, suitable habitat for the species within the BSA is of low quality.
Not expected to occur: The BSA is located outside the known geographic or elevational range of the species and/or the site does not contain suitable habitat for the species, or the species was not observed during focused protocol-level surveys.

[2] Section 4000 of the California Fish and Game Code defines "kit fox" as a fur-bearing animal.

Status Designations

Federal

BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
FC: Federal candidate for listing
FE: Federally listed as endangered
FPD: Federally proposed for delisting
FT: Federally listed as threatened

State

FP: California Fully Protected species
SC: State candidate for listing as threatened or endangered
SCE: State candidate for listing as endangered
SE: State listed as endangered
SSC: California Species of Special Concern
ST: State listed as threatened
WL: California Watch List species

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Appendix H
Burrowing Owl Relocation Plan

Burrowing Owl Relocation Plan

Phelan 20 Project

FEBRUARY 2025

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
CDFW	California Department of Fish and Wildlife
MM	Mitigation Measure
Plan	Burrowing Owl Relocation Plan
project	Phelan 20 Project

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1 Purpose and Objectives

This Burrowing Owl Relocation Plan (Plan) describes the burrowing owl (*Athene cunicularia*) monitoring and reporting requirements during construction of the Phelan 20 Project (project), as recommended in the Biological Resources Technical Report prepared for the project (Dudek 2024). This Plan was prepared in accordance with Mitigation Measure (MM) BIO-10 per the Biological Resources Technical Report. The full text of MM-BIO-10 is provided in Section 1.1 herein for ease of reference.

This Plan is intended to identify when passive displacement of burrowing owls will be used, the methods that will be implemented to perform passive displacement, and the monitoring and reporting that will be required if passive displacement is performed. More specifically, this Plan includes descriptions of the following requirements for passive displacement procedures:

- Methods to confirm a burrow is active
- Measures that could be used to avoid and minimize impacts
- Methods to be used to determine vacancy and excavation timing
- Methods for burrow excavation
- Methods for removal of other potential owl burrow surrogates or refugia
- Requirements for reporting on the excavation and closure of burrows
- Requirements for monitoring to evaluate success
- Requirements for reporting on long-term burrowing owl deterrence of the impacted site

1.1 Mitigation Measure BIO-10

This Plan was prepared in accordance with MM-BIO-10, per the project's Biological Resources Technical Report (Dudek 2024). The full text of MM-BIO-10 is provided below:

MM-BIO-10 Pre-Construction Surveys for Burrowing Owl and Avoidance.

One pre-construction burrowing owl survey shall be completed no more than 14 days before initiation of site preparation or grading activities and a second survey shall be completed within 24 hours of the start of site preparation or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the project site shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (prepared by the California Department of Fish and Game [now California Department of Fish and Wildlife; CDFW]) in 2012 or current version.

If burrowing owls are detected, and if impacts to burrowing owl cannot be feasibly avoided, the project applicant will consult with California Department of Fish and Wildlife (CDFW) and obtain appropriate take authorization from the CDFW through the California Endangered Species Act (CESA) Incidental Take Permit process.

In the event an Incidental Take Permit is needed, mitigation for direct impacts to burrowing owl shall be fulfilled through compensatory mitigation at a minimum 1:1 habitat replacement of equal or better functions and values to those impacted by the project, or as otherwise determined through the Incidental Take Permit process. Mitigation shall be accomplished either through off-site conservation or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank, and lands are conserved separately, a cost estimate shall be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source shall be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount shall be established following the completion of a project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record shall take into account all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

2 Background

2.1 Project Overview

The approximately 22.6-acre site, including the 21.0-acre project site and 1.6-acre off-site improvements area, is in the northwestern part of Hesperia, which is within the Victor Valley Region of San Bernardino County (Figure 1, Project Location). The project site is bounded to the north by Phelan Road, south by Sultana Street, west by Los Banos Avenue and two single family residential lots, and east by vacant land and U.S. Highway 395. The project would consist of approximately 419,700 square feet of industrial/warehouse. In addition, the project would involve associated improvements, including loading docks, truck and vehicle parking, and landscaped areas. Additionally, the project would include improvements along Phelan Road, including frontage landscaping and pedestrian improvements. A variety of trees, shrubs, plants, and land covers would be planted within the project frontage's landscape setback area and within the landscape areas around the proposed industrial/warehouse building and throughout the project site.

2.2 2023 Biological Survey Results

Biological resource surveys of the 22.6-acre biological survey area (BSA), which includes the project site plus off-site improvement areas, were conducted February 2023 through July 2023. During an initial biological reconnaissance survey of the BSA conducted on February 27, 2023, Dudek biologists observed and mapped several burrows of suitable burrowing owl size (greater than or equal to 4 inches in diameter). During 2023 Desert Tortoise surveys, Dudek biologists incidentally observed and mapped additional suitable burrows, including a single burrow with whitewash sign. No pellets, feathers, or other burrowing owl sign were observed during 2023 field surveys.

Given the presence of suitable open shrub habitat and suitable sized burrows within the BSA (Figure 2, Suitable Burrowing Owl Burrow Locations), burrowing owl could occupy the BSA prior to construction. Pursuant to the California Fish and Game Code and the Migratory Bird Treaty Act, a pre-construction survey in compliance with the California Department of Fish and Wildlife's (CDFW) 2012 Staff Report on Burrowing Owl Mitigation (2012 Staff Report) (CDFW 2012) would be necessary to re-evaluate the locations of potential burrowing owl burrows within the project limits so that impacts to owls and active owl nests can be avoided or minimized. Consistent with MM-BIO-10, a pre-construction survey for burrowing owl will be conducted in areas supporting potentially suitable habitat no more than 14 days prior to the start of construction activities, and a second survey will be completed within 24 hours of the start of site preparation or grading activities.

2.3 Mitigation Measures

If burrowing owls are detected during the pre-construction survey, and if impacts to burrowing owl cannot be feasibly avoided, the project applicant will consult with CDFW and obtain appropriate take authorization from the CDFW through the CESA Incidental Take Permit process. This Plan shall be reviewed and approved by CDFW prior to implementation. Furthermore, implementation of this Plan is likely to require a permit (e.g., Scientific Collection Permit or ITP).

In the event an Incidental Take Permit is needed, mitigation for direct impacts to burrowing owl shall be fulfilled through compensatory mitigation at a minimum 1:1 habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through the Incidental Take Permit process. Mitigation shall be accomplished either through off-site conservation or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank, and lands are conserved separately, a cost estimate shall be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source shall be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount shall be established following the completion of a Project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record shall take into account all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

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2.4 Qualified Biologist

In accordance with the 2012 Staff Report, a qualified biologist meets the following minimum qualifications (CDFG 2012):

- Familiarity with the species and its local ecology
- Experience conducting habitat assessments and non-breeding- and breeding-season surveys, or experience with these surveys conducted under the direction of an experienced surveyor
- Familiarity with the appropriate state and federal statuses related to burrowing owls, scientific research, and conservation
- Experience with analyzing impacts of development on burrowing owls and their habitat

In accordance with the 2012 Staff Report, a qualified biologist will perform the burrowing owl surveys as outlined in MM-BIO-10. Occupied burrows will not be disturbed during the nesting season. Occupied burrows will also not be disturbed during the non-nesting season until a qualified biologist verifies that either (1) nesting has not begun or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival.

3 Avoidance and Minimization Measures

3.1 Pre-Construction Burrowing Owl Surveys

In accordance with MM-BIO-10, a qualified biologist (see Section 2.4) will conduct surveys of the project site and a 150-meter buffer, where legally accessible, no more than 14 days prior to the start of construction activities and again within 24 hours of the start of site preparation or grading. The surveys will identify active wintering or breeding burrowing owls within these areas.

The survey methods are detailed in the 2012 Staff Report (CDFW 2012) and will consist of walking parallel transects 7 to 20 meters apart over the entire survey area and noting all burrowing owls present and any suitably sized burrows (i.e., 4 inches or greater in diameter) with burrowing owl sign (e.g., whitewash, feathers, pellets). The results of the surveys will be submitted to CDFW.

If burrowing owls or active burrowing owl sign are detected during pre-construction surveys, the qualified biologist or monitoring biologist will coordinate with the contractor to avoid and minimize impacts to burrowing owl by implementing the measures described below.

3.2 Buffer Distances

If occupied burrowing owl burrows are detected outside of the project site and off-site improvements areas but within the 150-meter buffer during the pre-construction surveys, the active burrow will be flagged to include a 160-foot buffer during the non-breeding season and a 250-foot buffer during the breeding season, or as otherwise determined by the qualified biologist. The buffer will be staked and flagged. Ground-disturbing activities during the breeding season will be restricted within the buffer. Depending on the level of disturbance, a smaller buffer may be established in consultation with the lead agency.

The active burrows will be monitored to ensure that the buffer distance is effective. Effective buffers minimize direct impacts by providing space between the owl and the construction activity. In addition, effective buffers minimize indirect impacts by decreasing sound and visual disturbance for the animal. A monitoring biologist will be present during all initial activities adjacent to burrowing owl buffers to monitor bird behavior. In any case where a burrowing owl shows signs of stress or disturbance due to construction activities, all activities in the immediate vicinity will be halted and the buffer distance and construction activities will be re-evaluated. In accordance with MM-BIO-13, no project activities will be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer will remain in place until it is determined that any nesting activity has ended and/or occupied burrows have been vacated.

3.3 Burrow Screening

In cases where it is infeasible to maintain a 160-foot buffer during the non-breeding season or a 250-foot buffer during the breeding season due to environmental, topographic, or construction constraints, the buffer may be reduced and burrows screened to minimize potential impacts to burrowing owls, where appropriate and feasible. This strategy involves screening burrows by installing hay bales, plywood, and/or other fencing material to create a visual and auditory barrier between construction activities and the active burrows. Biological monitors will

determine if the topography of a specific site is appropriate for the use of this technique, and whether this technique will be effective at reducing disturbance.

During the breeding season, hay bales will be stacked three bales high and 50 feet wide. During the non-breeding season, hay bales will be stacked two bales high and 50 feet wide. All hay bales used within the 150-meter buffer of the project site and off-site improvements will be certified as weed free. Perches near the burrow will remain within the sheltered area of the bales, and the bales will not be closer than 2 or 3 feet from the occupied burrow and will be placed as far from the active burrow as possible, outside the nearest work area. During and following installation of the shelter, biological monitors will be present for all ground-disturbing activities within the area between the recommended buffer and the edge of the reduced buffer. Biological monitors will evaluate and make adjustments to the buffer and/or shelter to ensure that impacts to burrowing owl are minimized and the owls are not showing signs of stress or disturbance.

When determining an appropriate buffer setback distance, the qualified biologist will take into consideration any data collected on the individual sensitivities of the burrowing owls present at the project site. This data will be used as a baseline to compare the behavior of burrowing owls within no-disturbance buffers that are smaller than the recommended distances. Biological monitors will have the authority to stop construction or sheltering activities that are disturbing sensitive species, and to make changes to the shelters and buffers in accordance with these guidelines to increase protection of the burrowing owls, if necessary.

Documentation of the installation of a shelter will include the following: where and when the shelter was installed, how long it will be required, anticipated level of construction activity, pictures of the shelter, pictures of installation, a description of the installation, and a description of site conditions. The description should include surrounding vegetation, topography of the area, animals present at the burrow, and line-of-sight conditions between the burrow and construction activities. This information and a status of the shelters will be described in the monthly reports (see Section 5.2, Reporting Requirements).

3.4 Excavation of Inactive Burrows

Excavation of inactive burrows, confirmed inactive based on wildlife camera monitoring, will help deter burrowing owls from occupying construction areas. Pre-construction surveys (described above) will be conducted within the project site to determine if burrows are actively being used. If burrows are suitably sized (i.e., 4 inches or greater in diameter), game cameras will be installed at the entrance for 3 days to confirm owl presence. Inactive burrows will be excavated and refilled by a qualified biologist. To prevent injury to wildlife that might be inside the burrow, all excavation of inactive burrows will be performed using hand tools, escape routes will be installed (flexible plastic pipe), and a mirror or camera will be used to scope during the excavation of all burrows. The excavation of inactive burrows will occur prior to clearing or grading activities.

4 Passive Displacement

If an active burrow is identified in an area where there is potential for it or the tunnel structure to be destroyed or irreversibly affected by construction, and the owl would be in danger, and shelter-in-place, setback distances, and avoidance will not be effective or possible, then passive displacement will be implemented. To the extent feasible, passive displacement will take place such that it is in synch with owl natural dispersal cycles (i.e., early in the non-breeding season, when owls are less site-faithful) (*Hennessy et al*. 2020*; Le Gouar et al*. 2012).

4.1 Determining Vacancy

Passive displacement will only occur outside of the breeding season (September 1 through January 31) after a qualified biologist verifies that juveniles from the burrow are foraging independently and capable of independent survival, or the owls have not begun nesting. If exclusion will occur immediately (within 1 week) after the end of the breeding season (August 31), daily monitoring will be conducted for 1 week to confirm that young have fledged prior to exclusion. Similar to the excavation of inactive burrows, a mirror or camera will be used to scope all previously active burrows to ensure burrows are not occupied by eggs or young.

4.2 Excavation of Active Burrows

Burrowing owls will be excluded from currently occupied burrows by installation of a one-way door in the original burrow and all connected legally accessible surrounding potentially active burrows within 160 feet. One-way doors will remain in place at least 72 hours before excavation. The one-way doors will be monitored for exiting or trapped animals via a game camera. Once a qualified biologist can determine by site surveillance that the old burrow is vacant (i.e., 3 days of negative game camera results), with no sign of fresh use by wildlife, including tracks, scat, or recent excavation, the burrows will be checked with an endoscope (fiber-optic camera) immediately prior to excavation to verify status. Sections of flexible plastic pipe will be inserted into the tunnels during excavation to maintain an escape route for any animals that could be inside the burrow. Each burrow will be refilled with dirt and/or rocks to prevent reoccupation of the burrows. Photographs will be taken of the excavation and closure of the burrow to demonstrate success and sufficiency. Construction will occur as soon as possible following passive relocation and burrow collapse to discourage burrowing owls from re-occupying the disturbance area.

Prior to burrow collapse, the qualified biologist will obtain confirmation that the burrows are empty of wildlife, document the installation of one-way doors 72 hours in advance of burrow excavation, and remove other potential burrow surrogates or refugia on the project site. Burrows that are not threatened by collapse due to the project (i.e., burrows outside the construction area) will not be passively excluded or dismantled.

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5 Monitoring and Reporting

5.1 Monitoring Requirements

In accordance with the 2012 Staff Report, monitoring will occur before, during, and after exclusion of burrowing owls. In accordance with MM-BIO-10, if exclusion occurs, a qualified biologist will conduct daily monitoring for 3 days to confirm owls have vacated the burrows. Monitoring will be performed from 2 hours before sunset to 2 hours following sunset, or 1 hour before sunrise to 2 hours following sunrise, corresponding with the time when burrowing owls are most active; this monitoring time will be extended if owls are active longer. Biologists will examine the collapsed burrows and survey for owl-related impacts and new burrows in the surrounding area. The results of these monitoring efforts and an evaluation of the success of the passive displacement efforts will be included in the monthly compliance reports, along with any needed remedial measures to avoid and/or minimize impacts.

5.2 Reporting Requirements

Pre-Construction Clearance Survey Reports

A report will be submitted to the lead agency documenting the results of the pre-construction surveys. The report will describe the methods and results of the clearance surveys and will serve as notification as to whether owl passive relocation is necessary.

Monthly Reports

If avoidance or passive relocation is implemented, monthly reports will be prepared for submittal to the lead agency. The reports will summarize the construction activities that occurred with the potential to impact burrowing owls, any injuries or fatalities of burrowing owls, the effectiveness and practicality of the avoidance and minimization measures implemented, and recommendations for modifying the protection measures. If passive relocation of burrowing owls is performed, the monthly reports will also include the following: the total number and locations of burrows collapsed, a map of those locations, photographs of the excavation and closure of the burrows, the number and activity of the owls observed leaving the burrows to be excavated, and the methods used to continually make the site inhospitable to burrowing owls and fossorial mammals.

Final Compliance Report

A final compliance report will be submitted to the lead agency summarizing the effectiveness of the mitigation measures and the level of burrowing owl take associated with the project.

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6 References

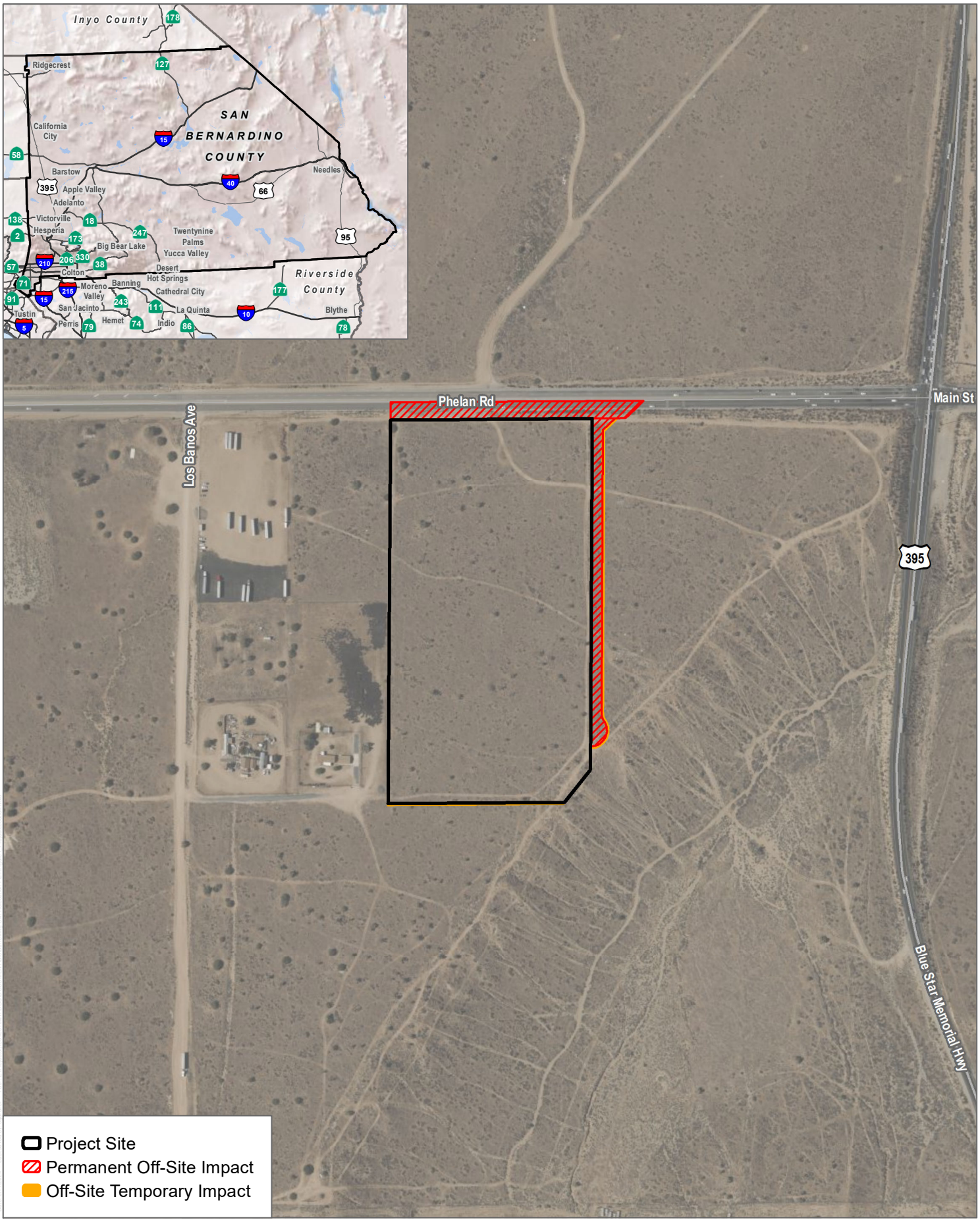
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SOURCE: Bing Imagery 2022

DUDEK

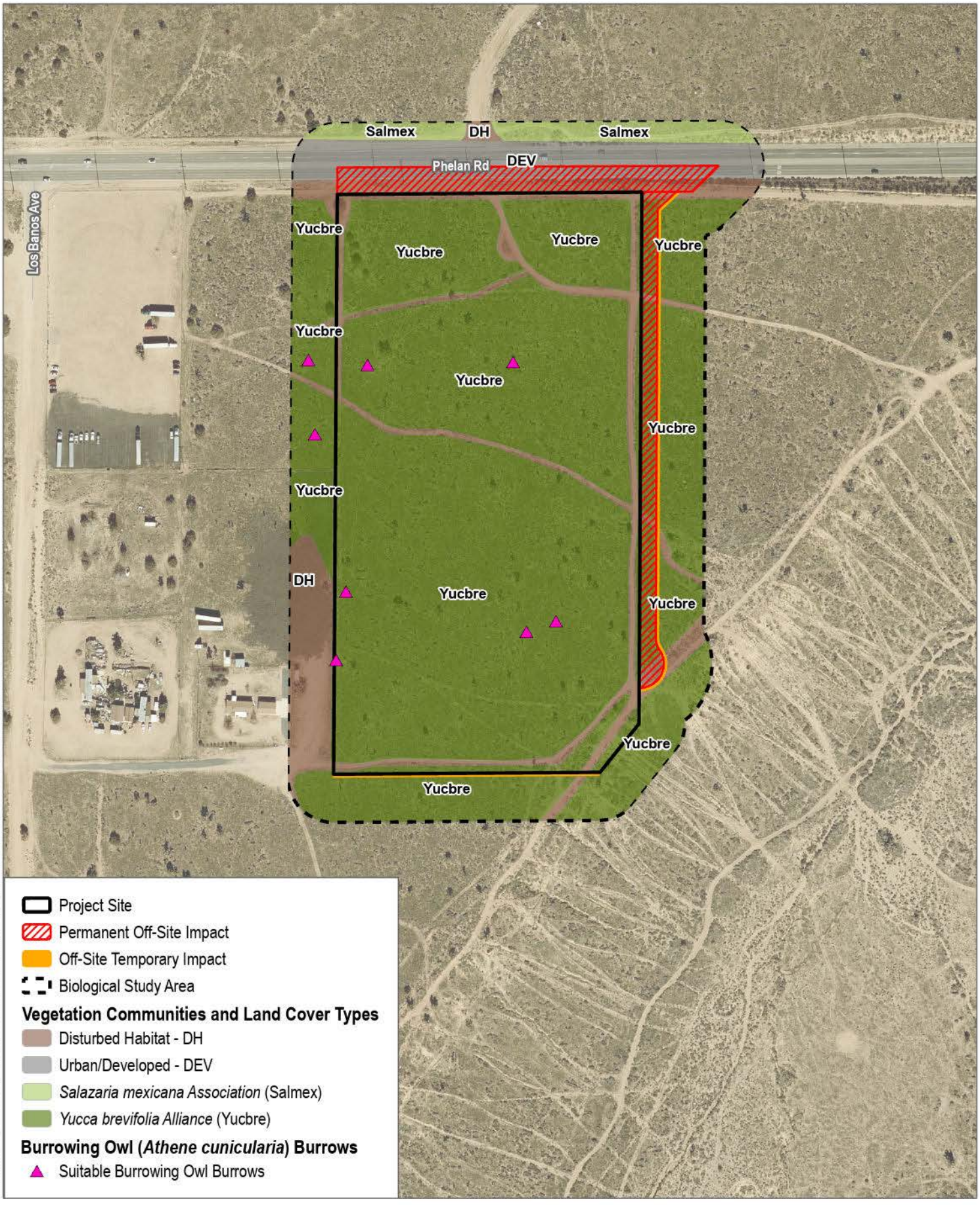
0 200 400 Feet

FIGURE 1

Project Location

Burrowing Owl Relocation Plan Phelan 20 Project

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SOURCE: Esri World Imagery

DUDEK

0 137.5 275 Feet

FIGURE 2

Suitable Burrowing Owl Burrow Locations

Burrowing Owl Relocation Plan Phelan 20 Project

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