
Appendix C

Biological Resources Technical Report

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Mojave Industrial Park Project

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Acronyms and Abbreviations

Acronym	Definition
AgACIS	Agricultural Applied Climate Information System
amsl	above mean sea level
AQMD	Air Quality Management District
BLM	Bureau of Land Management
BMP	best management practice
BSA	biological survey area
CALGreen	California Green Building Standards Code
Cal-IPC	California Invasive Plant Council
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
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County General Plan	San Bernardino County General Plan
CRPR	California Rare Plant Rank
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
EPA	U.S. Environmental Protection Agency
Esri	Environmental Systems Research Institute
FESA	federal Endangered Species Act
GIS	geographic information system
HUC	Hydrologic Unit Code
IPaC	Information for Planning and Consultation
ISA	International Society of Arboriculture
ITP	Incidental Take Permit
Joshua Tree Plan	Joshua Tree Preservation, Protection, and Relocation Plan
MBTA	Migratory Bird Treaty Act
MM	Mitigation Measure
NCCP/HCP	Natural Community Conservation Plan/Habitat Conservation Plan
NRCS	Natural Resources Conservation Service
OHWM	ordinary high water mark
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SSC	California Species of Special Concern
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers

USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMC	City of Victorville Municipal Code
WEAP	Worker Environmental Awareness Program
WJTCA	Western Joshua Tree Conservation Act
WRCC	Western Regional Climate Center

1 Introduction

This report documents the results of surveys conducted to identify potential biological resources constraints for the Mojave Industrial Park Project (project) located in the City of Victorville (City), San Bernardino County, California. 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 (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 Location

The project is located in the northern portion of the City, which is located in the Victor Valley/High Desert region of western San Bernardino County. Figure 1, Project Location, shows the regional location of the project, as well as the site vicinity. The project is located immediately north of Mojave Drive and east of U.S. Highway 395 with proposed off-site improvements located along Mojave Drive, Cactus Road/Tawney Ridge Lane, Onyx Road, and Topaz Road. The project consists of Assessor's Parcel Numbers (APNs) 312-863-102, 312-863-103, and 312-863-104 and adjacent rights-of-way (ROWs). Off-site improvement areas associated with the project also include ROWs along Mojave Drive, Cactus Road/Tawney Ridge Lane, Onyx Road, and Topaz Road, as well as adjacent parcels comprised of APNs 045-505-392, 312-861-104, 312-862-102, 312-862-106, and 313-537-101. The project occurs in Sections 10 and 11, Township 5 North, Range 5 West of the Public Land Survey System, as depicted on the U.S. Geological Survey (USGS) Adelanto, California 7.5-minute topographic quadrangle map (USGS 2015a). Local access to the project is provided via Cactus Road/Tawney Ridge Lane or Mojave Drive.

1.2 Project Description

The project involves the construction of three industrial/warehouse buildings totaling 1,351,400 square feet on an approximately 81.1-acre site in Victorville (City), California (Figure 2, Project Site Plan), and 17.4 acres of off-site utility and street improvements, encompassing a total Project area of 98.5 acres. This report analyzes the biological resources present within the 98.5-acre Project area, as well as a 100-foot buffer comprised of 53.9 acres, resulting in a total Biological Study Area (BSA) of 152.4 acres. The on-site portion of the project consists of three parcels located north of Mojave Drive and east of Onyx Road and extends to the center line of the adjacent ROWs. Building 1, the southeast building, would be approximately 100,300 square feet, Building 2, the southwest building, would be approximately 91,100 square feet, and Building 3, the northern building, would be approximately 1,160,000 square feet. The project would include passenger vehicle parking spaces, trailer parking spaces, tractor-trailer loading docks, and other associated site improvements such as landscaping, sidewalks, and internal driveways.

Off-Site Improvements

Given the vacant, undeveloped nature of the project site, both wet and dry utilities, including domestic water, sanitary sewer, storm drainage, and electricity, would need to be extended onto the project site. Additionally, the project would include street improvements along Onyx Road, Topaz Road, Mojave Road, and Cactus Road.

Utility Improvements

Specifically, the project would involve extension of 1.75 miles of the water main within the new segments of road improvements that would be constructed as part of the Project: approximately 0.51 linear miles in Mojave Drive from Diamond Road to Onyx Road; approximately 0.50 linear miles in Onyx Road from Mojave Drive to Cactus Road; approximately 0.24 linear miles in Cactus Road from Onyx Road to Topaz Road; and approximately 0.50 mile in Topaz Road from Mojave Drive to Cactus Road. The project would also involve the extension of approximately 1.21 miles of sewer line within the new segments of road: approximately 0.74 linear miles in Cactus Road from east of Diamond Road to Onyx Road; and approximately 0.47 linear miles in Topaz Road from Cactus Road to south of Mojave Drive. In addition, the project involves approximately 2 miles of storm drain improvements: approximately 0.5 linear miles along Mojave Drive from east of Topaz Road to west of Onyx Road; approximately 0.5 linear miles along Cactus Road from Diamond road to Onyx Road; approximately 0.5 linear miles along Onyx Road from Cactus Road to north of Mojave Drive; and approximately 0.5 linear miles along Topaz Road from Cactus Road to north of Mojave Drive. Storm drain inlets and outlets would be built on adjacent parcels north of Cactus Road, approximately 210 feet east of Onyx Road; west of Onyx Road, approximately 100 feet south of Cactus Road and approximately 950 feet north of Mojave Drive; and north of Mojave Drive, approximately west of Diamond Road.

Street Improvements

Street improvements involve widening Mojave Drive from east of Topaz Road to west of Onyx Road; extending the east half of Onyx Road from Mojave Drive to Cactus Road; extending the west half of Topaz Road from Mojave Drive to Cactus Road; extending the south half of Cactus Road from Topaz Road to Onyx Road; and extending a two-lane road along Cactus Road from Onyx Road to east of Highway 395.

Site Access, Circulation, and Parking

Access to the Project site would be provided by seven driveways along Mojave Drive, Topaz Road, and Onyx Road. Local access to these points of entry would be provided via Cactus Road between Onyx Road and U.S. Highway 395, along which road improvements are to be completed as part of the project, and Mojave Drive, an existing paved road. Paved passenger vehicle parking areas would be provided within areas south of Building 3, southeast of Building 1 along Mojave Drive and Topaz Road, and southwest of Building 2 along Mojave Drive and Onyx Road. Tractor-trailer stalls would be surrounding Building 3 to the north, east and west. Loading docks would occur on the east and west sides of Building 3 and on the north side of Buildings 1 and 2. In total, the project would provide approximately 229 loading dock positions, approximately 580 tractor-trailer stalls, and approximately 851 passenger vehicle parking spaces.

Construction Schedule and Post-Construction Operations

Construction of the project is anticipated to commence in October 2024, lasting approximately 12 months. Tenants for the proposed industrial warehouse buildings have not yet been identified, but the project would operate as a warehouse and/or distribution facility. It is anticipated that the facilities would be operated 24 hours a day, 7 days a week. Cold storage is not proposed as part of this project.

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 to “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) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation’s waters. Section 401 requires a project operator for a federal license or permit that allows activities resulting in a discharge to waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The Regional Water Quality Control Boards (RWQCBs) administer the certification program in California. Section 402 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 (USACE) that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. USACE implementing regulations are found at 33 Code of Federal Regulations (CFR) Parts 320 through 332. Guidelines for implementation are referred to as the

Section 404(b)(1) Guidelines, which were developed by the U.S. Environmental Protection Agency (EPA) in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

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 Section 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, rule makings, 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. EPA* 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 Clean Water Act for traditional navigable waters, the territorial seas, interstate waters, and upstream water resources that significantly affect those waters. The Rule re-expanded federal jurisdiction over certain water bodies and wetlands previously exempt pursuant to the 2020 Navigable Waters Protection Rule, reinstating the “Significant Nexus” test and adopting the “Relatively Permanent Standard” 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, but not limited to, volume, duration, and 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. 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. EPA.*, in which it rejected the EPA's claim that “waters of the United States,” as defined in the CWA, includes 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. On August 29, 2023, the EPA and USACE announced the final rule amending the 2023 definition of “waters of the United States”, conforming with the *Sackett v. EPA* decision. Some of the key changes include removing the significant nexus test from consideration when identifying tributaries and other waters as federally protected and revising the adjacency test when identifying federally jurisdictional wetlands. Under the EPA's new definition, a “water of the United States” is

a relatively permanent, standing, or continuously flowing body of water that has an apparent surface connection to a “traditionally navigable water” to fall within federal purview. The new rule applies to wetlands and streams throughout the U.S. Although the Sackett opinion did not specifically reference streams, the EPA’s new rule extends the “continuous surface connection” standard to streams, thereby removing non-permanent, ephemeral streams that do not meet these standards from federal jurisdiction.

The term “wetlands” (a subset of waters of the United States) is defined in 33 CFR, Section 328.3(c)(16), as “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the “ordinary high water mark,” which is defined in 33 CFR 328.3(c)(7) as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”

2.2 State

2.2.1 California Endangered Species Act

The California 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 mitigation implementation, and monitoring of mitigation measures.

Western Joshua Tree

On October 21, 2019, the California Fish and Game Commission (Commission) received a petition from the Center for Biological Diversity to list western Joshua tree (*Yucca brevifolia*). 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 (CDFW 2020). The report states that CDFW recommended that the Commission accept the petition for further consideration of western Joshua tree under the CESA. On September 22, 2020, the Commission accepted the candidacy proposal for western Joshua tree, effective October 9, 2020. When a plant or wildlife species is granted candidacy under the 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 the CESA is warranted.

In listing western Joshua tree as a candidate species under CESA, the 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 their 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 (WJTCA) was passed. While western Joshua tree is a candidate species, take for western Joshua tree can be received through payment of pre-determined mitigation fees.

The WJTCA introduces a streamlined permitting framework that applies to specific development activities and mandates the collection of mitigation fees. These fees are intended to facilitate the acquisition and preservation of western Joshua tree habitat, as well as to support conservation measures aimed at safeguarding the western Joshua tree. The underlying goal is to counterbalance the adverse impacts on western Joshua trees resulting from authorized projects and to promote species conservation on a landscape scale.

Under the WJTCA, CDFW is authorized to perform the following key functions:

- Issue permits for the trimming and removal of hazardous or deceased western Joshua trees.
- Grant permits for the incidental take of western Joshua trees, contingent upon the fulfillment of specific conditions.
- Establish agreements with counties or cities to delegate limited authority for the issuance of the aforementioned permits, provided that predetermined conditions are met.

Furthermore, the WJTCA instructs CDFW to develop a comprehensive conservation plan for the western Joshua tree by the conclusion of the year 2024.

The WJTCA institutes two categories of mitigation fees: reduced fees and standard fees, depending on the geographical location, as defined in the California Department of Fish and Game Code (Section 1927). It empowers the CDFW to issue permits for the incidental take of one or more western Joshua trees, subject to compliance with stipulated conditions. Permit holders may opt to remit specified fees in lieu of undertaking mitigation activities. Additionally, the WJTCA authorizes the CDFW to issue permits for the removal of deceased western Joshua trees and the trimming of live western Joshua trees under specific circumstances.

Notably, all in-lieu fees collected under the WJTCA are directed to the Western Joshua Tree Conservation Fund, with the explicit purpose of allocation to the CDFW. These funds are designated exclusively for the acquisition, conservation, and management of western Joshua tree conservation lands, as well as the execution of other initiatives designed to safeguard the western Joshua tree.

Permitting

The initial step in the project permitting process necessitates the comprehensive survey and documentation of western Joshua trees located on the project site as well as within a 50-foot radius surrounding the project area. This census must adhere to precise specifications outlined on the CDFW’s official website.

Simultaneously, a permit application, available on the CDFW's website, must be completed. The application mandates that the applicant complies with the California Environmental Quality Act (CEQA). Notably, there are no

stipulated statutory deadlines governing the permitting process; however, CDFW is committed to expeditiously processing the applications upon receipt. Upon successful processing of the application by CDFW, the permittee will be issued an invoice for the mandatory mitigation fee. This fee is to be remitted via check or money order, with the invoice securely attached, following the precise instructions provided by CDFW.

2.2.2 California Fish and Game Code

Fully Protected Species

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

Sections 1600–1616

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 CEQA document.

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 (OHWM) to be claimed as jurisdictional. CDFW does not have jurisdiction over ocean or shoreline resources.

California Native Plant Protection Act

The Native Plant Protection Act of 1977 (Sections 1900 et seq. of the California Fish and Game Code) directed CDFW to carry out the Legislature’s intent to “preserve, protect and enhance rare and endangered plants in this State.” The Native Plant Protection Act gave the Commission the power to designate native plants as “endangered” or “rare,” and 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 project proponents.

Nesting Birds

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

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.

The State of California CEQA Guidelines (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 CEQA Guidelines Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or ... [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c).

CDFW has developed a list of "Special Species" as "a general term that refers to all of the taxa the California Natural Diversity Database (CNDDDB) is interested in tracking, regardless of their legal or protection status." This is a broader list than those species that are protected under FESA, CESA, and 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 Bureau of Land Management Sensitive Species and USFWS Birds of Special Concern, are also included on this CDFW Special Species list. Additionally, CDFW has concluded that plant species listed as California Rare Plant Rank (CRPR) 1 and 2 by the California Native Plant Society (CNPS), and potentially some CRPR 3 plants, are covered by CEQA Guidelines Section 15380.

Section IV, Appendix G, Environmental Checklist Form, of the CEQA Guidelines requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or the USFWS."

2.2.4 Porter-Cologne Water Quality Control Act

Pursuant to provisions of the Porter-Cologne Act, the RWQCBs regulate discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code, Section 13260[a]). The State Water Resources Control Board (SWRCB) defines waters 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 SWRCB definition of wetlands (SWRCB 2019) includes the following:

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

Wetlands that may not meet all of USACE’s wetland delineation criteria are considered wetland waters of the state if, “under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation” (SWRCB 2019). Additionally, aquatic resources that USACE determines to not be waters of the United States because they lack a significant nexus to a traditional navigable water or are above the OHWM limit of federal jurisdiction, may also be considered waters of the state. If a CWA Section 404 permit is not required for a project, the RWQCB may still require a permit (waste discharge requirements) for impacts to waters of the state under the Porter-Cologne Act.

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, or 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 County of San Bernardino General Plan (County General Plan) contains the goals and policies that guide future development within San Bernardino County (County of San Bernardino 2007a). San Bernardino County is broken into three distinct geographic planning regions: the Valley, the Mountains, and the Desert. The Project site occurs within the Desert Planning Region of San Bernardino County. The Desert Planning Region has two goals and policies: (1) to preserve open lands by working with Bureau of Land Management (BLM) and (2) to ensure that off-highway vehicle use is managed to protect environmentally sensitive resources.

The Project would also need to comply with the Development Code. The San Bernardino County Development Code (County of San Bernardino 2007b) implements the goals and policies of the County General Plan. Chapter 88.01.060, Desert Native Plant Protection, of the San Bernardino County Development Code is a subset of the Plant Protection and Management Code (Chapter 88.01 of the Development Code) and focuses on the conservation of specified desert tree species. This code ensures coordination with CNDPA and requires issuance of a Tree or Plant Removal Permit in compliance with 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. Smoke tree (*Psoralea argophylla* [Synonym: *Dalea spinosa*])
 - b. All species of the genus *Prosopis* (mesquites)
- (2) All species of the family Agavaceae (century plants, nolin, 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 Victorville General Plan

The City's Resource Element (City of Victorville 2008) addresses biological resources in Goal #4 (Conservation of Important Habitat), wherein objectives and policies are set forth to achieve the goal of preserving native vegetation that provides habitat for rare, threatened, and/or endangered plant and wildlife species. The following objectives and policies pertain to biological resources and are relevant to the project:

Objective 4.1. Preservation of natural communities that support rare, threatened, and or endangered plant and wildlife species throughout the planning area.

Policy 4.1.1. Encourage natural habitat that supports rare, threatened, or endangered plants and wildlife (i.e., “sensitive” species), or require restoration of the same type of impacted habitat within an existing, planned, or potential conservation area.

Policy 4.1.2. Support and participate in the West Mojave Plan.

Objective 4.2. Permanent Conservation of Mojave River Corridor Ecological Values.

Policy 4.2.1. Generally, prohibit private or public development projects or major infrastructure facilities on land within the Mojave River Corridor, where biological surveys have determined there is habitat that supports rare, threatened, and/or endangered plants or wildlife. Allow minor encroachments into such habitat for critical public facilities and recreational trails, where reliable assurances are provided that no loss of sensitive species would occur.

2.3.3 City of Victorville Municipal Code

The City of Victorville Municipal Code (VMC) provides some protections for western Joshua tree in Chapter 13.33 of the Code of Ordinances, titled Preservation and Removal of Joshua Trees.

Per Chapter 13.3 of the VMC (2023a), it is determined by the City council that proper and necessary steps be taken to protect and preserve, to the greatest extent possible, Joshua trees in all areas of the City to preserve the unique natural desert environment throughout the City and for the health, safety, and welfare of the community (VMC 13.33.010). The VMC continues to state that it is unlawful for any person to cut, damage, destroy, dig up, or harvest any Joshua tree without the prior written consent of the Director of Parks and Recreation or their designee (VMC 13.33.040).

Furthermore, Section 16-5.02.060 of the VMC states the following regarding western Joshua trees and as a requirement of the grading and permit requirements of Article 2, Grading Regulations VMC (2023b):

All Joshua trees, as per Chapter 13.33 of the Victorville Municipal Code, shall be indicated by showing the exact center of its trunk as established by a licensed surveyor. Its tag number, trunk diameter and height must be indicated. The health and proposed disposition of the tree must be indicated. Where a tree or trees are to be removed, the applicant shall meet all current requirements and standards as set forth by the California Department of Fish and Wildlife, and proof shall be submitted to the Building Department prior to issuance of a permit. Alternatively, the Applicant may provide a detailed report, from a licensed Arborist or Biologist, for protecting and preserving, the tree or trees in accordance with applicable California Department of Fish and Wildlife standards, which may be affected by the proposed grading.

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3 Methods

Data regarding biological resources present within the 152.4-acre biological survey area (BSA), which includes the 81.1-acre project site, 17.4 acres of off-site improvement areas, and a 100-foot buffer, were obtained through a review of pertinent literature, field reconnaissance, habitat assessments, and protocol/focused surveys, which are described in detail below.

3.1 Literature Review

Prior to conducting the field investigation, 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 queries of the most recent versions of the CDFW CNDDDB and the CNPS Inventory of Rare and Endangered Plants of California (CDFW 2023a ; 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 (i.e., Adelanto) and the 8 surrounding quadrangles (i.e., Hesperia, Victorville, Shadow Mountains, Helendale, Victorville NW, Phelan, Baldy Mesa, and Shadow Mountains SE). The review also included the resource list returned in the USFWS Information for Planning and Consultation (IPaC) tool query for the BSA (USFWS 2023a).

Other literature reviewed included U.S. Department of Department and Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2023a); CDFW Biogeographic Information and Observation System (CDFW 2023b); A Manual of California Vegetation, Online Edition (CNPS 2023b); the California Natural Community list (CDFW 2023c); State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2023d); State and Federally Listed Endangered and Threatened Animals of California (CDFW 2023e); and the CDFW California Wildlife Habitat Relationships (CWHR) Life History Accounts and Range Maps (CDFW 2017).

The following available resources were reviewed to assess the potential for jurisdictional waters: aerial photographs (Google Earth 2023; Nationwide Environmental Title Research 2023); the subject USGS 7.5-minute topographic quadrangle maps (USGS 2015a); the National Hydrography Dataset and Watershed Boundary Dataset (USGS 2023); and the USFWS National Wetland Inventory (USFWS 2023b).

3.2 Special-Status Definitions

Special-Status Plant Species.

Endangered, rare, or threatened plant species as defined in Section 15380(b) of the CEQA Guidelines (14 CCR 15000 et seq.) are referred to as “special-status plant species” and, as used in this report, include (1) plant species listed or candidates for listing as endangered or threatened recognized in the context of CESA and FESA (CDFW 2023d); and/or (2) plant species with a CRPR 1 or 2 as designated by the CNPS (2023a). Species with CRPR 3 or 4 generally do not qualify for protection under CEQA; therefore, are not analyzed in this report.

Special-Status Wildlife Species

Endangered, rare, or threatened wildlife species as defined in CEQA Guidelines, Section 15380(b) (14 CCR 15000 et seq.), are referred to as “special-status wildlife species” and, as used in this report, include (1) wildlife species

listed or candidates for listing as endangered or threatened recognized in the context of CESA and FESA (CDFW 2023e); (2) California Species of Special Concern (SSC) as designated by CDFW (2023f); (3) mammals and birds that are fully protected species as described in the California Fish and Game Code, Sections 4700 and 3511 (CDFW 2023g); and (4) species designated by California Fish and Game Code Section 4000 as fur-bearing mammals.

Special-Status Vegetation Communities

Special-status vegetation communities are those communities identified as high priority for inventory in the California Natural Communities List (CDFW 2023c) by a state rarity ranking of S1, S2, or S3. In addition, communities that are regulated by CDFW under California Fish and Game Code Sections 1600–1616, and/or that provide suitable habitat for special-status species may also be considered special status under CEQA. Areas regulated by CDFW under California Fish and Game Code Sections 1600–1616 are discussed under separate cover.

3.3 Special-Status Species Assessment

Dudek biologists performed a desktop review of literature, existing documentation, and geographical information system (GIS) data to evaluate the potential for special-status plant or wildlife species to occur within the BSA. Each special-status plant or wildlife species was assigned a rating of “not expected,” “low,” “moderate,” or “high” potential to occur based on relative location to known occurrences, vegetation communities and soils present, current site conditions, and each species’ known range, habitat associations, and/or elevation. Additional detail related to each rating is provided below:

- **Observed:** Species was documented within the BSA during field survey efforts
- **High:** Habitat within the BSA is suitable and species has been documented either within the BSA or immediately adjacent to project boundary in recent records (i.e., within 20 years).
- **Moderate:** Habitat within the BSA is suitable and species has been documented within 5 miles of BSA in recent records (i.e., within 20 years).
- **Low:** Habitat within the BSA is marginal and/or documented occurrences of species are historical (i.e., over 20 years old)
- **Not expected:** Habitat within the BSA is unsuitable or BSA is outside of the known geographic range of the species, or the species was confirmed absent from the BSA during protocol surveys for the species.

3.4 Resource Mapping

Dudek biologists Tracy Park and Shana Carey conducted an initial biological reconnaissance-level field survey of the project site to document biological resources and vegetation communities in September 2022. Additional field surveys conducted by Dudek included an aquatic resources jurisdictional delineation, a focused special-status plant survey and desert native plant survey, focused western Joshua tree mapping surveys, focused burrowing owl (*Athene cunicularia*), protocol surveys for Mojave desert tortoise (*Gopherus agassizii*), and protocol surveys for Mohave ground squirrel (*Xerospermophilus mohavensis*) surveys. Table 1 lists the dates, survey type, and personnel for each survey.

Table 1. Survey Schedule

Date	Personnel ¹	Survey Type	Survey Conditions ²
9/13/2022	TP, SC	Biological Reconnaissance; Vegetation Mapping; Aquatic Resources Jurisdictional Delineation	8:00 AM–3:00 PM Air: 68–82 °F; 1–7 mph wind; 70–80% cc
9/14/2022	TP, SC		8:00 AM–4:30 PM Air: 64–80 °F; 1–3 mph wind; 10% cc
9/15/2022	TP, SC		8:00 AM–2:30 PM Air: 60–84 °F; 1–4 mph wind; 0% cc
3/22/2023	ST, AC	Focused Western Joshua Tree Mapping Survey	Air: 30–45 °F; windy
3/23/2023	ST, AC		Air: 30–45 °F; windy
3/23/2023	ES, CBD	Focused Burrowing Owl Survey Pass 1	6:21 AM–10:11 AM Air: 38–50 °F; 1–5 mph wind; 0–40% cc
3/24/2023	ES, CBD		6:24 AM–9:58 AM Air: 38–49 °F; 1–3 mph wind; 0% cc
4/12/2023	RS, CBD	Focused Mojave Desert Tortoise Survey	10:00 AM–2:35 PM Air: 60–70 °F; 50–90% cc
4/13/2023	TP, RS, CBD		9:15 AM–4:07 PM Air: 57–66 °F; 2–10 mph wind; 10% cc
4/18/2023	TP		10:03 AM–3:24 PM Air: 54–63 °F; 2–7 mph wind; 0% cc
4/18/2023	TP	Focused Burrowing Owl Survey Pass 2	8:31 AM–9:51 AM Air: 50–54 °F; 1–5 mph wind; 0% cc
4/20/2023	ES, RP	Special-Status Plant Survey; Desert Native Plant Survey	8:51 AM–7:10 PM Air: 50–68 °F; 1–2 mph wind; 0% cc
4/21/2023	Dipodomys Ecological Consulting	Focused Mohave Ground Squirrel Surveys Pass 1	Air: 63.4–82.2 °F; Soil: 59–77 °F; 3.3–4.2 mph wind; 0–2% cc
4/22/2023			Air: 69.3–88.6 °F; Soil: 64.4–68.9 °F; 2.6–3.4 mph wind; 10–20% cc
4/23/2023			Air: 67.8–88 °F; Soil: 63.8–68.9 °F; 2.4–6.7 mph wind; 0–5% cc
4/24/2023			Air: 63.5–82.7 °F; Soil: 64.1–80.6 °F; 12.2– 21.5 mph wind; 0–1% cc
4/25/2023			Air: 66.3–82.8 °F; Soil: 64.8–83.6 °F; 3.7–6.7 mph wind; 0–5% cc
4/28/2023	ST, AC	Focused Western Joshua Tree Mapping Survey	Air: 50–60 °F; sunny
5/27/2023	Dipodomys Ecological Consulting	Focused Mohave Ground Squirrel Surveys Pass 2	Air: 62.4–90 °F; Soil: 71.2–84.2 °F; 2.4–4.3 mph wind; 0–2% cc
5/28/2023			Air: 61.5–82.1 °F; Soil: 73.4–88.3 °F; 1.2– 21.3 mph wind; 0–2% cc
5/29/2023			Air: 64.2–78.6 °F; Soil: 70.2–82.9 °F; 6.3– 15.8 mph wind; 5% cc
5/30/2023			Air: 66.9–78.2 °F; Soil: 70.7–83.3 °F; 5.7– 17.8 mph wind; 15–50% cc
5/31/2023			Air: 71.5–82.3 °F; Soil: 67.1–77 °F; 5.1–7.5 mph wind; 2–5% cc

Table 1. Survey Schedule

Date	Personnel ¹	Survey Type	Survey Conditions ²
6/1/2023	CBD	Focused Burrowing Owl Survey Pass 3	7:00 AM–9:00 AM Air: 55–65 °F; clear skies; 7 mph wind
6/23/2023	ES	Focused Burrowing Owl Survey Pass 4	7:56 AM–9:45 AM Air: 54–63 °F; 0–20% cc; 9 mph wind
7/4/2023	Dipodomys Ecological Consulting	Focused Mohave Ground Squirrel Surveys Pass 3	Air: 72.5–89.8 °F; Soil: 84.2–85.1 °F; 4.3–9.6 mph wind; 0% cc
7/5/2023			Air: 66.5–90 °F; Soil: 81.5–82.4 °F; 6.5–9 mph wind; 0% cc
7/6/2023			Air: 68.3–90 °F; Soil: 82.4–84.2 °F; 6–6.4 mph wind; 0% cc
7/7/2023			Air: 69.5–87.1 °F; Soil: 80.6–82.4 °F; 6.6–8.7 mph wind; 0% cc
7/8/2023			Air: 68.8–88.9 °F; Soil: 80.6–83.3 °F; 2.7–6.2 mph wind; 0% cc
7/18/2023	TP	Focused Burrowing Owl Survey Pass 5	7:56 AM–9:33 AM Air: 87–92 °F; 0–1 mph wind; 0% cc
9/29/2023	TP	Aquatic Resources Jurisdictional Delineation	11:30 AM–4:00 PM Air: 76–75 °F; 3–10 mph wind; 0% cc
11/7/2023	AP, LB	Focused Western Joshua Tree Mapping Survey	Survey conditions not collected.
1/22/2024	ST	Focused Western Joshua Tree Mapping Survey	Survey conditions not collected.
1/24/2024	TP	Aquatic Resources Jurisdictional Delineation	12:45 PM–2:07 PM Air: 56–57 °F; 0–5 mph wind; 100% cc

Notes:

¹ TP=Tracy Park; SC=Shana Carey; ST=Sarah Tian; AC=Aida Castro; ES=Eillean Salas; CBD=Chelsea Bowers-Doering; RS=Ryan Stanley; RP=Zarina “Rina” Pringle; AP=Ana Pflieger; LB=Luz Badillo

² °F = degrees Fahrenheit; mph = miles per hour; cc = cloud cover

3.4.1 Vegetation Community and Land Cover Mapping

Methods for vegetation mapping followed CDFW’s Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018) and the Survey of California Vegetation Classification and Mapping Standards (CDFW 2022). Where feasible, vegetation communities within the BSA were mapped using CDFW’s List of Vegetation Alliances and Associations (or California Natural Community List) (CDFW 2023c), which is based on A Manual of California Vegetation, Second Edition (Sawyer et al. 2009) and A Manual of California Vegetation, Online Edition (CNPS 2023b). 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. In cases where the vegetation classification standards from the CDFW Natural Communities List did not apply, classification standards from “Methods used to survey the vegetation of Orange County parks and open space areas and The Irvine Company property” and Draft Vegetation Communities of San Diego County (Jones and Stokes 1993; Oberbauer et al. 2008) were incorporated to accommodate the lack of conformity of conditions observed on site (e.g., developed/disturbed land cover types).

Vegetation mapping surveys were conducted on foot to visually cover 100% of the BSA. Vegetation communities and other land cover types within the BSA were mapped in the field using the Environmental Systems Research Institute (Esri) Field Maps, a mobile data collection application, on a digital aerial-based background (Esri 2023). Communities were classified based on dominant species and associated cover classes, site factors, stand descriptions (e.g., slope aspect, canopy structure), geographic setting, and characteristic species present within an area. Minimum mapping units were established to standardize the scale and appropriate evaluation of stands, as recommended by CDFW (2022). 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 were used as minimum mapping units. Visible disturbance factors were also noted during vegetation mapping. Following completion of the fieldwork, all vegetation linework was finalized using Esri ArcGIS software and GIS coverage was created. Once in ArcGIS, the acreage of each vegetation community and land cover type within the BSA was determined.

3.4.2 Flora

All plant species encountered during the field surveys were identified and recorded. Latin and common names for plant species with a CRPR follow the CNPS 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 USDA NRCS PLANTS Database (USDA 2023b).

3.4.3 Fauna

All wildlife species, as detected during the field survey—by sight, calls, tracks, scat, or other signs—were identified and recorded. Binoculars were used to aid in the identification of observed wildlife. In addition to species observed, expected wildlife usage of the BSA was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. Latin and common names for wildlife species referred to in this report follow Crother (2017) for reptiles and amphibians, American Ornithological Society (AOS) Checklist (AOS 2023) for birds, Wilson and Reeder (2005) for mammals, and Moyle (2002) for fish.

3.4.4 Focused Special-Status Plant Survey

Based on the results of the literature review discussed in Section 3.1 and results of the reconnaissance-level field survey conducted in September 2022, seven special-status plant species were preliminarily determined to have potential to occur within the BSA based on known species distribution, species-specific habitat preferences, and habitat conditions on site: Beaver Dam breadroot (*Pediomelum castoreum*), Booth's evening primrose (*Eremothera boothii* ssp. *boothii*), Latimer's woodland-gilia (*Saltugilia latimeri*), Mojave monkeyflower (*Diplacus mohavensis*), sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*), short-joint beavertail (*Opuntia basilaris* var. *brachyclada*), and western Joshua tree. Therefore, focused surveys were conducted for these target species on April 20, 2023, within the blooming period range for these species.

Surveys for special-status species were conducted by walking meandering transects throughout the entire project site, where accessible. The survey date and biologists for the focused special-status plant surveys within the BSA are included in Table 1. Focused special-status plant surveys conformed to CNPS Botanical Survey Guidelines (CNPS 2001), Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities (CDFW 2018), and USFWS General Rare Plant Survey Guidelines (Cypher 2002). All plant species

encountered during the field surveys were identified to subspecies or variety, if applicable, to determine sensitivity status. Moreover, all plant species encountered in the field were recorded.

Focused surveys for desert native plants were conducted in accordance with the CDNPA and concurrently with special-status plant survey. Survey methods are further discussed below in Section 3.2.5, Desert Native Plant Survey. Western Joshua tree mapping was conducted during a separate focused survey and is discussed in Section 3.2.6, 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 upper terrace of Cajon Wash (off of Cajon Blvd). Mojave monkeyflower was observed in bloom on April 18, 2023, south of Daggett, California in the Newberry Mountains. Beaver dam breadroot was observed in bloom north of Lucerne Dry Lake on April 18, 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 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, Victorville received approximately 5.36 inches of precipitation from September 2022 to April 2023 (Agricultural Applied Climate Information System [AgACIS] 2023) as compared with the average annual precipitation is 5.52 inches (Western Regional Climate Center [WRCC] 2023); therefore, the area received average precipitation totals for the rain year thus far thereby asserting that surveys for special-status plant species adequately covered flora that are known to bloom within the vicinity.

3.4.5 Focused Desert Native Plant Survey

A desert native plant mapping survey within the BSA was conducted concurrently with the special-status plant survey and in accordance with the CDNPA. The survey date, biologists, and weather conditions are included 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 the CDNPA, Chapter 3, the following desert native plants were considered target species:

- (a) All species of the family Agavaceae (century plants, nolinias, 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.

3.4.6 Focused Western Joshua Tree Survey

The Commission determined that listing the western Joshua tree as threatened or endangered under CESA may be warranted and is currently under review. During the status review, the western Joshua tree is protected under CESA as a candidate species.

Per the WJTCA, an International Society of Arboriculture (ISA)-certified arborist performed a western Joshua tree survey (Table 1) to inventory and evaluate the health and relocation potential for each western Joshua tree within the project site plus off-site improvements and a 50-foot buffer (hereafter referred to as Joshua Tree Survey Area). The western Joshua tree inventory and evaluation survey methods are provided in Appendix A. During the inventory, the geographic location of each western Joshua tree found in the Joshua Tree Survey Area was recorded. Dudek certified arborists walked the entire Joshua Tree Survey Area in parallel transects to ensure documentation of each western Joshua on site.

Dudek collected the following attributes of each tree:

- Species
- Size class (Size A - <1m, Size B - >1m and <5m, and Size C - >5m)
- Actual height (meters)
- Health (excellent, good, fair, poor, critical, and dead)
- Live or dead
- Tree maturity (mature if branching occurs, not mature if no branching occurs)
- Flowering or fruiting stage (flowers or fruits present)
- 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 furthest leaf.
- All inventoried and assessed protected trees were tagged with an aluminum tag bearing a unique identification number, which was placed on the main trunk on the north side of each Joshua tree. Tagging on the north side allows for proper orientation during relocation (each relocated Joshua tree will need 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.

3.4.7 Focused Burrowing Owl Survey

Focused breeding season burrowing owl surveys were conducted in accordance with the March 7, 2012, Staff Report on Burrowing Owl mitigation (CDFW 2012). Dudek biologists conducted four survey passes in March through July of 2023 under suitable weather conditions, between morning civil twilight and 10:00 a.m. (Table 1). Surveys were scheduled at least three weeks apart as per CDFW protocol, with the first survey visit between February 15 and April 15, two survey visits between April 15 and June 15, and one survey visit after June 15. The first visit included a habitat assessment concurrent with searching for suitable burrows and burrowing owls.

Dudek biologists conducted the survey on foot by slowly walking transects to inspect all vegetation for evidence of burrowing owl within the project site as well as the surrounding 500-foot buffer area. The surveys covered all portions of site that included suitable burrowing owl habitat (i.e., short, sparse vegetation with few shrubs, level to gentle topography and well-drained soils). Pauses were taken to scan the area with appropriate binoculars (10x42 magnification) to search for burrowing owls. Any potentially suitable burrows or burrow surrogates (e.g., rock cavities, pipes, culverts, debris piles with crevices) greater than 11 centimeters (4 inches) in diameter were mapped using a GPS handheld unit with sub-meter accuracy and inspected for burrowing owl sign (e.g., owl pellets, white wash, abundant insect remains, feathers). Dudek conducted an additional pass on July 18, 2023, in order to confirm the presence and location of burrowing owls incidentally sighted in the project vicinity during Mohave ground squirrel surveys.

3.4.8 Focused Mojave Desert Tortoise Survey

On April 2, 1990, the Mojave population of the desert tortoise was listed by USFWS as threatened (55 FR 12178–12191). Proposed actions within the range of the desert tortoise fall under purview of FESA. Because the project lies within the range of the desert tortoise (Zeiner et al. 1990) within the Western Recovery Unit (USFWS 2011), Dudek conducted focused surveys for desert tortoise to determine the status of the species on site. To evaluate the impacts to 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 2019). Biologists surveyed the site by walking approximately 10-meter-wide transects for 100% coverage of the BSA, searching for live tortoises, suitable burrows, scat, or carcasses.

3.4.9 Focused Mohave Ground Squirrel Survey

Dipodomys Ecological Consulting biologists conducted initial visual surveys within the project site and off-site improvement areas for Mohave ground squirrel in April 2023 (Dipodomys Ecological Consulting 2023). The visual surveys were conducted by driving and walking throughout the project site, portions of the off-site improvement areas, to identify suitable habitat for Mohave ground squirrel, which is consistent with the methods described in the 2010 CDFW Mohave Ground Squirrel Survey Guidelines (CDFW 2010). Field methods are described in detail in Appendix B. Following an initial visual survey, three 5-day live-trapping surveys for Mohave ground squirrel were conducted between April 21, 2023, and July 8, 2023, within the on-site portion of the BSA. The methods used for the live trapping effort followed the most recent CDFW Mohave Ground Squirrel Survey Guidelines issued in 2010 (CDFW 2010). Camera trappings consisted of ten camera stations in locations. Methods used for camera trapping effort are described in detail in Appendix B.

3.4.10 Jurisdictional Delineation of Aquatic Resources

Before conducting fieldwork for the aquatic resources delineation, Dudek reviewed the National Wetlands Inventory (USFWS 2023b), the National Hydrography Database (USGS 2023), the NRCS Web Soil Survey (USDA 2023a), historic aerials (Google Earth 2023; NETR 2023), and USGS topographic maps (USGS 2015a-b). Dudek biologists conducted an aquatic resources delineation field visit in September 2022. The survey dates, biologists, and weather conditions are included in Table 1. Survey datasheets and forms are included in the Aquatic Resources Delineation Report, provided in Appendix C. The surveys were conducted on foot to visually cover 100% of the BSA.

Dudek conducted a delineation of state and federal jurisdictional waters and wetlands within the BSA in accordance with current policies. Federal wetlands were mapped based on the procedures in USACE's 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters were mapped at the OHWM based on the procedures defined in USACE's 2008 A Field Guide to Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b). Waters of the state were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State, adopted on April 2, 2019. CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code Section 1602.

To aid in the delineation and in conformance with the USACE 2008 Field Guide, five OHWM datasheets were recorded at potential non-wetland waters within the BSA to determine the OHWM indicators within those features. OHWM datasheets are included in Appendix C of Appendix C. The jurisdictional delineation did not contain any features that met the State Water Resources Control Board wetland criteria, and due to the lack of hydrophytic vegetation and hydric soils, wetland determination data forms were not completed.

The limits of aquatic resources were collected in the field using Esri Field Maps equipped with sub-meter accuracy. The geographic extents were digitized into ArcGIS based on data collected from the mobile application.

3.4.11 Survey Limitations

Limitations of the surveys include a diurnal bias as most surveys were conducted during the daytime. As such, birds represent the largest component of vertebrate fauna recorded during the surveys, as they are usually most active during daytime hours. Although the diurnal bias likely result in fewer observations of mammals, camera trapping and small mammal trapping surveys conducted as part of the Mohave ground squirrel protocol surveys made detections of most crepuscular and/or nocturnal wildlife species on site possible. Many species of reptiles and amphibians are secretive in their habits and are difficult to observe using standard meandering transects.

Despite these limitations, the survey work conducted in the BSA provides an adequate overall assessment of floral and faunal resources for purposes of evaluating potential biological constraints.

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4 Environmental Setting

The purpose of this section 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 located in the High Desert region of western San Bernardino County, located approximately 68 miles from the Pacific Ocean on the trans-montane slope of the San Gabriel and San Bernardino Mountains. July is the warmest month with an average high temperature of 98.1 °F, and December is the coolest month with an average low temperature of 29.2 °F (WRCC 2023). Significant rainfall occurs primarily between November and March, with the maximum average precipitation occurring in January and February. The average annual precipitation for Victorville is 5.52 inches (WRCC 2023). Periods of extended drought are common throughout the region.

4.2 Terrain

The BSA is located in Victor Valley, which lies northeast the San Gabriel Mountains and northwest of the San Bernardino Mountains. The topography of the project site and surrounding area is generally a flat plane, which slopes gently in a northeasterly direction. The BSA is located approximately 3.6 miles southwest of the Mojave River and approximately 7.2 miles southeast of Quartzite Mountain (USGS 2015b). Elevations within the BSA ranges from approximately 2,957 feet above mean sea level (amsl) in the northeastern portion to 3,014 feet amsl in the southwestern portion.

4.3 Soils

According to the USDA NRCS Web Soil Survey (USDA 2023a), the BSA is included within the Soil Survey for the San Bernardino County, Mojave River Area (USDA 1986). The BSA consists of six soil mapping unit types: Bryman loamy fine sand, 2% to 5% slopes; Cajon sand, 0% to 2% slopes; Cajon sand, 2% to 9% slopes; Helendale loamy sand, 2% to 5% slopes; Lavic loamy fine sand; and Rosamond loam, saline-alkali. These soil types are described in more detail below and are presented on Figure 3, Soils.

Bryman Series consists of very deep, well drained soils formed in alluvial material derived mainly from granitic rocks. The Bryman loamy fine sand, 2% to 5% slopes, mapping unit occurs on terraces at elevations between 3,000 to 3,400 feet amsl (USDA 1986).

Cajon Series consists of very deep, somewhat excessively drained soils formed in alluvial material derived mainly from granitic rocks. Both the Cajon sand, 0% to 2% slopes, and the Cajon sand, 2% to 9% slopes, mapping units occur on alluvial fans at elevations between 1,800 to 3,500 feet amsl (USDA 1986).

Helendale Series consists of very deep, well drained soils formed in alluvial material derived mainly from granitic rocks. The Helendale loamy sand, 2% to 5% slopes, mapping unit occurs on alluvial fans and terraces at elevations between 2,700 to 3,800 feet amsl (USDA 1986).

Lavic Series consists of very deep, moderately well drained soils formed in alluvial material derived mainly from granitic rocks. The Lavic loamy fine sand mapping unit occurs on alluvial fans and basin rims at elevations between 2,800 to 3,100 feet amsl (USDA 1986).

Rosamond Series consists of very deep, well drained soils formed in alluvial material derived mainly from granitic rocks. The Rosamond loam, saline-alkali flats, mapping unit occurs on the lower margins of alluvial fans and on basin rims at elevations between 1,700 to 2,800 feet amsl (USDA 1986).

4.4 Surrounding Land Uses

The BSA is primarily composed of currently vacant, undeveloped property located at the western edge of Victorville, southeast of Adelanto. The BSA is surrounded by undeveloped land immediately north, west, and east of the subject parcels and sparse residential development occurs south of Mojave Drive, east of Topaz Road and west of Onyx Road. Additionally, a residential development is actively under construction south of Tawney Ridge Lane and east of Diamond Road. Other developed lots in the project vicinity include existing school campuses located north of Tawney Ridge Lane and east of Diamond Road and an existing truck stop at the western extent of the BSA, where Cactus Road meets U.S. Highway 395.

According to the City of Victorville General Plan Land, the land use for the project site is planned for light industrial use (City of Victorville 2022). Dirt roads along Cactus Road and Onyx Road have been present since the mid-1980s and were observed to be frequently used by local commuters at the time of the site visits. A significant increase in bare patches and trails along these roads and within the main portion of the project site appear in aerial imagery between 2016 and 2020, likely due to an increase in foot traffic, trash dumping, homeless encampments, and off-road vehicular recreation. Evidence of these activities were observed throughout the BSA, with active off-road ATV use observed during 2022 and 2023 field surveys.

4.5 Watersheds and Hydrology

The BSA is located within southwestern portion of the Mojave River subbasin, Hydrologic Unit Code [HUC] 18090208 (Figure 4, Hydrologic Setting). The Mojave River subbasin comprises approximately 4,600 square miles and is almost entirely within San Bernardino County (USGS 2023). The primary geographic and surface hydrologic feature of the watershed is the Mojave River, which flows north for approximately 120 miles until it reaches Silver Dry Lake near the community of Baker. Some reaches of the Mojave River flow underground in the confined riverbed channel. The Mojave River is approximately 3.6 miles northeast of the BSA.

Within this subbasin, the BSA occurs primarily within Burkhardt Lake-Mojave River subwatershed (HUC 180902080706) of the Bell Mountain Wash-Mojave River watershed (HUC 1809020807) (Figure 4). The northeastern extent of the BSA, including the northeastern corner of the northern project parcel, occurs within the Manzanita Wash subwatershed (HUC 180902080503) of the Upper Fremont Wash Watershed (HUC 1809020805).

5 Results

This section describes the results of the literature review, field surveys, and habitat assessments within the BSA.

5.1 Vegetation Communities and Land Covers

Three vegetation communities and land cover types were mapped within the BSA: creosote bush scrub (*Larrea tridentata* association), disturbed habitat, and urban/developed land. The vegetation communities and land cover types mapped within the BSA are detailed below in Table 2. The spatial distribution of the vegetation communities and land covers are presented on Figure 5, Vegetation. Representative photos of the BSA are included in Appendix D, Site Photos.

Table 2. Existing Vegetation Communities and Land Cover Types within the Biological Study Area

Vegetation Community or Land Cover Type	Alliance	Association	State Ranking ^a	Project Site (acres)	Off-Site Areas (acres)	Total BSA (acres) ^c
Creosote Bush Scrub	<i>Larrea tridentata</i> Shrubland Alliance	<i>Larrea tridentata</i> Association	S5	76.74	7.60	119.21
Disturbed Habitat	N/A	N/A	NA	2.40	6.57	20.60
Urban/Developed	N/A	N/A	NA	1.97	3.23	12.62
Total^b				81.10	17.40	152.42

Notes: BSA = biological study area (project site, off-site areas, and 100-foot buffer combined); N/A = not applicable.

^a 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 meaning (NatureServe 2023):

- 1 = critically imperiled
- 2 = imperiled
- 3 = vulnerable to extirpation or extinction
- 4 = apparently secure
- 5 = demonstrably widespread, abundant, and secure
- NA = no applicable ranking
- GNR = unranked, global rank not yet assessed
- SNR = unranked, subnational rank not yet assessed

^b Total acreages may not sum exactly due to rounding.

5.1.1 Creosote Bush Scrub

Creosote bush scrub, or the *Larrea tridentata* shrubland alliance, is recognized by the CDFW Natural Community List. Communities in this alliance include creosote bush as the dominant shrub, exceeding all other shrubs in cover. If brittlebush (*Encelia farinosa*) is present, it is less than three times the cover of creosote bush, or if white bursage (*Ambrosia dumosa*) is present, it is less than two times the cover of creosote bush (CNPS 2023b). This alliance is found in a variety of desert landforms, including alluvial fans, upland slopes, and small intermittent washes on well-drained soils (CNPS 2023b).

Creosote bush scrub composes the majority of the BSA (Figure 5). Other shrub species observed in the community on site include white bursage, Nevada joint-fir (*Ephedra nevadensis*), rubber rabbitbrush (*Ericameria nauseosa*), Mexican bladdersage (*Scutellaria mexicana*), Mojave cottonthorn (*Tetradymia stenolepis*), peach thorn (*Lycium cooperi*), and cheesebush (*Ambrosia salsola* var. *salsola*). Western Joshua trees were scattered throughout the creosote bush scrub community within the BSA; however, they make up less than 1% absolute cover and therefore did not warrant its own community. Western Joshua trees were scattered throughout the creosote bush scrub community within the BSA; however, western Joshua tree made up less than 1% absolute cover and therefore did not warrant its own community. Creosote bush scrub is ranked as S5 and therefore is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2023c).

5.1.2 Disturbed Habitat

Although not recognized by the CDFW Natural Community List (CDFW 2023c), disturbed habitat refers to areas that have had physical 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.

Within the BSA, disturbed habitat includes the existing dirt roads within the site and along the western and northern boundaries of the on-site portion of the BSA, as well as cleared areas bordering Mojave Drive and adjacent to the truck stop off of U.S. Highway 395 (Figure 5). Dirt roads within BSA, including the on-site areas, were observed during surveys to be frequently used by local residents and off-road vehicular motorists for commuting and recreation. Disturbed habitat is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2023c).

5.1.3 Urban/Developed Land

Although not recognized by the CDFW Natural Community List (CDFW 2023c), 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.

Within the BSA, urban/developed land consists of the paved roads and lots associated with Mojave Drive Road along the southern boundary, the Diamond Road-Tawney Ridge Lane intersection located at the northeastern extent of the BSA, and the truck stop off of U.S. Highway 395 located at the western extent of the BSA (Figure 5). Urban/developed land is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2023c).

5.2 Plants

A total of 73 plant species, 59 native (81%) and 14 non-native (19%), were recorded within the BSA. A comprehensive list of species is available in Appendix E, Plant Compendium. Special-status plants that were observed within the BSA are discussed below in Section 5.2.1.

5.2.1 Special-Status Plant Species Assessment

Nine plant species considered special-status in this report were returned in the queries of the CNDDDB and the CNPS Inventory for the subject USGS 7.5-minute quadrangles (i.e., Adelanto) and surrounding eight USGS 7.5-minute quadrangles (i.e., Hesperia, Victorville, Shadow Mountains, Helendale, Victorville NW, Phelan, Baldy Mesa, and Shadow Mountains SE) or were included in the USFWS IPaC list generated for the BSA (CDFW 2023a; CNPS 2023a; USFWS 2023a). One special-status plant species, western Joshua tree, was observed within the BSA. This species is discussed in further detail below and its regulatory status, ecological associations, and presence within the BSA are summarized in Table 3, Special-Status Plant Species Detected in the Biological Study Area.

No other listed species or non-listed CRPR 1 or CRPR 2 plants were observed during focused surveys. Due to focused surveys being conducted during the appropriate blooming period, all other special-status plants are not expected to occur. These species are listed in Appendix F, Special-Status Plant Species Not Expected to Occur within the Biological Survey Area and are not discussed further in this report because no significant direct, indirect, or cumulative impacts are expected. The BSA does not overlap with any designated critical habitat for listed plant species .

Table 3. Special-Status Plant Species Detected within the Biological Study Area

Scientific Name	Common Name	Status (Federal/ State/ CRPR)	Primary Habitat Associations/Life Form/Blooming Period/Elevation Range (feet amsl)	Potential to Occur
<i>Yucca brevifolia</i>	Western Joshua tree	None/CST/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/April–May/1,310–6,560	Present. This species was detected within the BSA.

Status Designations

CST: Candidate for listing under CESA as State Threatened

Notes: BSA = biological survey area; CRPR = California Rare Plant Rank; amsl = above mean sea level.

Western Joshua Tree

Western Joshua tree is a candidate for listing as “Threatened” under CESA and afforded the protection of the act while the Commission decides if listing the species is warranted. This monocot tree in the asparagus family (Agavaceae) typically blooms between April and May but is a conspicuous tree identifiable at any time of year. It is found within Joshua tree woodland, Great Basin grassland and scrub, Mojavean desert scrub, pinyon and juniper woodland, Sonoran desert scrub, and valley and foothill grassland between 1,310 and 6,560 feet amsl (CNPS 2023b). This species occurs on desert flats and slopes in San Bernardino County and other southern and eastern counties of California (Calflora 2023; Jepson Flora Project 2023).

A total of 119 western Joshua tree individuals were observed within the Joshua Tree Survey Area (project site, off-site improvement areas, and 50-foot buffer) (Figure 6, Floral and Faunal Resources). Of the 119 trees found

within the Joshua Tree Survey Area, 101 western Joshua tree individuals are located within the project site and off-site improvement areas, with the remaining 18 western Joshua tree individuals located within the 50-foot Joshua Tree Survey Area buffer. Further details on phenological data of western Joshua tree individuals observed is provided in Appendix A, Joshua Tree Preservation, Protection, and Relocation Plan (Joshua Tree Plan).

5.2.2 California Desert Native Plants

Other than western Joshua tree, two desert native plant species were mapped within the BSA (Figure 6). Specifically, one Wiggins' cholla (*Cylindropuntia echinocarpa*) individual and two buckthorn cholla (*Cylindropuntia acanthocarpa*) individuals were observed.

Although the CDNPA is codified in state law (California Food and Agricultural Code Division 23), enforcement powers and administrative responsibilities are given to the subject County commissioner, sheriff, and board of supervisors as stipulated in Chapter 4 of the CDNPA (Enforcement Powers and Administrative Responsibilities). Therefore, potential impacts to desert native plant species are analyzed in Section 6.7, which discusses project consistency with local policies or ordinances.

5.3 Wildlife

A total of 44 wildlife species, consisting of 40 native species and 4 non-native species, were recorded within the BSA or vicinity during surveys.

Avifauna comprised the majority of wildlife species detections with a total of 31 bird species due a detection bias for their mobility and diurnal activity. Some commonly observed bird species include common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), turkey vulture (*Cathartes aura*), mourning dove (*Zenaida macroura*), verdin (*Auriparus flaviceps*), lesser goldfinch (*Spinus psaltria*), and house finch (*Haemorhous mexicanus*). Six reptile species were observed: zebra-tailed lizard (*Callisaurus draconoides*), western fence lizard (*Sceloporus occidentalis*), common side-blotched lizard (*Uta stansburiana*), Great Basin tiger whiptail (*Aspidoscelis tigris tigris*), long-nosed leopard lizard (*Gambelia wislizenii*), and Mohave rattlesnake (*Crotalus scutulatus*). Six common mammal species were observed: coyote (*Canis latrans*), domestic dog (*Canis familiaris*), black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), kangaroo rats (*Dipodomys* sp.), and white-tailed antelope squirrel (*Ammospermophilus leucurus*). No amphibian species were observed due to lack of suitable aquatic habitat. A comprehensive list of wildlife species observed during surveys is available in Appendix G, Wildlife Compendium. Special-status wildlife species detected within the BSA are discussed below in Section 5.3.1.

5.3.1 Special-Status Wildlife

Twenty-eight wildlife species considered special-status in this report were returned in the query of the CNDDDB for the subject USGS 7.5-minute quadrangles (i.e., Adelanto) and surrounding eight USGS 7.5-minute quadrangles (i.e., Hesperia, Victorville, Shadow Mountains, Helendale, Victorville NW, Phelan, Baldy Mesa, and Shadow Mountains SE) or were included in the USFWS IPaC list generated for the BSA (CDFW 2023a; USFWS 2023a). Special-status wildlife that have a low potential to occur or are not expected to occur within the BSA due to lack of suitable habitat are listed in Appendix H, Special-Status Wildlife Species with Low Potential or Not Expected to Occur within the Biological Study Area. These species are not discussed further in this report because no significant direct, indirect, or cumulative impacts are expected.

Table 4. Special-Status Wildlife Species Detected or with Moderate to High Potential and Listed Wildlife Species with a Low Potential to Occur within the Biological Study Area

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
<i>Vulpes macrotis arsipus</i>	Desert kit fox	None/None ^a	Sparse scrub habitats such as creosote scrub communities that support abundant rodent populations (Center for Biological Diversity 2013)	Observed. This species was detected within the BSA via a camera trap that was deployed as part of 2023 focused Mohave ground squirrel surveys.

Status Designations:

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

SSC: California Species of Special Concern

SCE: State candidate for listing as endangered

Notes: BSA = biological survey area; CNDDDB = California Natural Diversity Database.

^a Species considered a “fur-bearing mammal” protected under Fish and Game Code Section 4000.

Burrowing Owl

Burrowing owl is a CDFW SSC. 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 as they are required for nesting, roosting, cover, and caching prey (Coulombe 1971; Martin 1973; Green and Anthony 1989; Haug et. al. 1993). In California, western burrowing owls most commonly live in burrows created by California ground squirrels (*Otospermophilus beecheyi*). 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); usable burrows are available; and foraging habitat occurs in close proximity (Gervais et. al. 2008). Debris piles, riprap, culverts, and pipes can be used for nesting and roosting.

Focused surveys for burrowing owl were conducted between March 23, 2023, and July 18, 2023, in five passes. Dudek conducted an additional pass rather than the minimum four passes required by CDFW protocol in order to confirm the presence and location of burrowing owls incidentally sighted in the project vicinity during Mohave ground squirrel surveys. One burrowing owl individual was observed flying over project site after being flushed from its off-site burrow location on July 18, 2023 (Figure 6). The active burrow, at which breeding was confirmed with observations of a pair of adult owls and at least four owlets, is located approximately 150 feet east of the proposed project (Figure 6). Although the burrowing owls were not nesting within the BSA, they are likely to use the project site to forage due to their close proximity and the presence of suitable foraging habitat. The BSA contains suitable nesting or overwintering habitat for the species due to presence of open scrub vegetation and burrows of suitable size. Therefore, burrowing owl could use the site as overwintering habitat or for breeding in subsequent years. A burrowing owl relocation plan for the project is detailed in Appendix I.

Crotch's Bumblebee

Crotch bumblebee is a candidate for listing as an endangered species under CESA. The Crotch bumblebee is distributed in coastal California, east towards the Sierra-Cascade Crest, and is less commonly 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 bumblebee has a moderate potential to occur within the BSA, as the study area contains open scrub communities with the preferred plant genera. The nearest CNDDDB record is approximately 10 miles northeast of the BSA (CDFW 2023a).

Desert Tortoise

Desert tortoise is listed under FESA and CESA as a threatened species. The range of the Mojave population of the 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 desert tortoise in the Mojave Desert is creosote bush scrub where precipitation ranges from 2 to 8 inches, with relatively high diversity of perennial plants and high productivity of ephemeral plants. Throughout most of the Mojave Desert, 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 of burrows, but firm enough that burrows do not collapse (USFWS 2008). Although populations of 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).

Protocol surveys in 2023 resulted in no observations of active desert tortoise burrows, active desert tortoise sign (i.e., scat, drink basins, footprints, tortoise remains), or observations of individual desert tortoises. However, the BSA contains suitable sandy soils, ephemeral washes, and creosote scrub to support this species. In addition, nearest CNDDDB occurrences from 2007 are mapped approximately 250 feet east and 0.25-mile north of the BSA (CDFW 2023a) and the BSA is located within CDFW's CWHR predicted habitat modeling for the species ranked with a high habitat suitability score (CDFW 2017). Therefore, this species is considered to have a low potential to occur within the BSA. Due to an abundance of caution and this species' federal and state listing status, impacts to this species are analyzed in Section 6.3, which discusses impacts to special-status species. Desert tortoise survey forms are included as Appendix J.

Loggerhead Shrike

Loggerhead shrike is a CDFW SSC. This stocky, large-headed songbird is widespread at the lower elevations in California (Humple 2008). Preferred habitats for the species 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 man-made structures (such as the top of chain-link fences or barbed wire) that provide a location to impale prey items for storage or manipulation (Humple 2008). Nest sites are chosen based more on the cover than the particular vegetation species and are usually constructed in a dense shrub or tree well below

the crown and are well concealed (Yosef 2020). Although this species was not detected within the BSA, two loggerhead shrike detections were made approximately 580 feet and 0.3-mile north of the BSA on two separate site visits. Additionally, the BSA supports suitable foraging and nesting habitat (e.g., open desert scrub with scattered shrubs) for this species. Therefore, loggerhead shrike has a high potential to occur within the BSA.

Desert Kit Fox

Desert kit fox is considered a “fur-bearing mammal,” protected from take under the Commission’s Mammal Hunting Regulations (Subdivision 2, Chapter 5), which effectively protects it from hunting pressure. Desert kit fox is not listed under FESA or CESA, or under any other special-status designation. The desert kit fox lives in the open desert, on creosote bush flats, and amongst the sand dunes (National Park Service [NPS] 2015). Desert kit fox was observed within the BSA via a camera trap deployed as part of the protocol-level Mohave ground squirrel surveys conducted in 2023. The BSA provides suitable creosote bush flats habitat for this species and burrows suitable for use as desert kit dens were observed north of the BSA (Figure 6). A desert kit fox relocation plan for the project is detailed in Appendix K.

Mohave Ground Squirrel

Mohave ground squirrel is listed under CESA as a threatened species. The distribution range for this species is restricted to the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo Counties (Zeiner et. al. 1990). This species generally inhabits 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 between 1,800 and 5,000 feet amsl.

Although suitable habitat is present within the BSA, focused Mohave ground squirrel surveys conducted in accordance with CDFW survey guidelines were negative for the species. Therefore, CDFW survey guidelines indicate it can be determined that Mohave ground squirrel are currently absent from the BSA. More details of this species and the results of the protocol survey are provided in the Mohave Ground Squirrel Report (Appendix B).

5.3.2 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 steppingstones for dispersal.

The BSA is not mapped as an essential connectivity area, natural landscape block, or linkage for the California Essential Habitat Connectivity Network nor the California Desert Linkage Network. Additionally, due to the undeveloped land on the BSA, there are opportunities for wildlife to move across the site 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, the project would not create a significant impediment to wildlife movement that would warrant a wildlife corridor study.

5.3.3 Native Wildlife Nursery Sites

No diagnostic signs of bird rookeries (e.g., numerous nests, whitewash) or large maternal or overwintering bat roosts (e.g., large concentrations of guano or guano odors) were identified in the BSA. Additionally, aquatic resources identified within the BSA are unlikely to support fisheries due to a lack of perennially available water. The lack of typical urban roosting habitat (bridges and older buildings with structural deficiencies) and minimal stands of large trees makes it unlikely for the BSA to support roosting bats. However, vegetation throughout the BSA could provide suitable nesting habitat for many species of native birds.

5.4 Jurisdictional Aquatic Resources

With respect to USACE-jurisdictional waters of the United States, including wetlands, the USACE makes the jurisdictional determination. The USACE issues two types of jurisdictional determinations: preliminary and approved.¹ Both types of determinations require a submittal of a formal jurisdictional delineation report. CDFW and RWQCB also may request a site visit to review the jurisdictional delineation and may potentially change the limits of delineation. Therefore, the jurisdiction determinations provided in this technical report are preliminary and only identify potential jurisdictional areas.

Dudek used the methods described in Section 3.4.10 of this report to determine the presence or absence of potential USACE, RWQCB, and CDFW jurisdiction within the BSA. Table 5 summarizes the features identified and the limits of aquatic resources are provided on Figure 7, Aquatic Resources.

Table 5. Summary of Potential Jurisdictional Waters within the Biological Study Area

Aquatic Resources Type	Regulatory Agency	Acreage
Non-Wetland Waters of the U.S.	USACE	None
Non-Wetland Waters of the State	RWQCB	0.40
Streambed, Banks, and Riparian Habitat	CDFW	1.02

Notes: USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.

Three un-named hydrological features were identified in the BSA. All three features are ephemeral desert washes, which are presumed to be non-jurisdictional by USACE because they do not meet the relatively permanent standard as waters of the United States. However, features mapped within the BSA may be regulated by the RWQCB and CDFW. In total, 0.40-acre of non-wetland waters (below OHWM) fall under RWQCB jurisdiction, and 1.02-acre of CDFW streambed occurs in the BSA. No areas within the review area supported hydrophytic vegetation, and therefore features within the BSA were considered non-wetland waters of the State. The results of the formal aquatic resources delineation are discussed in further detail in the attached Aquatic Resources Delineation Report prepared for this project (Appendix C).

¹ The USACE issues two types of jurisdictional Determinations (JDs)—preliminary and approved. A preliminary JD is an expedited process typically initiated at the time that a 404 permit is requested for impacts to federal jurisdictional waters; the preliminary JD is non-binding and does not involve USACE review. This process is used when the permittee does not wish to request a determination that some or all of the potentially jurisdictional waters on the project site are not subject to federal jurisdiction. An approved JD is requested through submittal of a JD report and the accompanying form. It requires USACE review of the report and application of the criteria used to request a non-federal JD.

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6 Project Impacts

This section 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 Section 7, Mitigation. Cumulative impacts are addressed in the project's 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 California Code of Regulations [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 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 impacts would occur from construction of three industrial/warehouse buildings and associated loading docks, tractor-trailer stalls, passenger vehicle parking spaces, landscaped areas, and off-site road and utility improvements. All on-site and off-site direct impacts are considered permanent.

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. 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 environmental impact report.

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

6.3 Impact BIO-1: Special-Status Species

One listed special-status plant species (i.e., western Joshua Tree) and two special-status wildlife species (i.e., burrowing owl and desert kit fox) were detected within the project's BSA (project footprint plus a 100-foot buffer). Additionally, two special-status wildlife species (i.e., loggerhead shrike, Crotch bumble bee) have a moderate or high potential to occur within the BSA due to presence of suitable habitat and site conditions. Although 2023 protocol survey results were negative for Mojave desert tortoise, in the abundance of caution and due to recent nearby CNDDDB occurrences, this listed species is considered to have a low potential to occur. The project would have significant impacts on special-status species absent mitigation or avoidance.

No non-listed special-status plant species were observed or have a high or moderate potential to occur within the BSA; therefore, the project would have no direct impacts to non-listed special-status plant species. In addition, the BSA does not occur within federally designated critical habitat for any special-status species, and there would be no direct impacts to critical habitat. Impacts to these species and proposed mitigation measures are discussed below. Plant species that are not considered special-status but are protected under the locally-enforced CDNPA (i.e., Wiggins' cholla, buckthorn cholla) are discussed below in Section 6.7, Impacts Associated with Local Policies and Ordinances.

6.3.1 Impacts to Special-Status Plants

6.3.1.1 Direct Impacts

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, implementation of the project would result in direct impacts to 101 western Joshua trees. All ground-disturbing activities are considered permanent impacts to western Joshua trees. Direct impacts to western Joshua tree would be significant absent mitigation under CEQA.

Based on the WJTCA, Fish and Game Code section 1927.3 requires the applicant to mitigate by paying the statutorily prescribed fees. Trees located in the area described in Fish and Game Code section 1927.3 (e) are in the reduced fee area; therefore, impacts to western Joshua tree can be mitigated on a per-tree basis as follows:

- 5 meters or greater in height - \$1,000
- 1 meter or greater but less than 5 meters in height - \$200
- less than 1 meter in height - \$150

The project would result in direct impacts to 2 Joshua trees that are 5 meters or greater in height, 74 trees 1 meter or greater but less than 5 meters in height, and 25 trees less than 1 meter in height.

As required by **Mitigation Measure (MM)-BIO-1** (Western Joshua Tree Fee Payment), mitigation for direct impacts to 101 western Joshua trees, their seed bank, and associated habitat would be fulfilled through conservation of western Joshua trees through a payment of fees consistent with the Western Joshua Tree Conservation Act or through payment to a CDFW approved mitigation bank.

Furthermore, the 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 footprint. **MM-BIO-5** (Education Program) would provide construction personnel with 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.

Therefore, 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 Programs), **MM-BIO-6** (Construction Monitoring Notebook), and **MM-BIO-7** would reduce potential direct impacts to western Joshua trees to less than significant.

6.3.1.2 Indirect Impacts

No non-listed special-status plant species were observed or have a high or moderate potential to occur within the 50-foot buffer outside of the project footprint; therefore, the project would have no indirect impacts to non-listed special-status plant species.

In total, 18 western Joshua trees were mapped within the 50-foot buffer outside of the project footprint and would be preserved in place. Although these trees would not be directly impacted, implementation of the project may result in indirect impacts to these western Joshua trees.

Western Joshua Tree

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

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 (AQMDs) Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction.

A Stormwater Pollution Prevention Plan (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. Best management practice (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.

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 Code (CalGreen) 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 special-status plants due to changes in water quality would be avoided and minimized through implementation of low-impact-development features and BMPs.

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.

Upon completion of project construction, the project would not facilitate wildfire spread or exacerbate wildfire risk due to the low ignitability of the proposed structures and implementation of fire-resistant and irrigated landscaping. 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, long-term indirect impacts to special-status plants associated with increased wildlife risk are not expected to occur.

Additionally, **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 clean-up of any hazardous waste occurs. Implementation of **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 special-status plants. Thus, implementation of **MM-BIO-8** (Hazardous Waste) and **MM-BIO-9** (Herbicides) would help to avoid and minimize indirect impacts to special-status plants from any construction-related chemical spills or improper application of herbicides.

Furthermore, the 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 footprint. **MM-BIO-5** (Education Program) would provide construction personnel with 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.

Lastly, the Joshua Tree Plan provide measures for protecting the remaining western Joshua trees, such as establishment of a tree protected zone (crown/canopy plus 6 feet), protective fencing and signage, pre-construction meetings, measures for protection and maintenance during construction, and procedures for maintenance after construction.

Accordingly, implementation of the Joshua Tree Plan, **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 tree to less than significant.

6.3.2 Impacts to Special-Status Wildlife

6.3.2.1 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. The project could result in significant, direct impacts to four special-status wildlife species that were observed or have a moderate to high potential to occur within the BSA: burrowing owl, loggerhead shrike, Crotch bumble bee, and desert kit fox. Additionally, potential significant direct impacts to one special-status species that has a low potential to occur, desert tortoise, are analyzed due its federal and state listing status. Potential direct impacts to these five special status species and proposed avoidance/minimization measures are detailed below. Focused surveys conducted for Mohave ground squirrel were negative; therefore, impacts to these species are not expected to occur and will not be analyzed further.

Burrowing Owl

Burrowing owl was observed within the BSA. Specifically, an individual was flushed from a burrow located out of the BSA and was observed briefly flying into the project site. The individual was part of a family of burrowing owls that were occupying a burrow approximately 50 feet outside of the BSA. Although burrowing owls were not nesting within the BSA for the 2023 breeding season, they were likely using the project site to forage due to the presence of suitable open scrub habitat and its close proximity to the active burrow. The BSA also contains suitable nesting and overwintering habitat for burrowing owl with a few suitable burrows. Therefore, burrowing owl could breed or overwinter within the BSA at the start of construction.

While home ranges vary widely, burrowing owl have been found to primarily forage within 600 meters of nest burrows (Haug & Oliphant 1990; Gervais et al. 2003; Rosenberg & Haley 2004). As such, implementation of the project would result in the loss of approximately 76.47 acres of occupied breeding habitat for burrowing owl (i.e., directly impacted creosote bush scrub occurring within 600 meters of the occupied nest burrow). These potential direct impacts to burrowing owls are considered significant absent mitigation under CEQA. **MM-BIO-10** (Pre-Construction Surveys for Burrowing Owl Avoidance) requires mitigation for the loss of occupied breeding habitat, which would be fulfilled through conservation of burrowing owl habitat with purchase of credits at a minimum of 1:1 in-kind habitat replacement. Accordingly, **MM-BIO-10** (Pre-Construction Burrowing Owl Survey and Avoidance) would reduce direct impacts due to loss of suitable burrowing habitat to less than significant.

Direct impacts could occur to burrowing owl if nesting or overwintering individuals occur within the BSA during construction. Construction activities could cause disruptions to breeding activities and mortality or injury to individuals in burrows if present within the disturbance footprint during construction. Harm to or loss of individuals as a result of construction activities 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 (CDFW 2012) would be necessary to reevaluate the locations of potential burrowing owl burrows within the project limits so take of owls or active owl nests can be avoided. **MM-BIO-10** (Pre-Construction Burrowing Owl Survey and Avoidance) would require pre-construction surveys for burrowing owl shall be conducted in areas supporting potentially suitable habitat with the first survey no less than 14 days prior to the start of construction activities, and the second within 24 hours of start of construction. A Burrowing Owl Relocation Plan has been prepared to facilitate implementation of this mitigation measure and is attached to this report as Appendix I. In addition, implementation of **MM-BIO-3** (Designated Biologist Authority), **MM-BIO-4** (Compliance Monitoring),

MM-BIO-5 (Education Programs), and **MM-BIO-6** (Construction Monitoring Notebook) would reduce potential direct impacts to less than significant.

Accordingly, implementation of **MM-BIO-3** (Designated Biologist Authority), **MM-BIO-4** (Compliance Monitoring), **MM-BIO-5** (Education Programs), **MM-BIO-6** (Construction Monitoring Notebook), **MM-BIO-10** (Pre-Construction Burrowing Owl Survey and Avoidance) would reduce potential direct impacts to burrowing owl to less than significant.

Loggerhead Shrike

The BSA supports suitable loggerhead shrike foraging and nesting habitat (e.g., open desert scrub with scattered shrubs). Additionally, two loggerhead shrike detections were made in close proximity to the BSA. Therefore, loggerhead shrike has a high potential to occur within the BSA.

Implementation of the proposed project could result in direct impacts to loggerhead shrike through the removal of potentially suitable habitat. However, this impact would be adverse, but not significant due to abundant suitable habitat present in the project region. These areas will continue to provide habitat opportunities for this species. As a result, the loss of suitable habitat would not substantially reduce the habitat for the species and would not cause the species population to drop below self-sustaining levels. Additionally, as required by **MM-BIO-1** (Western Joshua Tree Fee Payment), mitigation for direct impacts to western Joshua trees would be fulfilled through a payment of fees consistent with the WJTCA or through payment to a CDFW approved mitigation bank. Conservation efforts for western Joshua tree will 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. Thus, mitigation for impacts to western Joshua tree would ensure conservation of suitable habitat for loggerhead shrike, which use similar habitat. Therefore, direct impacts resulting from the loss of habitat for loggerhead shrike would be less than significant.

To avoid potential direct impacts to nesting loggerhead shrike, vegetation removal activities would be conducted outside 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-11** (Pre-Construction Nesting Bird Survey and Avoidance).

Accordingly, implementation of **MM-BIO-1** (Western Joshua Tree Fee Payment) and **MM-BIO-11** (Pre-Construction Nesting Bird Survey and Avoidance) would reduce potential direct impacts to loggerhead shrike to less than significant.

Crotch Bumble Bee

Crotch bumble bee is a generalist forager and could forage anywhere within the BSA where suitable floral resources are present. Therefore, this species has a moderate potential to occur in open scrub where preferred plant genera occurs in the herbaceous layer. There is also potential for the project to support nesting sites for bumble bee colonies, including Crotch bumble bee, which are primarily located underground in abandoned holes made by ground squirrels, mice, and rats, but may be above ground in abandoned bird nests or empty cavities (Williams et al. 2014).

Implementation of the proposed project could result in direct impacts to Crotch bumble bee through the removal of potentially suitable habitat. However, this impact would be adverse, but not significant due to abundant suitable habitat present in the project region. These areas will continue to provide habitat opportunities for this species. As a result, the loss of suitable habitat would not substantially reduce the habitat for the species and would not cause

the species population to drop below self-sustaining levels. Additionally, as required by **MM-BIO-1** (Western Joshua Tree Fee Payment), mitigation for direct impacts to western Joshua trees would be fulfilled through a payment of fees consistent with the WJTCA or through payment to a CDFW approved mitigation bank. Conservation efforts for western Joshua tree will 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. Thus, mitigation for impacts to western Joshua tree would ensure conservation of suitable habitat for Crotch bumble bee, which use similar habitat. Therefore, direct impacts resulting from the loss of habitat for Crotch bumble bee would be less than significant.

Because Crotch bumble bee typically nests underground, individuals if present at a given work location in the BSA would also be highly vulnerable to injury and mortality during construction. Harm to or the loss of individuals during construction could be significant, absent mitigation. Implementation of **MM-BIO-12** (Pre-Construction Crotch Bumble Bee Survey and Avoidance) would require pre-construction habitat assessments and focused surveys to identify any Crotch bumble bee nest(s) present within the impact footprint. The measure would require no-impact buffers to be established around nests if found, thereby avoiding potential direct impacts to Crotch bumble bee resulting from the loss of individuals. In addition, implementation of **MM-BIO-3** (Designated Biologist Authority), **MM-BIO-4** (Compliance Monitoring), **MM-BIO-5** (Education Programs), and **MM-BIO-6** (Construction Monitoring Notebook) would reduce potential direct impacts to less than significant.

Accordingly, 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 Programs), **MM-BIO-6** (Construction Monitoring Notebook), **MM-BIO-12** (Pre-Construction Crotch Bumble Bee Survey and Avoidance) would reduce potential direct impacts to Crotch bumble bee to less than significant.

Mojave Desert Tortoise

Although 2023 protocol surveys for desert tortoise were negative, the BSA contains suitable habitat ranked with a high habitat suitability score in CWHR predicted habitat modeling for the species (CDFW 2017). In addition, the nearest CNDDDB occurrences from 2007 are mapped approximately 250 feet east and 0.25-mile north of the BSA (CDFW 2023a). Therefore, Mojave desert is a mobile species that could enter the BSA prior to construction and has a low potential to occur. Any potential direct and indirect impacts to Mojave desert tortoise would be significant absent mitigation under CEQA.

A pre-construction Mojave desert tortoise clearance survey in compliance with current USFWS protocol would be necessary to reevaluate the locations of potential Mojave desert tortoise burrows within the project limits so take of Mojave desert tortoise can be avoided. Consistent with **MM-BIO-13** (Pre-Construction Mojave Desert Tortoise Clearance Survey and Avoidance), a pre-construction clearance survey for Mojave desert tortoise would be conducted in areas supporting potentially suitable habitat 14 to 21 days prior to the start of construction activities, and a second survey would be repeated within 72 hours prior to the start of construction activities; or, alternatively, pre-construction clearance surveys may be conducted following construction of a desert-tortoise-proof fence encompassing the project site that would ensure that tortoises cannot enter the project after clearance surveys are completed. Should Mojave desert tortoises be located during the clearance survey, additional measures in compliance with current USFWS protocol would be required, as described further in **MM-BIO-13** (Pre-Construction Mojave Desert Tortoise Clearance Survey and Avoidance). In addition, implementation of **MM-BIO-3** (Designated Biologist Authority), **MM-BIO-4** (Compliance Monitoring), **MM-BIO-5** (Education Programs), and **MM-BIO-6** (Construction Monitoring Notebook) would reduce potential direct impacts to less than significant.

Should Mojave desert tortoise be located during the clearance survey, the project would result in the permanent loss of 84.34 acres of occupied habitat for Mojave desert tortoise (i.e., creosote bush scrub). These direct permanent impacts would be significant absent mitigation. As required by **MM-BIO-13** (Pre-Construction Mojave Desert Tortoise Clearance Survey and Avoidance), mitigation for direct impacts to 84.34 acres, should Mojave desert tortoise be found during pre-construction clearance surveys, would be fulfilled through conservation of suitable Mojave desert tortoise habitat through the purchase of credits at a minimum of 1:1 in-kind habitat replacement.

Accordingly, 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-13** (Pre-Construction Mojave Desert Tortoise Clearance Survey and Avoidance) would reduce potential direct impacts to Mojave desert tortoise to less than significant.

Desert Kit Fox

Desert kit fox was observed within the BSA. An individual was incidentally detected during a camera trapping study conducted as part of focused Mohave ground squirrel surveys. Additionally, the BSA contains suitable open desert scrub habitat for desert kit fox with suitable burrows. Therefore, desert kit fox could occupy the BSA at the start of construction.

Implementation of the proposed project could result in direct impacts to desert kit fox through the removal of potentially suitable habitat. However, this impact would be adverse, but not significant due to abundant suitable habitat present in the project region. These areas will continue to provide habitat opportunities for this species. As a result, the loss of suitable habitat would not substantially reduce the habitat for the species and would not cause the species population to drop below self-sustaining levels. Additionally, as required by **MM-BIO-1** (Western Joshua Tree Fee Payment), mitigation for direct impacts to western Joshua trees would be fulfilled through a payment of fees consistent with the WJTCA or through payment to a CDFW approved mitigation bank. Conservation efforts for western Joshua tree will 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. Thus, mitigation for impacts to western Joshua tree would ensure conservation of suitable habitat for desert kit fox, which use similar habitat. Therefore, direct impacts resulting from the loss of habitat for desert kit fox would be less than significant.

To avoid potential direct impacts to desert kit fox, a pre-construction survey for desert kit fox will be conducted within 10 days prior to the start of construction to determine the presence/absence of desert kit fox, pursuant to **MM-BIO-14** (Pre-Construction Desert Kit Fox Survey and Avoidance). A Desert Kit Fox Relocation Plan has been prepared to facilitate implementation of this mitigation measure and is attached to this report as Appendix K. 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 a less-than-significant level.

Accordingly, implementation of **MM-BIO-3** (Designated Biologist Authority), **MM-BIO-4** (Compliance Monitoring), **MM-BIO-5** (Education Programs), **MM-BIO-6** (Construction Monitoring Notebook), **MM-BIO-14** (Pre-Construction Desert Kit Fox Survey and Avoidance) would reduce potential direct impacts to desert kit fox to less than significant.

Nesting Migratory Birds and Raptors

The BSA contains trees, shrubs, and other vegetation suitable for birds of prey (raptors) and other avian species to nest on site. Native nesting bird species with potential to occur within 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 would 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-11** (Pre-Construction Nesting Bird Survey and Avoidance).

Accordingly, implementation of **MM-BIO-11** (Pre-Construction Nesting Bird Survey and Avoidance) would reduce potential direct impacts to nesting migratory birds and raptors to less than significant.

6.3.2.2 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. Such impacts include fugitive dust 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; generation of trash, such as food packaging and cigarette butts, and debris from construction-related materials, which can degrade wildlife habitat and can attract nuisance and pest species; night-time 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. Implementation of the project could result in significant indirect impacts to special-status wildlife species absent mitigation.

MM-BIO-3 (Designated Biologist Authority), **MM-BIO-4** (Compliance Monitoring), **MM-BIO-5** (Education Program), and **MM-BIO-6** (Construction Monitoring Notebook) would require that all workers complete a Worker Environmental Awareness Program (WEAP) training and would 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 clean-up 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 AQMDs Rules 401 and 403.2, which would limit the amount of fugitive dust generated during construction. **MM-BIO-15** (Trash and Debris) would require trash and debris to be removed regularly and would require animal-resistant trash receptacles to avoid attracting urban-related predator species. **MM-BIO-16** (Lighting) would require night-time lighting during construction within 50 feet of habitat for special-status species to be shielded downward.

In addition, pre-construction surveys as required by **MM-BIO-10** (Pre-Construction Burrowing Owl Survey and Avoidance), **MM-BIO-11** (Pre-Construction Nesting Bird Survey and Avoidance), **MM-BIO-12** (Pre-Construction Crotch’s Bumble Bee Survey and Avoidance), **MM-BIO-13** (Pre-Construction Mojave Desert Tortoise Clearance Survey and Avoidance), and **MM-BIO-14** (Pre-Construction Desert Kit Fox Survey and Avoidance) would require establishment of construction buffers around any occupied burrows or active nests found, thus limiting effects from most short-term indirect impacts, including noise and vibration, increased human presence, night-time lighting, and vehicle collisions.

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

MM-BIO-16 (Lighting) would require night-time lighting during post-construction operations within 50 feet of habitat for special-status species to be shielded downward. **MM-BIO-17** (Invasive Plant Management) would require 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 (2023).

Accordingly, **MM-BIO-3** (Designated Biologist Authority), **MM-BIO-4** (Compliance Monitoring), **MM-BIO-5** (Education Program), and **MM-BIO-6** (Construction Monitoring Notebook), **MM-BIO-8** (Hazardous Waste), **MM-BIO-10** (Pre-Construction Burrowing Owl Survey and Avoidance), **MM-BIO-11** (Pre-Construction Nesting Bird Survey and Avoidance), **MM-BIO-12** (Pre-Construction Crotch’s Bumble Bee Survey and Avoidance), **MM-BIO-13** (Pre-Construction Mojave Desert Tortoise Clearance Survey and Avoidance), **MM-BIO-14** (Pre-Construction Desert Kit Fox Survey and Avoidance), **MM-BIO-15** (Trash and Debris), **MM-BIO-16** (Lighting), and **MM-BIO-17** (Invasive Plant Management) would reduce potential indirect (short-term and long-term) impacts to special-status wildlife to less than significant.

6.4 Impact BIO-2: Riparian Habitat and Sensitive Vegetation Communities

A total of 98.50² acres, including 81.10 acres within the project site and 17.40 acres within the off-site areas, would be impacted by the project within the BSA (Figure 8, Impacts to Biological Resources). Table 6, Impacts to Vegetation Communities and Land Cover Types within the Biological Study area, summarizes permanent direct impacts to vegetation communities and land covers within the BSA.

Table 6. Impacts to Vegetation Communities and Land Cover Types within the Biological Study Area

Vegetation Community or Land Cover Type	State Ranking ¹	Total BSA (acres)	On-Site Permanent Impacts (acres)	Off-Site Permanent Impacts (acres)	Total Impacts (acres)
Creosote Bush Scrub	S5	119.21	76.74	7.60	84.34

² Totals do not sum due to rounding.

Table 6. Impacts to Vegetation Communities and Land Cover Types within the Biological Study Area

Vegetation Community or Land Cover Type	State Ranking ¹	Total BSA (acres)	On-Site Permanent Impacts (acres)	Off-Site Permanent Impacts (acres)	Total Impacts (acres)
Disturbed Habitat	NA	20.60	2.40	6.57	8.97
Urban/Developed	NA	12.62	1.97	3.23	5.20
Total²		152.42	81.10	17.40	98.50

Notes: BSA = biological study area (project site, off-site areas, and 100-foot buffer combined); 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 meaning (NatureServe 2023):

- 1 = critically imperiled
- 2 = imperiled
- 3 = vulnerable to extirpation or extinction
- 4 = apparently secure
- 5 = demonstrably widespread, abundant, and secure
- NA = no applicable ranking
- GNR = unranked, global rank not yet assessed
- SNR = unranked, subnational rank not yet assessed

² Total acreages may not sum exactly due to rounding.

The BSA does not contain any riparian habitat or vegetation communities considered a sensitive biological resource by CDFW under CEQA. Therefore, project implementation would have no impact on sensitive vegetation communities.

6.5 Impact BIO-3: State or Federally Protected Wetlands or Waters

The BSA supports three ephemeral drainages consisting of 0.40-acre of non-wetland waters of the state under RWQCB, and 1.02-acre of jurisdictional streambed under CDFW. These drainages are presumed to be non-jurisdictional by USACE because they do not meet the relatively permanent standard as waters of the United States. No areas within the review area supported hydrophytic vegetation, and therefore features within the BSA were considered non-wetland waters of the State.

6.5.1 Direct Impacts

The project would result in direct permanent impacts to 0.27-acre of potential non-wetland waters of the state under RWQCB jurisdiction, consisting of 0.20-acre within the project site and 0.07-acre within off-site improvement areas. The project would also result in direct permanent impacts to 0.65-acre of potential streambed under CDFW jurisdiction, consisting of 0.47-acre within the project site and 0.18-acre within off-site improvement areas. These impacts are depicted on Figure 8 and are summarized in Table 7. The ephemeral drainages present are not likely subject to USACE jurisdiction because these features are isolated and do not meet the relatively permanent as a water of the United States. However, the ultimate decisions on the amount and location of jurisdictional resources are made by the resource agencies (i.e., USACE, CDFW, and RWQCB). These potential direct impacts to jurisdictional waters would be significant absent mitigation under CEQA.

Table 7. Summary of Impacts to Potential Jurisdictional Aquatic Resources within the Biological Study Area

Aquatic Resource Type	Regulatory Agency	Permanent On-Site Impacts (acres)	Permanent Off- Site Impacts (acres)	Total Permanent Impacts (acres)	Total Jurisdictional Aquatic Resources in the BSA (acres)
Non-wetland Waters of the State	RWQCB	0.20	0.07	0.27	0.40
Streambed	CDFW	0.47	0.18	0.65	1.02

Notes: BSA = Biological Study Area; CDFW = California Department of Fish and Wildlife; USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board.

Permits would be required from each of the regulatory agencies and entail providing mitigation to offset the impacts and loss of beneficial uses, functions, and values to the jurisdictional waters and habitats. **MM-BIO-18** (Aquatic Resources Mitigation) would require obtaining permits from each of the regulatory agencies (RWQCB and CDFW). Based on the project design, it is assumed that the project would require a waste discharge requirement; therefore, an application must be submitted to RWQCB. A Streambed Alteration Agreement would be required for impacts to jurisdictional streambed under CDFW.

In addition, **MM-BIO-3** (Designated Biologist Authority), **MM-BIO-4** (Compliance Monitoring), **MM-BIO-5** (Education Program), and **MM-BIO-6** (Construction Monitoring Notebook) would require that all workers complete WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. **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. **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 clean-up 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 AQMDs Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction.

Accordingly, 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-18** (Aquatic Resources Mitigation) would reduce potential direct impacts to jurisdictional aquatic resources to less than significant.

6.5.2 Indirect Impacts

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 would be significant absent mitigation under CEQA.

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** through **MM-BIO-7** 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 clean-up 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.

In addition, 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.

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

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 CalGreen 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.

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), SWPPP, low-impact-development features, BMPs, and CalGreen requirements would reduce potential indirect (short-term and long-term) impacts to jurisdictional aquatic resources to less than significant.

6.6 Impact BIO-4: Wildlife Corridors and Nurseries

6.6.1 Direct Impacts

No significant direct permanent impacts would occur on 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 Mojave River, which is approximately 3.6 miles northeast of the BSA, would not be 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.

6.6.2 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 and the ability for 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 the nighttime. 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-16** (Lighting) would ensure all lighting during operations and within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife would be directed away from natural areas.

Accordingly, implementation of **MM-BIO-16** (Lighting) would reduce potential indirect impacts to wildlife movement to less than significant.

6.7 Impact BIO-5: Local Policies or Ordinances

Applicable local ordinances protecting biological resources within the biological study area include the County General Plan, San Bernardino Development Code, the City of Victorville General Plan, City of Victorville Municipal Code, and the locally-enforced CDNPA. Biological resources protected under these ordinances and policies are present within the BSA. These ordinances and proposed mitigation measures to ensure compliance are discussed below.

San Bernardino County General Plan

The Project site occurs within the Desert Planning Region of San Bernardino County, which has two goals and policies: (1) to preserve open lands by working with BLM and (2) to ensure that off-highway vehicle use is managed to protect environmentally sensitive resources.

The project does not occur within any Land Use Zoning Districts designated by the County General Plan and would be compatible with the goals of Desert Planning Region. Additionally, the project would comply with San Bernardino County Development Code, which implements the goals and policies of the General Plan, by transplanting or stockpiling any western Joshua trees proposed for removal where possible. Therefore, the project would not conflict with the County General Plan.

San Bernardino County Development Code

The San Bernardino County Development Code Chapter 88.01.060, Desert Native Plant Protection, ensures coordination with CNDPA and requires issuance of a Tree or Plant Removal Permit in compliance with Section 88.01.050 for specified desert tree species. The code also emphasizes compliance with the CDNPA for all plants regulated under the act, including those not explicitly stated in the Development Code Chapter 88.01.060.

The project only contains western Joshua trees protected under San Bernardino County Development Code. The San Bernardino County Development Code prohibits the removal of specified desert native trees except under a Tree or Plant Removal Permit in compliance with Section 88.01.050. Although the project includes Wiggins’ cholla and buckthorn cholla, which are protected under the CDNPA, this species does not require a Tree or Plant Removal Permit under the County Development Code. **MM-BIO-1** (Western Joshua Tree Fee Payment) would require mitigation for direct impacts to western Joshua trees through attainment of a WJTCA Incidental Take Permit (ITP) and fee payment, as well as attainment of a Tree or Plant Removal Permit in accordance with San Bernardino County Development Code Chapter 88.01.050. Therefore, impacts to western Joshua tree as protected under the San Bernardino County Development Code would be reduced to a less-than-significant level. **MM-BIO-2** (Desert Native Plant Removal Permit) also requires compliance with the CDNPA. Therefore, impacts to desert native plants as protected under the San Bernardino County Development Code would be less than significant. The project would not be in conflict with the San Bernardino County Development Code.

City of Victorville General Plan

The City’s Resource Element (City of Victorville 2008) addresses biological resources in Goal #4 (Conservation of Important Habitat), wherein objectives and policies are set forth to achieve the goal of preserving native vegetation that provides habitat for rare, threatened, and/or endangered plant and wildlife species.

Table 8. City of Victorville General Plan Goal #4 Conservation of Important Habitat

Protection of Biological Resources – Policies	Consistency	Analysis
Objective 4.1: Preservation of natural communities that support rare, threatened, and or endangered plant and wildlife species throughout the planning area		
<i>Policy 4.1.1: Encourage natural habitat that supports rare, threatened, or endangered plants and wildlife (i.e., “sensitive” species), or require restoration of the same type of impacted habitat within an existing, planned, or potential conservation area.</i>	Yes, with mitigation.	Focused surveys for special-status (or sensitive) species were conducted as part of the biological study of the project site. Impacts to special-status species would be reduced to a less-than-significant impact with implementation of MM-BIO-1 through MM-BIO-7 .
<i>Policy 4.1.2: Support and participate in the West Mojave Plan.</i>	N/A	Although the BLM issued a Record of Decision for the West Mojave Plan in 2006, the West Mojave Plan has not been formally adopted. Therefore, the City of Victorville is not currently a participant to the West Mojave Plan.

Table 8. City of Victorville General Plan Goal #4 Conservation of Important Habitat

Protection of Biological Resources – Policies	Consistency	Analysis
Objective 4.2: Permanent Conservation of Mojave River Corridor Ecological Values		
<p>Policy 4.2.1: Generally, prohibit private or public development projects or major infrastructure facilities on land within the Mojave River Corridor, where biological surveys have determined there is habitat that supports rare, threatened, and/or endangered plants or wildlife. Allow minor encroachments into such habitat for critical public facilities and recreational trails, where reliable assurances are provided that no loss of sensitive species would occur.</p>	<p>Yes.</p>	<p>The proposed project does not occur within the Mojave River Corridor, and therefore, would not be in conflict with this goal or policy.</p>

Impacts to biological resources goals and objectives provided within the City of Victorville General Plan would not impact, is less than significant, or would be mitigated to a less-than-significant level. The project would comply with requirements of the City of Victorville General Plan biological resource goals and policies through the implementation of the recommended mitigation measures. Additionally, the project would not be in conflict with the City’s General Plan Land Use Element. Therefore, the project would not conflict with the City of Victorville General Plan.

City of Victorville Municipal Code

The City of Victorville Municipal Code prohibits the removal or damage to western Joshua trees without prior consent of the Director of Parks and Recreation or their designee per VMC 13.33.040. The VMC also requires coordination with any laws and standards enforced by CDFW.

As required by **MM-BIO-1** (Western Joshua Tree Fee Payment), mitigation for direct impacts to western Joshua trees will be fulfilled through attainment of a WJTCA ITP and payment of fees consistent with the Western Joshua Tree Conservation Plan. In addition, **MM-BIO-1** requires that the project attain prior written consent from the City of Victorville Director of Parks and Recreation in accordance with the City of Victorville Municipal Code Chapter 13.33, Preservation and Removal of Joshua Trees. Therefore, the project would not conflict with City of Victorville Municipal Code.

California Desert Native Plants Act

A total of 119 western Joshua tree individuals were observed within the Joshua Tree Survey Area (project site, off-site improvement area, and a 50-foot buffer) (Figure 6). Of the 119 trees found within the Joshua Tree Survey Area, 101 western Joshua tree individuals are within the project impact area and would be directly impacted by project implementation (Figure 8).

In addition to western Joshua tree, two desert native plant species were observed within the BSA during the focused desert native plant survey: Wiggins’ cholla and buckthorn cholla (Figure 6). Specifically, one Wiggins’ cholla and one buckthorn cholla are located within the project impact area and would be directly impacted by project

implementation (Figure 8). Therefore, 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.

As required by **MM-BIO-1** (Western Joshua Tree Fee Payment), mitigation for direct impacts to 101 western Joshua trees will be fulfilled through payment of fees consistent with the Western Joshua Tree Conservation Plan. Conservation efforts for western Joshua tree will 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. In addition, **MM-BIO-1** requires that the project attain prior written consent from the City of Victorville Director of Parks and Recreation in accordance with the City of Victorville Municipal Code Chapter 13.33, Preservation and Removal of Joshua Trees. The mitigation also requires attainment of a Tree of Plant Removal Permit per San Bernardino County Development Code Chapter 88.01.050 prior to removal.

As of the date of this report, relocation of western Joshua trees is not a requirement of CDFW. However, relocation may be requested by CDFW following review of the Western Joshua Tree Conservation Act Incidental Take Permit Application. Should relocation be required by CDFW, the relocation specifications are detailed in Appendix A (Joshua Tree Preservation, Protection, and Relocation Plan).

For direct impacts to desert native plant species other than western Joshua tree, a permit must be attained as outlined in the CDNPA and applicable fee paid to the County of San Bernardino. **MM-BIO-2** (Desert Native Plants Removal Permit) requires compliance with the CDNPA and provides measures for successful relocation if required by applicable review authority.

Implementation of **MM-BIO-1** (Western Joshua Tree Fee Payment) and **MM-BIO-2** (Desert Native Plants Removal Permit) would reduce potential impacts associated with local policies and ordinances to less than significant.

6.8 Impact BIO-6: NCCP/HCP

The project is not located within any formally adopted Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) (CDFW 2023h). The project is within the BLM California Desert Conservation Area Plan (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 BLM 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, impacts associated with an adopted habitat conservation plan would be less than significant.

7 Mitigation

The project could result in potentially significant impacts to species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS, including special-status plant species such as western Joshua trees, native desert plants protected under the CDNPA, burrowing owl, loggerhead shrike, desert tortoise, desert kit fox, Crotch bumble bee, nesting migratory birds and raptors, and jurisdictional aquatic resources. Implementation of **MM-BIO-1** through **MM-BIO-18** is required to reduce impacts to a less-than-significant level.

MM-BIO-1 **Western Joshua Tree Fee Payment.** Mitigation for direct impacts to 101 western Joshua trees will be fulfilled through attainment of a Western Joshua Tree Conservation Act (WJTCA) Incidental Tak Permit and a payment of the elected fees as described in Section 1927.3 of the WJTCA. In conformance with the reduced fee schedule prescribed for the project area, mitigation will consist of payment of \$1,000 for each western Joshua tree five meters or greater in height, \$200 for each western Joshua tree less than five meters but greater than 1 meter in height; and \$150 for each western Joshua tree less than 1 meter in height. California Department of Fish and Wildlife (CDFW) determines the final fee. Alternatively, mitigation will 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., City of Victorville Municipal Code, Chapter 13.33 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 also receive written consent from the City of Victorville's Director of Parks and Recreation prior to the removal or relocation of western Joshua trees in accordance with City of Victorville Municipal Code, Chapter 13.33, Preservation and Removal of Joshua Trees. 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 **Desert Native Plants Removal Permit.** Prior to the commencement of project activities, the project applicant shall apply for a permit with the County of Los Angeles for removal of protected native desert plants as required under California Desert Native Plants Act (Food and Agricultural Code, Division 23). The project shall comply with any conditions of approval imposed by the applicable review authority upon issuance of the permit.

The permit application form shall specify information outlined in the California Desert Native Plant Act Section 80114, which includes but is not limited to, the number and species of native plants to be removed, a description of the real property from which the plants are to be removed, and in the case that relocation is required, the destination of the native plants and the manner in which the plants are to be salvaged. Pursuant to the California Desert Native Plants Act, tags or seals issued by the County must be attached to the native plants at the time of harvesting and before transporting to their permanent relocation site(s) and must remain attached to the plant until transplanted into its ultimate destination. Transport of salvaged plants will occur as prescribed by the County.

If relocation is required by the applicable review authority, the following actions shall also be implemented to ensure successful relocation of desert native plants:

- Salvaged plants shall be transplanted expeditiously to either their final on-site location or to an approved off-site area. If the plants cannot be expeditiously taken to their permanent relocation area at the time of excavation, they may be transplanted in a temporary area (stockpiled) prior to being moved to their permanent relocation site(s).
- Plants designated for relocation shall be marked on their north facing side prior to excavation. Transplanted plants shall be planted in the same orientation as they currently occur on the project site, with the marking on the north side of the trees facing north at the relocation site(s).
- Transplanted plants shall be watered prior to and at the time of transplantation. Watering of the transplanted plants shall continue under the guidance of qualified tree expert and desert native plant expert(s) until it has been determined that the transplants have become established in the permanent relocation site(s) and no longer require supplemental watering.

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 or other sensitive biological resources.

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 and impacts to other sensitive biological resources; prevent unlawful take of western Joshua trees; ensure that signs, stakes, and fencing are intact; and ensure that impacts are only occurring within the direct 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 site shall be administered before impacts occur. The WEAP shall consist of a presentation from the designated biologist that includes a discussion of the biology and status of western Joshua tree, burrowing owl, loggerhead shrike, desert tortoise, desert kit fox, and Crotch bumble bee, along with other biological resources 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 any 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, which 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 notebook will include a sign-off date page for the designated biologist to sign and date each construction date for which the project is in

compliance. The permittee shall ensure that a copy of the construction monitoring notebook is available for review at the project site upon request by the CDFW.

- 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 the 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 clean up 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 Burrowing Owl Survey 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 re-surveyed. 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 CDFW) in 2012 or current version.

If burrowing owls are detected, the Burrowing Owl Relocation Plan (Appendix I) shall be implemented in consultation with CDFW. As required by the Burrowing Owl Relocation Plan, disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers will be established around occupied burrows as determined by a qualified biologist. No project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that occupied burrows have been vacated or the nesting season has completed.

Outside of the nesting season, passive owl relocation techniques approved by CDFW shall be implemented. Owls shall be excluded from burrows in the immediate project area and within a buffer zone if there is a threat to the surface or subterranean burrow structure by installing one-way doors in burrow entrances. These doors will be placed at least 48 hours prior to ground-disturbing activities. The project area shall be monitored daily for 1 week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat will be provided following the guidance in the CDFW 2012 Staff Report on Burrowing Owl Mitigation or current version.

Where possible, burrows will be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any wildlife inside the burrow.

Mitigation for direct impacts to 76.47 acres of occupied breeding habitat shall be fulfilled through conservation of suitable burrowing owl habitat through the purchase of credits at a minimum of 1:1 in-kind habitat replacement of equal or better functions and values to those impacted by the project, for a total of 76.47 acres.

MM-BIO-11 **Pre-Construction Nesting Bird Survey 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 on the 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 will be determined by the biologist based on the species' sensitivity to disturbance. The nest area shall be avoided until the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing. On-site construction monitoring shall also be conducted when construction occurs in close proximity to an active nest buffer. No project activities may encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined the nestlings have fledged and the nest is no longer considered active.

MM-BIO-12 **Pre-Construction Crotch Bumble Bee Survey and Avoidance.** A pre-construction survey for Crotch bumble bee shall be conducted within the construction footprint prior to the start of initial vegetation removal or initial grading activities occurring during the Crotch bumble bee nesting period (February 1 through October 31). The survey shall ensure that no nests for Crotch bumble bee are located within the construction area. The pre-construction survey shall include 1) a habitat assessment and 2) focused surveys, both of which will be based on recommendations described in the "Survey Considerations for CESA Candidate Bumble Bee Species," released by the CDFW on June 6, 2023, or the most current at the time of construction.

The habitat assessment shall, at a minimum, include historical and current species occurrences; document potential habitat onsite including foraging, nesting, and/or overwintering resources; and identify which plant species are present. For the purposes of this mitigation measure, nest resources are defined as abandoned small mammal burrows, bunch grasses with a duff layer, thatch, hollow trees, brush piles, and man-made structures that may support bumble bee colonies such as rock walls, rubble, and furniture. If nesting resources are present in the impact area, focused surveys will be conducted.

The focused survey will be performed by a biologist with expertise in surveying for bumble bees and include at least three (3) survey passes that are not on sequential days or in the same week, preferably spaced two to four weeks apart. The timing of these surveys shall coincide with the

Colony Active Period (April 1 through August 31 for Crotch bumble bee). Surveys may occur between 1 hour after sunrise and 2 hours before sunset. Surveys will not be conducted during wet conditions (e.g., foggy, raining, or drizzling) and surveyors will wait at least 1 hour following rain. Optimal surveys are when there are sunny to partly sunny skies that are greater than 60 degrees Fahrenheit. Surveys may be conducted earlier if other bees or butterflies are flying. Surveys shall not be conducted when it is windy (i.e., sustained winds greater than 8 mph). Within non-developed habitats, the biologist shall look for nest resources suitable for bumble bee use. Ensuring that all nest resources receive 100% visual coverage, the biologist shall watch the nest resources for up to five minutes, looking for exiting or entering worker bumble bees. Worker bees should arrive and exit an active nest site with frequency, such that their presence would be apparent after five minutes of observation. If a bumble bee worker is detected, then a representative shall be identified to species. Biologists should be able to view several burrows at one time to sufficiently determine if bees are entering/exiting them depending on their proximity to one another. It is up to the discretion of the biologist regarding the actual survey viewshed limits from the chosen vantage point which would provide 100% visual coverage; this could include a 30- to 50-foot-wide area. If a nest is suspected, the surveyor can block the entrance of the possible nest with a sterile vial or jar until nest activity is confirmed (no longer than 30 minutes).

Identification will include trained biologists netting/capturing the representative bumble bee in appropriate insect nets, per the protocol in U.S. National Protocol Framework for the Inventory and Monitoring of Bees. The bee shall be placed in a clear container for observation and photographic documentation if able. The bee will be photographed using a macro lens from various angles to ensure recordation of key identifying characteristics. If bumble bee identifying characteristics cannot be adequately captured in the container due to movement, the container will be placed in a cooler with ice until the bumble bee becomes inactive (generally within 15 minutes). Once inert, the bumble bee shall be removed from the container and placed on a white sheet of paper or card for examination and photographic documentation. The bumble bee shall be released into the same area from which it was captured upon completion of identification. Based on implementation of this method on a variety of other bumble bee species, they become active shortly after removal from the cold environment, so photography must be performed quickly.

If Crotch bumble bee nests are not detected, no further mitigation would be required. The mere presence of foraging Crotch bumble bees would not require implementation of additional minimization measures because they can forage up to 10 kilometers from their nests. If nest resources occupied by Crotch bumble bee are detected within the construction area, no construction activities shall occur within 100 feet of the nest, or as determined by a qualified biologist through evaluation of topographic features or distribution of floral resources. The nest resources will be avoided for the duration of the Crotch bumble bee nesting period (February 1 through October 31). Outside of the nesting season, it is assumed that no live individuals would be present within the nest as the daughter queens (gynes) usually leave by September, and all other individuals (original queen, workers, males) die. The gyne is highly mobile and can independently disperse to outside of the construction footprint to surrounding open space areas that support suitable hibernacula resources.

A written survey report will be submitted to the City and CDFW within 30 days of the pre-construction survey. The report will include survey methods, weather conditions, and survey results, including a

list of insect species observed and a figure showing the locations of any Crotch bumble bee nest sites or individuals observed. The survey report will include the qualifications/resumes of the surveyor(s) and approved biologist(s) for identification of photo vouchers, detailed habitat assessment, and photo vouchers. If Crotch bumble bee nests are observed, the survey report will also include recommendations for avoidance, and the location information will be submitted to the CNDDDB at the time of, or prior to, submittal of the survey report.

If the above measures are followed, it is assumed that the project shall not need to obtain authorization from CDFW through the California Endangered Species Act Incidental Take Permit process. If the nest resources cannot be avoided during the nesting period, as outlined in this measure, the project applicant will consult with CDFW regarding the need to obtain an Incidental Take Permit. Any measures determined to be necessary through the Incidental Take Permit process to offset impacts to Crotch bumble bee may supersede measures provided in this CEQA document and shall be incorporated into the habitat mitigation and monitoring plan.

In the event an Incidental Take Permit is needed, mitigation for direct impacts to Crotch bumble bee will be fulfilled through compensatory mitigation at a minimum 1:1 nesting 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 will 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 will 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 will 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 will 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 will consider 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-13 Pre-Construction Mojave Desert Tortoise Clearance Survey and Avoidance. Two consecutive pre-construction clearance survey in accordance with current U.S. Fish and Wildlife Service (USFWS) protocol shall be conducted to reevaluate locations of potential Mojave desert tortoise burrows within the project limits so take of Mojave desert tortoise can be avoided. The first pre-construction clearance survey shall be conducted in areas supporting potentially suitable habitat 14 to 21 days prior to the start of construction activities and a second survey shall be repeated within 72 hours prior to the start of construction activities; or alternatively, pre-construction clearance surveys may be conducted at any time following construction of a desert tortoise-proof fence encompassing the project site that would ensure that tortoises cannot enter the project after clearance surveys are completed. If no Mojave desert tortoises are found during the surveys, no further mitigation would be required; however, desert tortoise-proof fence encompassing the project site shall remain in place until project construction is completed and shall be monitored by a qualified biologist in compliance with current USFWS protocol.

Should Mojave desert tortoise be located during the clearance survey, all methods used for handling desert tortoises during the clearance surveys must be in accordance with the USFWS

Desert Tortoise Field Manual or project-specific guidance contained in a biological opinion or Incidental Take Permit. No take of Mojave desert tortoise shall occur without authorization in the form of an Incidental Take Permit pursuant to California Fish and Game Code Section 2081 and a biological opinion or Habitat Conservation Plan. The project applicant shall adhere to measures and conditions set forth within the Incidental Take Permit. Anyone who handles desert tortoises during clearance activities must have the appropriate authorizations from USFWS. The area cleared and number of Mojave desert tortoises found within that area shall be reported to the local USFWS and appropriate state wildlife agency. Notification shall be made in accordance with the conditions of the biological opinion or Incidental Take Permit.

Should Mojave desert tortoise be located during the clearance survey, the project would result in the loss of 84.34 acres of occupied habitat for Mojave desert tortoise. Mitigation for direct impacts to 84.34 acres shall be fulfilled through conservation of suitable Mojave desert tortoise habitat through the purchase of credits at a minimum of 1:1 in-kind habitat replacement of equal or better functions and values to those impacted by the project, for a total of 84.34 acres or as otherwise determined through coordination with the USFWS and/or California Department of Fish and Wildlife.

MM-BIO-14 **Pre-Construction Desert Kit Fox Survey and Avoidance.** A pre-construction survey for desert kit fox shall be conducted within 10 days before initiation of site preparation or grading activities to determine the presence/absence of desert kit fox.

If an active non-natal desert kit fox den is detected, a 200-foot no disturbance buffer will be established around the active den, unless otherwise authorized by the California Department of Fish and Wildlife. Where required buffering will not be feasible, passive relocation is allowed with concurrence from the City of Victorville and CDFW. If an active natal desert kit fox den is detected, an initial 200-foot no disturbance buffer will be established around the natal den, and this buffer will be maintained until the den can be verified to not host pups. Construction activities will not be permitted in this area until the den has been vacated. Once the den is vacated, and if in danger by construction, it can be collapsed, if deemed necessary by a qualified biologist.

A report to evaluate the success of the relocation efforts and any subsequent re-occupation, if applicable, will be provided (including a comprehensive summary, tables, maps, etc.) at the end of the construction period. Data will be readily available to the CDFW upon request. If an injured, sick, or dead desert kit fox is detected on any area associated with the project, the designated CDFW personnel at both the Ontario office and the Wildlife Investigation Lab will be notified.

MM-BIO-15 **Trash and Debris.** The following avoidance and minimization measures shall be implemented during project construction.

- (1) Fully covered trash receptacles that are animal-proof will 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 will be removed at least once a week from the project site.

(2) 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-16 **Lighting.** Lighting for construction activities and post-construction operations within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife will be shielded and directed downward.

MM-BIO-17 **Invasive Plant Management.** In order 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 Cal-IPC California Invasive Plant Inventory (<http://www.cal-ipc.org/ip/inventory/index.php>). Post-construction, the applicant shall continually remove invasive plant species on site by hand or mechanical methods, as feasible.

MM-BIO-18 **Aquatic Resources Mitigation.** The project site supports aquatic resources that are considered jurisdictional under the Regional Water Quality Control Board (RWQCB) and the California Department of Fish and Wildlife (CDFW). Prior to construction activity, the applicant shall coordinate with the Lahontan RWQCB (Region 6) to ensure conformance with the requirements of the Porter–Cologne Water Quality Control Act (waste discharge requirement). Prior to activity within CDFW jurisdictional streambed or associated riparian habitat, the applicant shall coordinate with CDFW (Inland Deserts Region 6) relative to conformance to the Lake and Streambed Alteration permit requirements.

The project shall mitigate to ensure no-net-loss of waters at a minimum of 1:1 with purchase of credits (0.27-acre potential non-wetland waters of the state under RWQCB jurisdiction and 0.65-acre of potential streambed under CDFW jurisdiction) for impacts to aquatic resources as part of an overall strategy to ensure no net loss. Mitigation shall be completed through use of a mitigation bank (e.g., West Mojave Mitigation Bank) or other applicant-sponsored mitigation. Final mitigation ratios and credits shall be determined in consultation with RWQCB and/or CDFW based on agency evaluation of current resource functions and values and through each agency’s respective permitting process. Should applicant-sponsored mitigation be implemented, a Habitat Mitigation and Monitoring Plan (HMMP) shall be prepared in accordance with State Water Resources Control Board guidelines and approved by the agencies in accordance with the proposed program permits. The HMMP shall include a conceptual planting plan including planting zones, grading, and irrigation, as applicable; a conceptual planting plant palette; a long-term maintenance and monitoring plan; annual reporting requirements; and proposed success criteria. Any off-site applicant-sponsored mitigation shall be conserved and managed in perpetuity.

Best management practices shall be implemented to avoid any indirect impacts on jurisdictional waters, including the following:

- Vehicles and equipment shall not be operated in ponded or flowing water except as described in permits.
- Water containing mud, silt, or other pollutants from grading or other activities shall not be allowed to enter jurisdictional waters or be placed in locations that may be subjected to high storm flows.

- Spoil sites shall not be located within 30 feet from the boundaries of jurisdictional waters or in locations that may be subject to high storm flows, where spoils might be washed back into drainages.
- Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources resulting from project-related activities shall be prevented from contaminating the soil and/or entering avoided jurisdictional waters.

No equipment maintenance shall be performed within 100 feet of jurisdictional waters, including wetlands and riparian areas, where petroleum products or other pollutants from the equipment may enter these areas. Fueling of equipment shall not occur on the project site.

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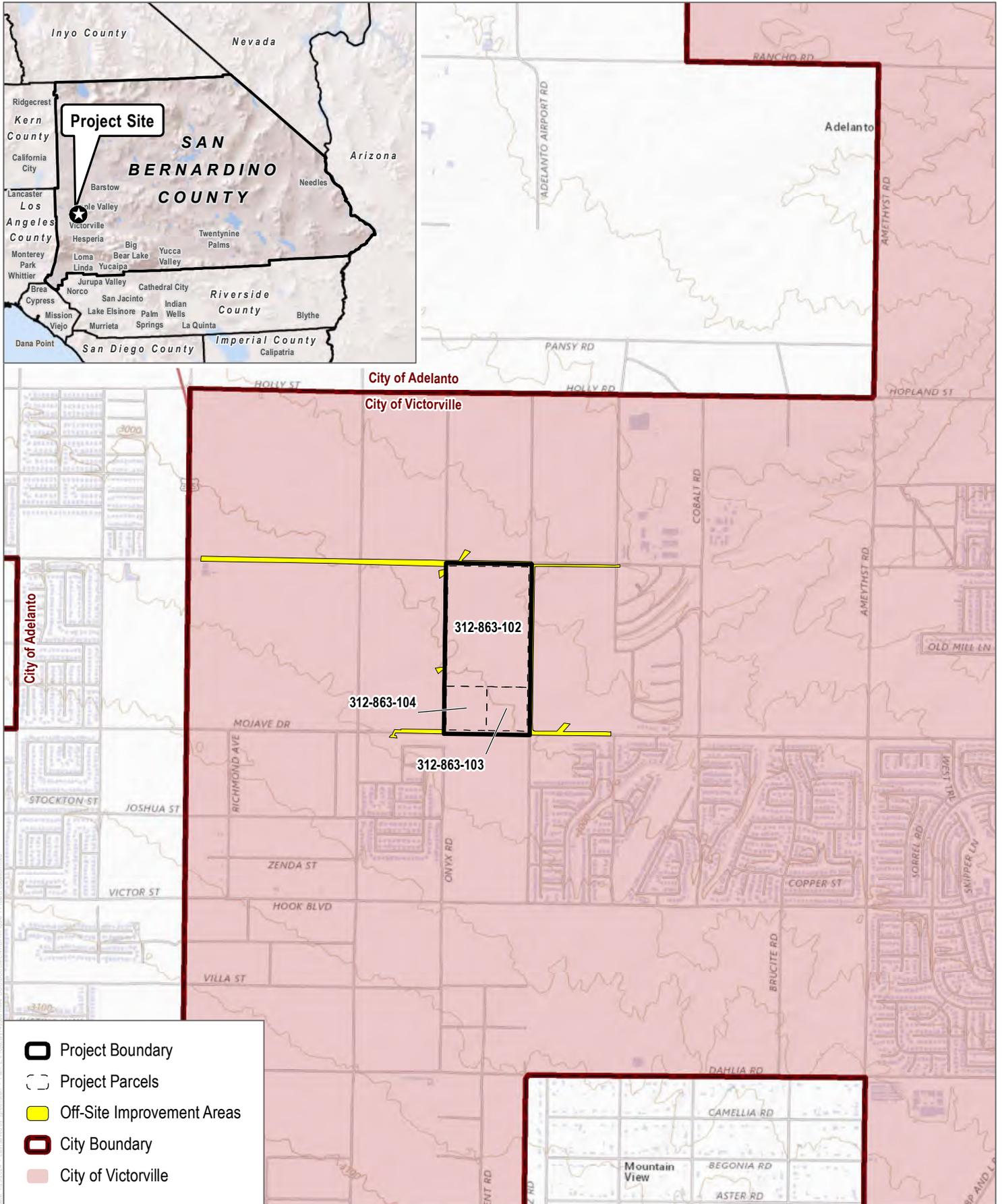
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SOURCE: Maxar 2020; County of San Bernardino 2023

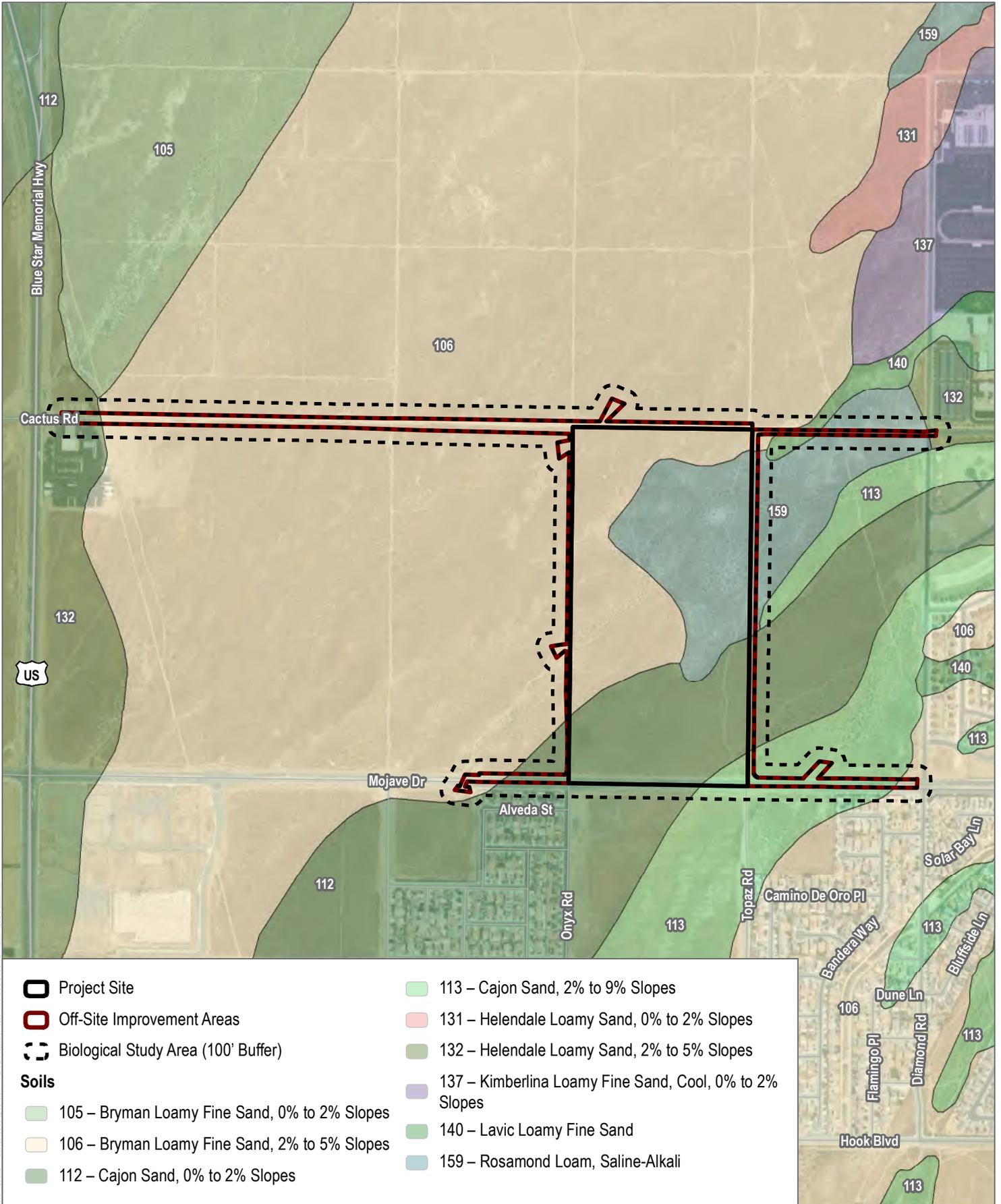
FIGURE 1

Project Location

Mojave Industrial Park Project

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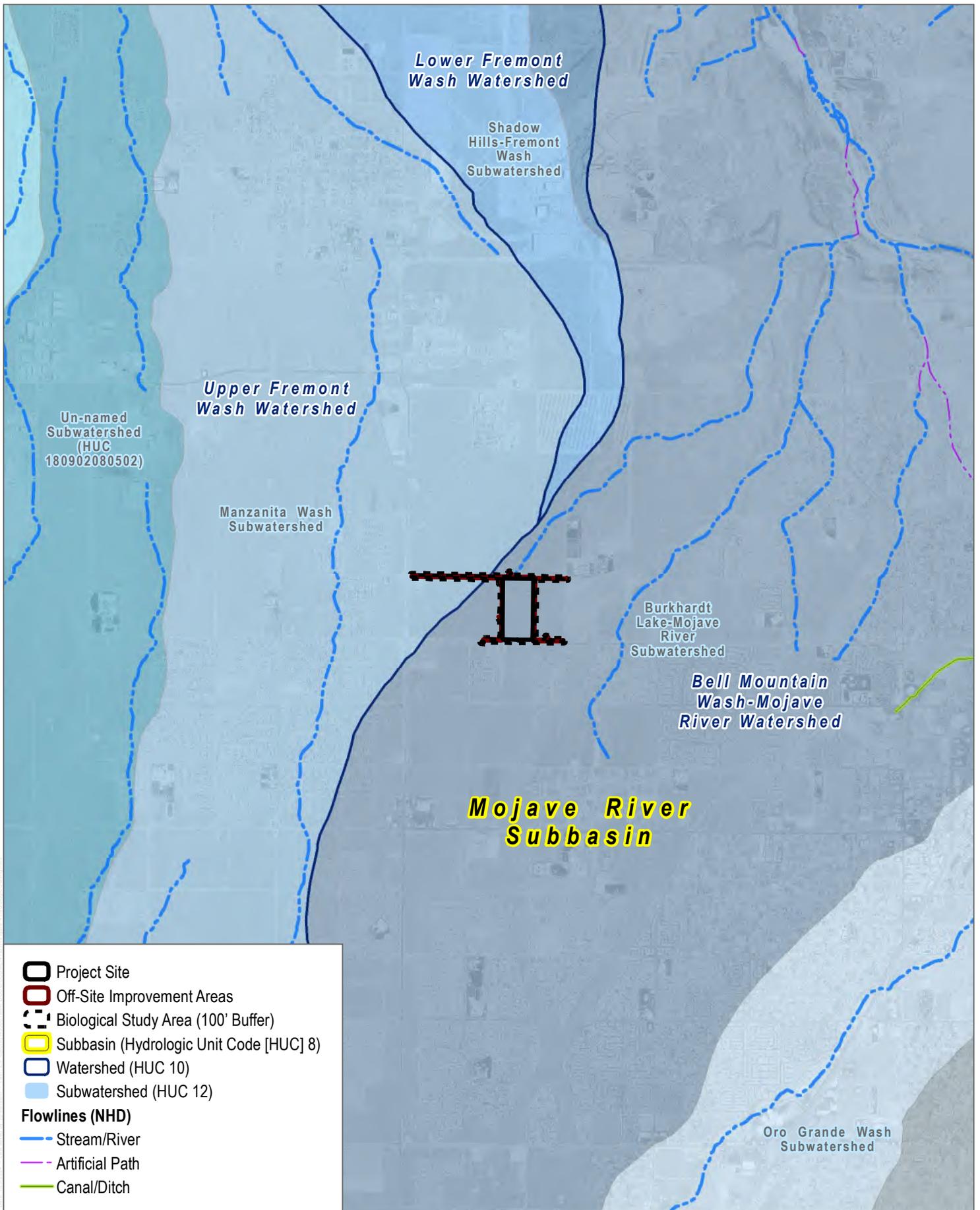
SOURCE: Maxar 2020; Open Street Map 2023; USDA SSURGO

FIGURE 3

Soils

Mojave Industrial Park Project

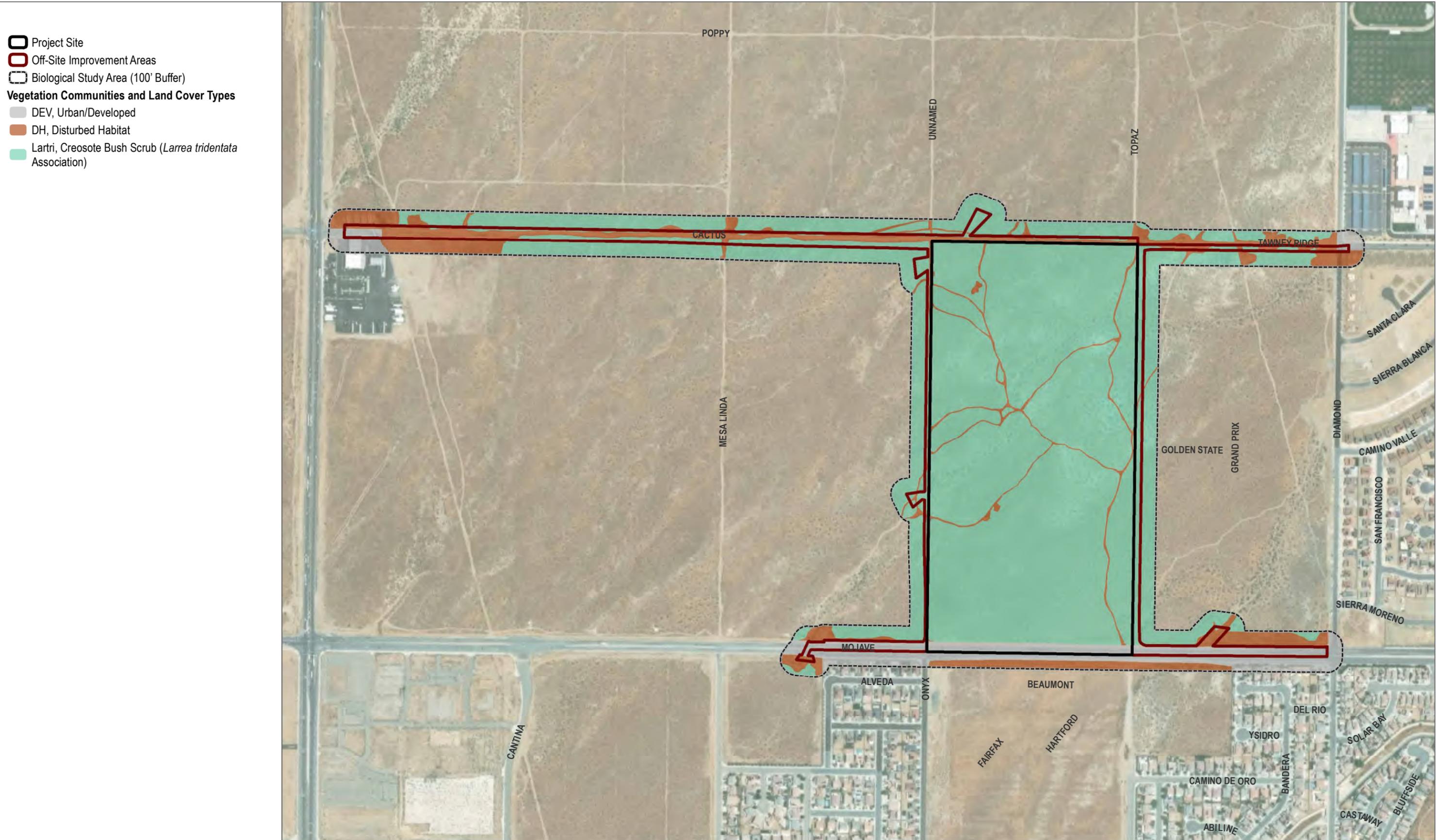
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SOURCE: Esri; USGS; NAIP 2020

FIGURE 4
Hydrologic Setting
Mojave Industrial Park Project

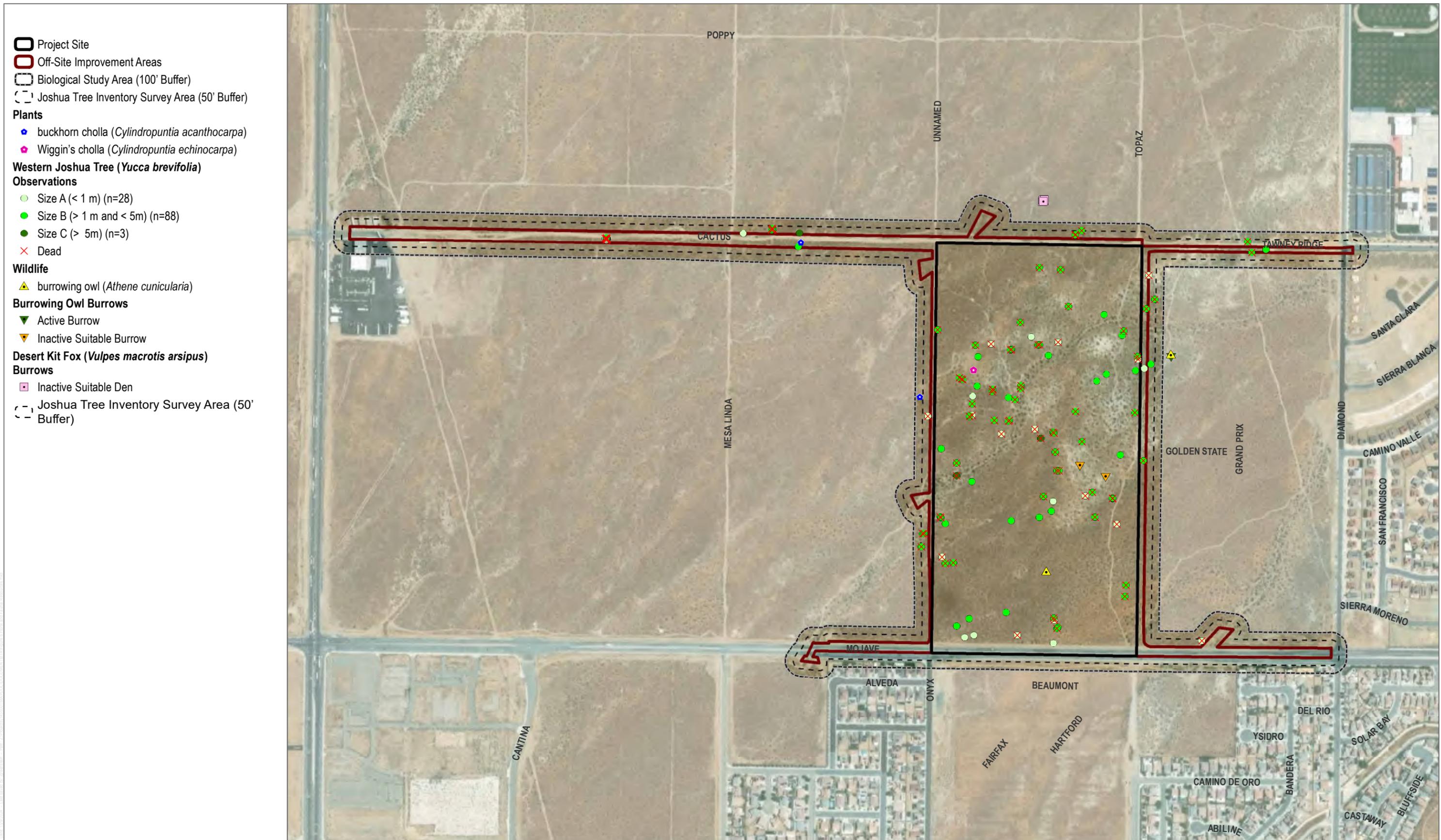
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SOURCE: Maxar 2020; Open Street Map 2023

FIGURE 5
Vegetation
Mojave Industrial Park Project

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SOURCE: Maxar 2020; Open Street Map 2023

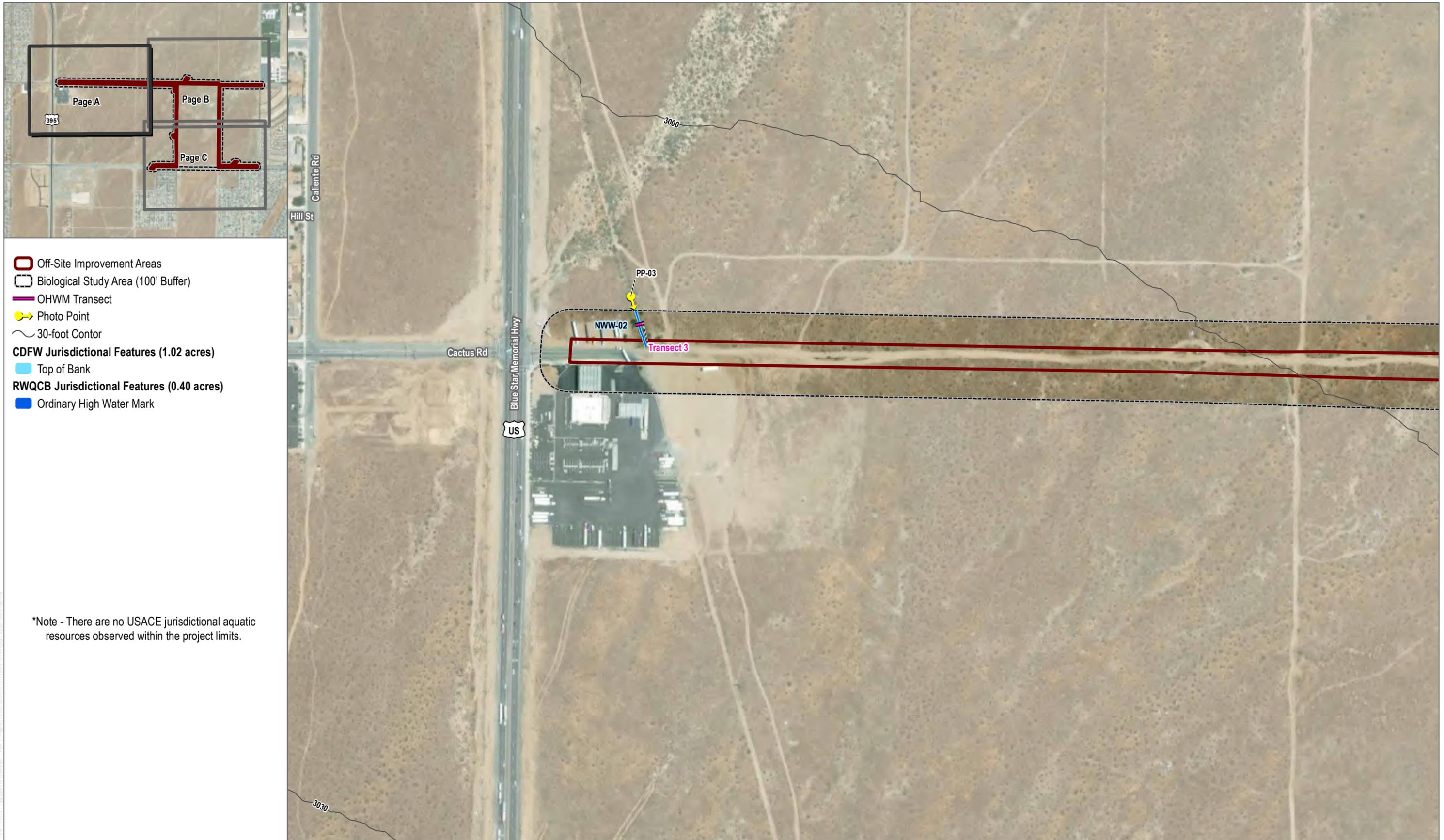


FIGURE 6

Floral and Faunal Resources

Mojave Industrial Park Project

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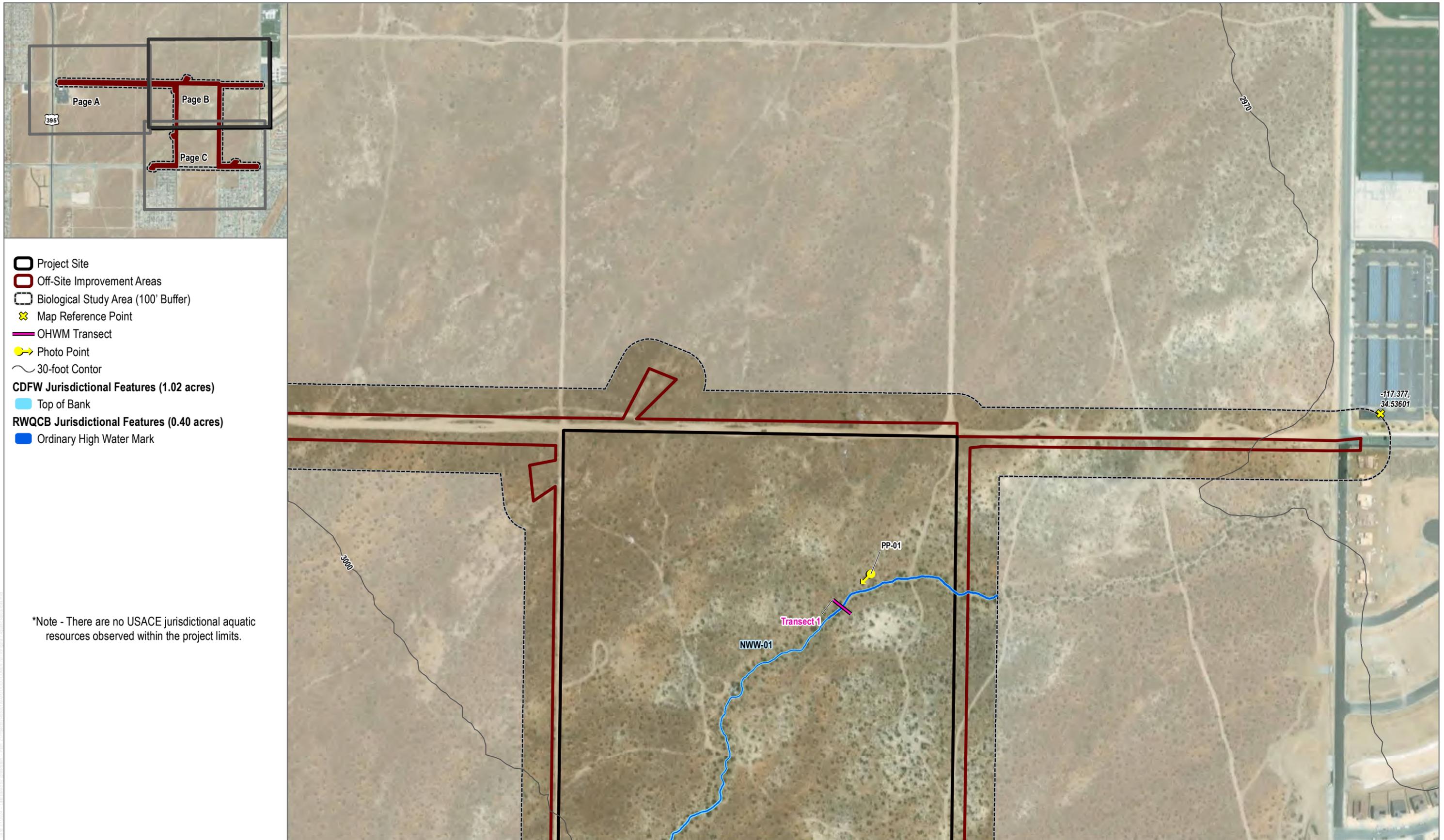


SOURCE: Maxar 2020; Open Street Map 2023



FIGURE 7A
Aquatic Resources
 Mojave Industrial Park Project

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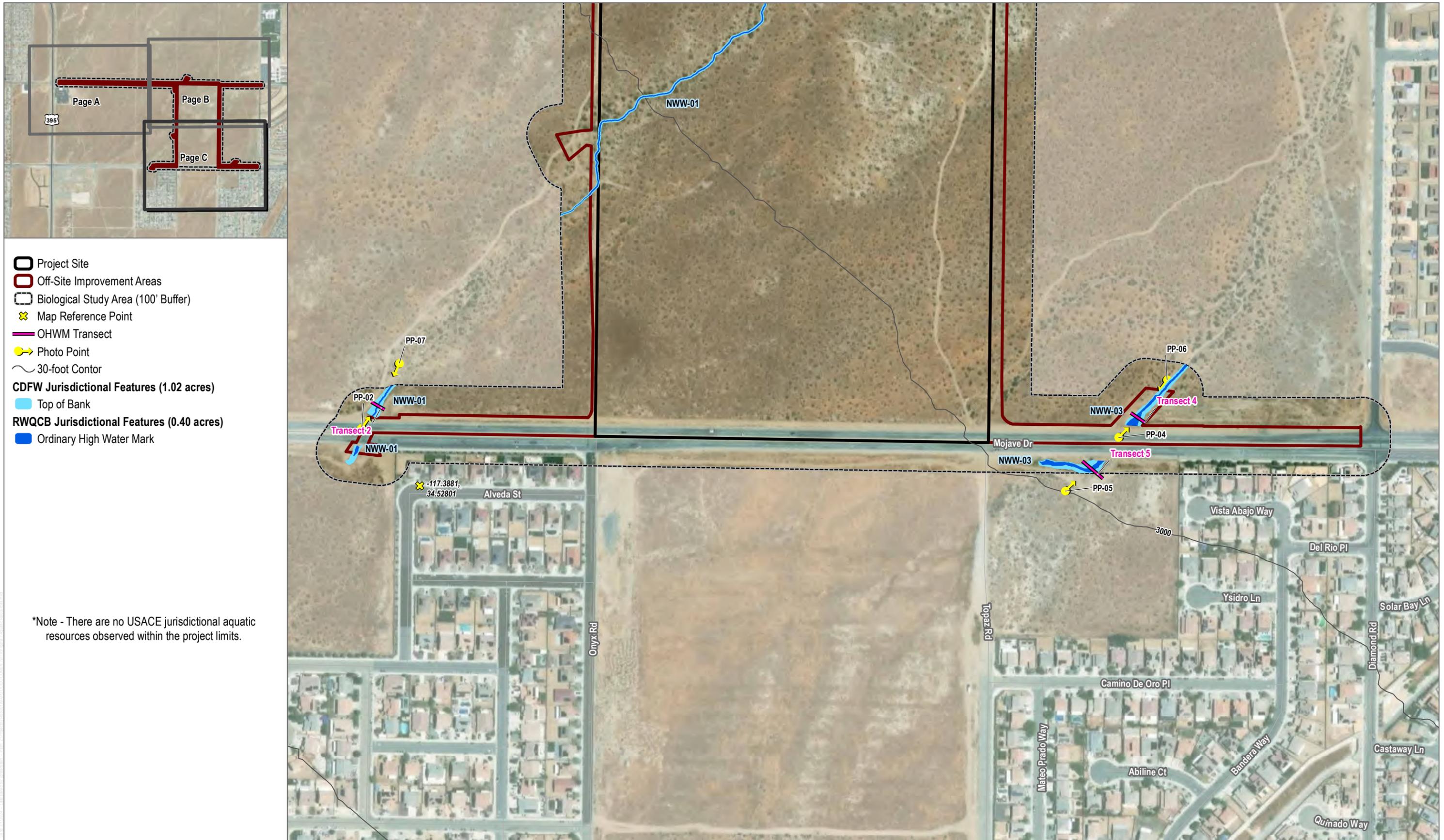
*Note - There are no USACE jurisdictional aquatic resources observed within the project limits.

SOURCE: Maxar 2020; Open Street Map 2023



FIGURE 7B
Aquatic Resources
 Mojave Industrial Park Project

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- Project Site
- Off-Site Improvement Areas
- Biological Study Area (100' Buffer)
- Map Reference Point
- OHWM Transect
- Photo Point
- 30-foot Contour
- CDFW Jurisdictional Features (1.02 acres)**
- Top of Bank
- RWQCB Jurisdictional Features (0.40 acres)**
- Ordinary High Water Mark

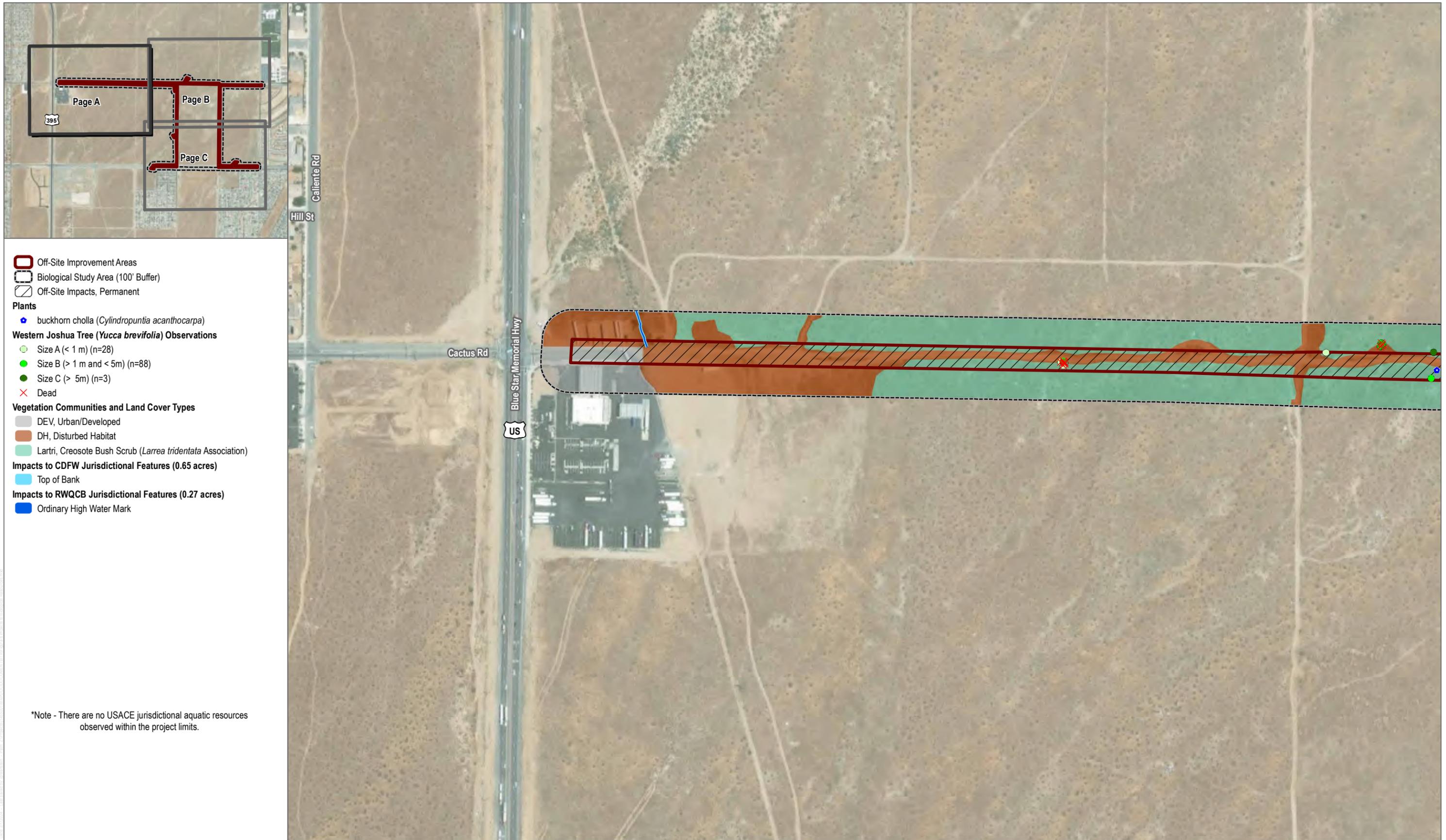
*Note - There are no USACE jurisdictional aquatic resources observed within the project limits.

SOURCE: Maxar 2020; Open Street Map 2023



FIGURE 7C
Aquatic Resources
 Mojave Industrial Park Project

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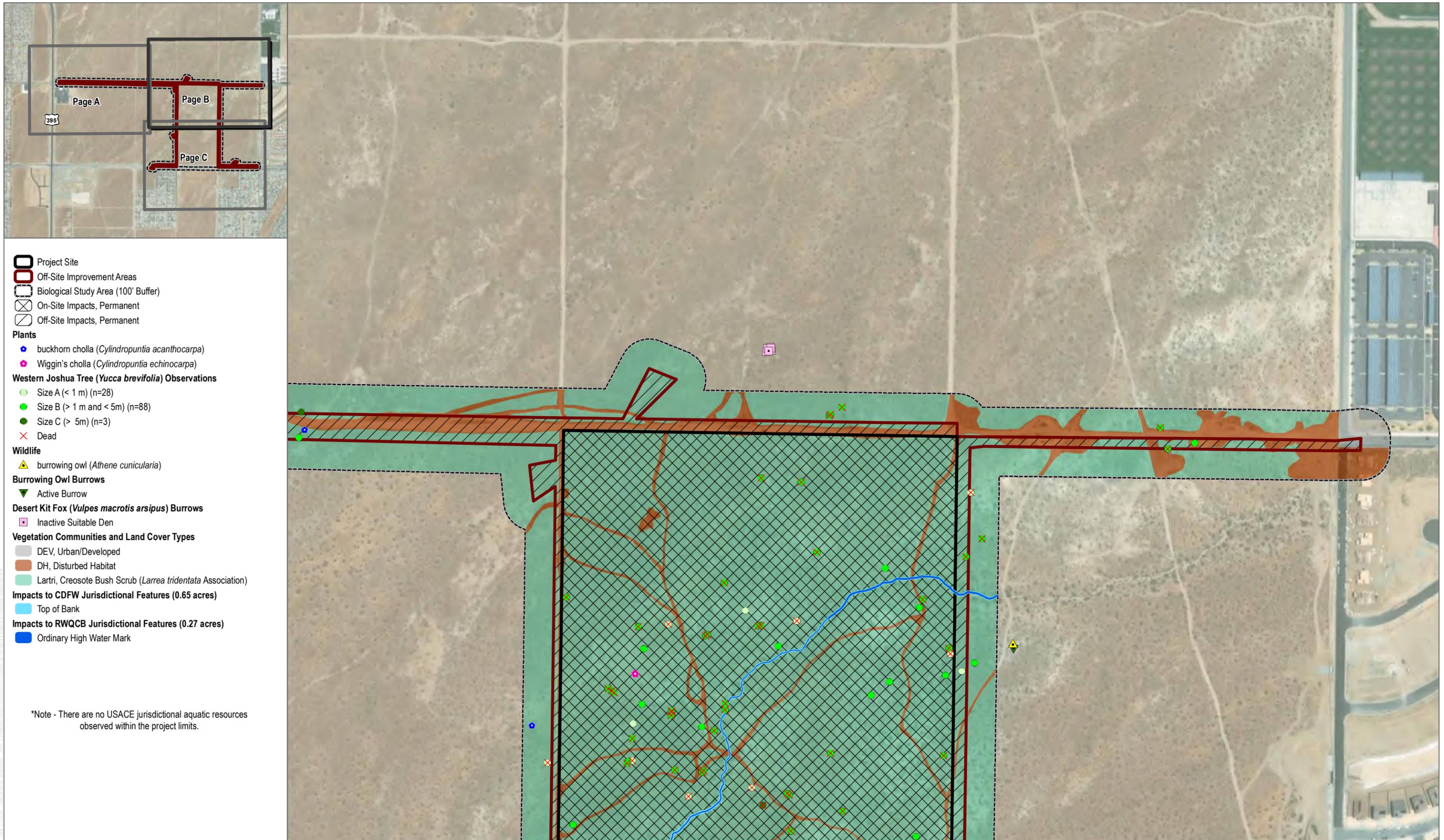
*Note - There are no USACE jurisdictional aquatic resources observed within the project limits.

SOURCE: Maxar 2020; Open Street Map 2023



FIGURE 8A
Impacts to Biological Resources
 Mojave Industrial Park Project

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SOURCE: Maxar 2020; Open Street Map 2023

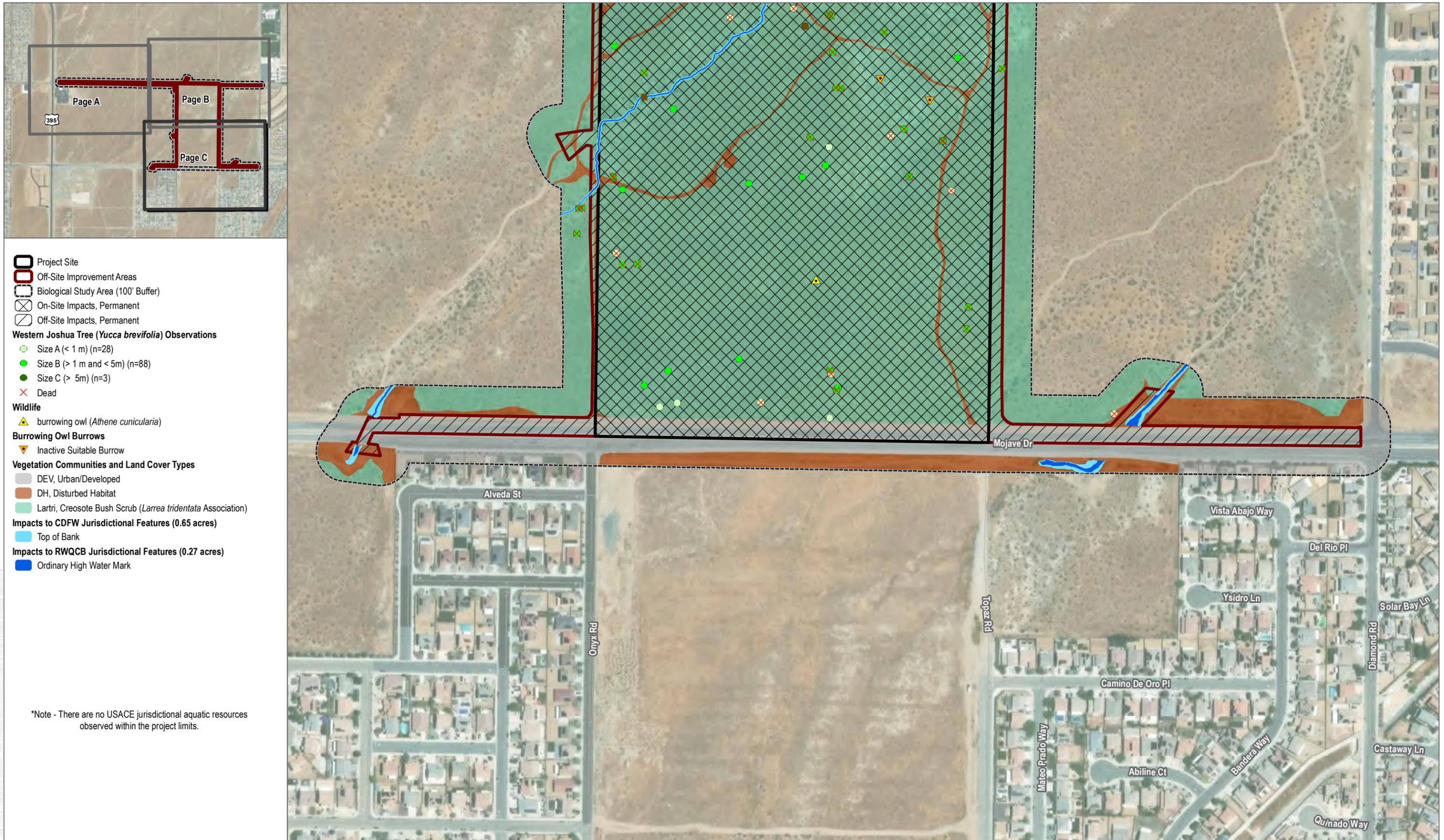


FIGURE 8B

Impacts to Biological Resources

Mojave Industrial Park Project

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SOURCE: Maxar 2020; Open Street Map 2023

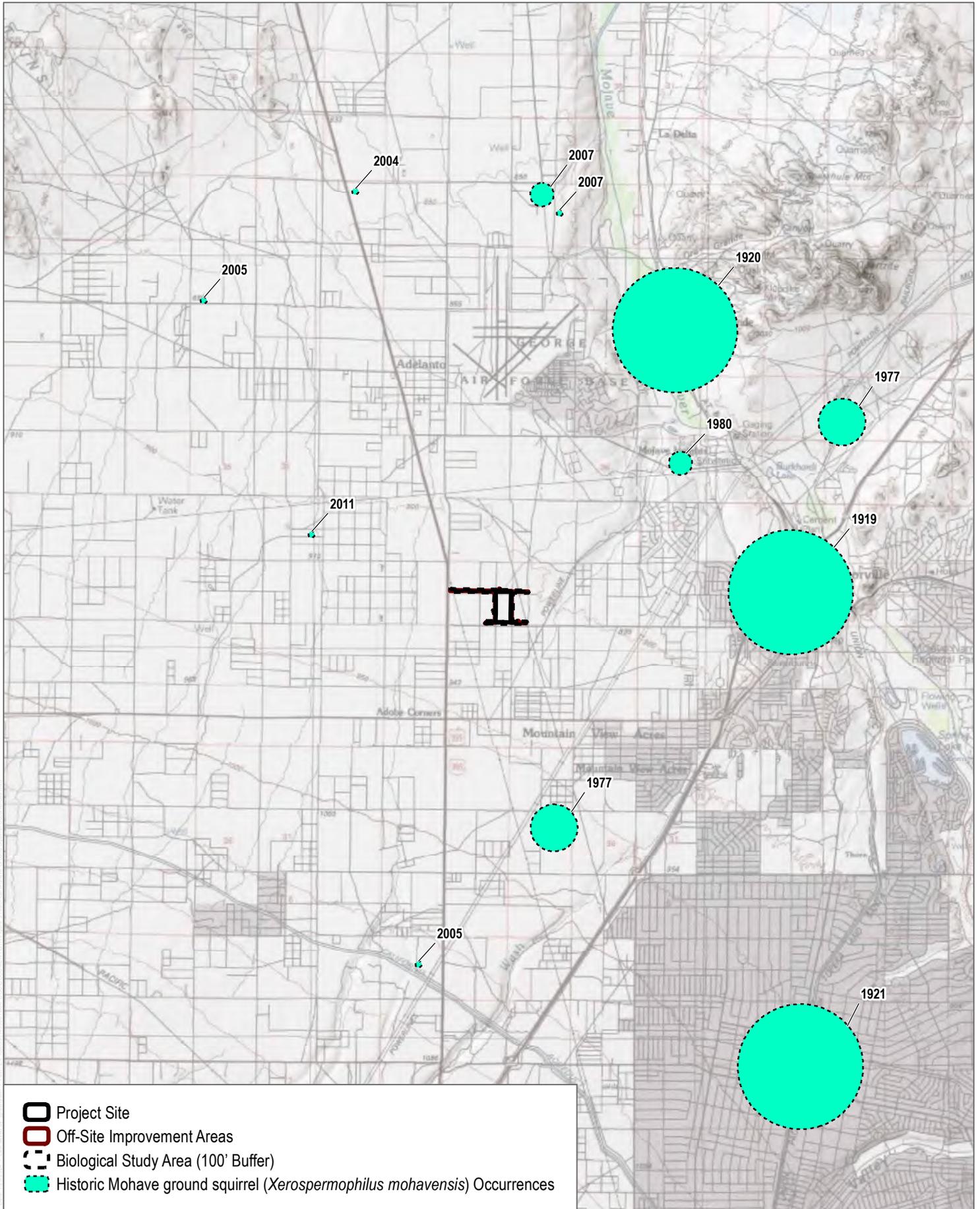


FIGURE 8C

Impacts to Biological Resources

Mojave Industrial Park Project

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SOURCE: USGS Topo Map Series; CDFW 2023

FIGURE 9
Historical Mohave Ground Squirrel Occurrences
 Mojave Industrial Park Project

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Appendix A

Joshua Tree Preservation, Protection, and Relocation Plan

Joshua Tree Preservation, Protection, and Relocation Plan

Mojave Industrial Park Project

FEBRUARY 2024

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
CDFW	California Department of Fish and Wildlife
City	City of Victorville
ISA	International Society of Arboriculture
ITP	Incidental Take Permit
Joshua Tree Plan	Joshua Tree Preservation, Protection, and Relocation Plan
Project	Mojave Industrial Park Project
VMC	Victorville Municipal Code
WJTCA	Western Joshua Tree Conservation Act

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1 Introduction

The purpose of this Joshua Tree Preservation, Protection, and Relocation Plan (Joshua Tree Plan) for the Mojave Industrial Park Project (Project) is to provide detailed specifications to meet the requirements of Chapter 13.3 of the City of Victorville (City) Municipal Code, which follows the California Department of Fish and Wildlife (CDFW) requirements to protect, preserve, and mitigate impacts to Joshua trees (*Yucca brevifolia*).

On September 22, 2020, the California Fish and Game Commission granted approval of the petition for candidacy of the western Joshua tree, marking the effective commencement of this status on October 9, 2020 (CDFW 2020). The acceptance of candidacy under the California Endangered Species Act endows the western Joshua tree with equivalent protection as that afforded to threatened or endangered species. This protection is sustained during the period in which the California Fish and Game Commission conducts an evaluation to determine whether formal listing as threatened or endangered under California Endangered Species Act is warranted.

Within this assessment interval, the removal or disturbance of western Joshua trees necessitates the acquisition of a 2081 Incidental Take Permit (ITP) issued by CDFW. Until recently, obtaining a 2081 ITP represented the principal avenue for obtaining permissions to undertake activities impacting western Joshua trees. A significant development occurred with the enactment of the Western Joshua Tree Conservation Act (WJTCA) in July 2023, which introduced an additional permitting mechanism for activities involving western Joshua trees.

Under the WJTCA, the act regards the relocation of western Joshua trees as a minimization measure, in contrast to the previous Section 2081 ITP process where relocation was viewed as an experimental approach. Specifically, the WJTCA outlines the following provisions related to relocation:

(4)(A) The department [CDFW] may require the permittee to relocate one or more of the western Joshua trees. The permittee shall implement measures to assist the survival of relocated trees and shall comply with any other reasonable measures required by the department to facilitate the successful relocation and survival of the western Joshua trees, including, but not limited to:

(i) A requirement that the relocated western Joshua tree is placed in a location and with proper orientation to improve its survival.

(ii) A requirement that western Joshua trees are relocated between October and March.

(iii) Adherence to performance criteria to ensure that relocated trees have at least an 80-percent survivability rate.

(iv) A requirement that a desert native plant specialist be on site to oversee relocation.

(B) The department [CDFW] may limit relocation to certain size classes of trees

Chapter 13.3 of the Victorville Municipal Code (VMC) states that “It is unlawful for any person to cut, damage, destroy, dig up, or harvest any Joshua tree without the prior written consent of the director of parks and recreation or his designee.” Furthermore, Section 16-5.02.060 of the VMC states that where a tree or trees are to be removed, the Applicant shall meet all current requirements and standards as set forth by CDFW, and proof shall be submitted to the Building Department prior to issuance of a permit. Alternatively, the Applicant may provide a detailed report, from a licensed arborist or biologist, for protecting and preserving the tree or trees in accordance with applicable CDFW standards, which may be affected by the proposed grading.

As such, this Joshua Tree Plan addresses the requirements of the City's Joshua Tree Policy and the proposed mitigation required by CDFW under the WJTCA, and provides details regarding the Project site's Joshua trees, detailed specifications for the protection of trees to be preserved on site, and relocation/salvage requirements for those trees requiring removal and relocation.

1.1 Applicability

The provisions of this Joshua Tree Plan apply toward the protection and removal of Joshua trees located within the City of Victorville, California, as defined in Chapter 13.3 and Section 16-5.02.060 of the City's Municipal Code.

1.2 Project Location

The Project is in the northern portion of the City, which is located in the Victor Valley/High Desert region of western San Bernardino County. Figure 1, Project Location, shows the regional location of the Project and the site vicinity. The Project is located immediately north of Mojave Drive and east of U.S. Highway 395 with proposed off-site improvements immediately west of the Project site, and located along Mojave Drive, Cactus Road/Tawney Ridge Lane, Onyx Road, and Topaz Road. The Project consists of Assessor's Parcel Numbers 312-863-102, 312-863-103, and 312-863-104 and adjacent rights-of-way. Off-site improvement areas associated with the project also include ROWs along Mojave Drive, Cactus Road/Tawney Ridge Lane, Onyx Road, and Topaz Road, as well as adjacent parcels, comprised of APNs 045-505-392, 312-861-104, 312-862-102, 312-862-106, and 313-537-101. Specifically, the Project is located in Sections 10 and 11, Township 5 North, Range 5 West, as depicted on the U.S. Geological Survey Adelanto, California 7.5-minute topographic quadrangle map (USGS 2015a). Local access to the Project is provided via Cactus Road/Tawney Ridge Lane or Mojave Drive.

1.3 Project Characteristics

The Project involves the construction of three industrial/warehouse buildings totaling 1,351,400 square feet on an approximately 81.1-acre site in Victorville, California (Figure 2, Project Site Plan). The on-site portion of the Project consists of three parcels located north of Mojave Drive and east of Onyx Road and extends to the center line of the adjacent rights-of-way. Building 1, the southeast building, would be approximately 100,300 square feet; Building 2, the southwest building, would be approximately 91,100 square feet; and Building 3, the northern building, would be approximately 1,160,000 square feet. The Project would include passenger vehicle parking spaces, trailer parking spaces, tractor-trailer loading docks, and other associated site improvements such as landscaping, sidewalks, and internal driveways.

Given the vacant, undeveloped nature of the Project site, both wet and dry utilities, including domestic water, sanitary sewer, storm drainage, and electricity, would need to be extended onto the Project site. Additionally, the Project would include street improvements along Onyx Road, Topaz Road, Mojave Drive, and Cactus Road. Specifically, the Project would involve extension of 1.75 miles of the water main within the new segments of road improvements that would be constructed as part of the Project: approximately 0.51 linear miles in Mojave Drive from Diamond Road to Onyx Road; approximately 0.50 linear miles in Onyx Road from Mojave Drive to Cactus Road; approximately 0.24 linear miles in Cactus Road from Onyx Road to Topaz Road; and approximately 0.50 miles in Topaz Road from Mojave Drive to Cactus Road. The Project would also involve the extension of approximately 1.21 miles of sewer line within the new segments of road, approximately 0.74 linear miles in Cactus Road from east of Diamond Road to Onyx Road, and approximately 0.47 linear miles in Topaz Road from Cactus Road to south of Mojave Drive. In addition, the Project would involve approximately 2 miles of storm drain improvements, approximately 0.5 linear

miles along Mojave Drive from east of Topaz Road to west of Onyx Road, approximately 0.5 linear miles along Cactus Road from Diamond road to Onyx Road, approximately 0.5 linear miles along Onyx Road from Cactus Road to north of Mojave Drive, and approximately 0.5 linear miles along Topaz Road from Cactus Road to north of Mojave Drive.

1.4 Site Characteristics

The approximately 81.1-acre, rectangular-shaped Project site is currently undeveloped property bound to the east by Topaz Road, to the west by vacant land and Onyx Road, to the south by Mojave Drive, and to the north by Cactus Road/Tawney Ridge Lane. The Project site currently has a General Plan designation of Light Industrial (LI) and zoning of General Commercial (C-2) and Light Industrial Transitional (M-1 T).

Ground surface cover of the Project site consists of low to moderate densities of native brush and shrub growth, with occasional Joshua trees located throughout the site. The site has been subject to disturbance as a result of illegal dumping and trespassing. These unpermitted activities have led to areas of exposed bare soils (where trails have formed) and several debris piles. Occasional debris is scattered throughout the Project site. The off-site improvement areas are located on undeveloped areas and/or are within public rights-of-way composed of either developed asphalt roadways or dirt roadways, primarily surrounded by undeveloped areas with vegetation similar to the Project site.

The Project site's surface elevation ranges from approximately 2,957 feet above mean sea level (amsl) in the northeastern portion to 3,014 feet amsl in the southwestern portion . The Project site's local topographic gradient is approximately 3% downward toward the south.

Land uses surrounding immediately surrounding the Project site primarily consist of vacant undeveloped property to the north, west, and east and by single-family homes south of Mojave Drive. Specific land uses located in the immediate vicinity of the Project site include the following:

- **North:** Cactus Road and vacant land
- **East:** Topaz Road, vacant land, and single-family homes
- **South:** Mojave Drive, vacant land, and single-family homes
- **West:** Onyx Road, and vacant land

In the broader Project vicinity, development includes scattered residential uses and the Melva Davis Academy of Excellence approximately 0.25 miles east of the Project site.

Local connectivity to the Project site from the center of the City and surrounding urban communities is provided via Mojave Drive (south of the Project site), Route 395 (approximately 2 miles west of the Project site), Highway 18 (approximately 3.5 miles east of the Project site), and Interstate 15 (approximately 4 miles southeast of the Project site).

Climate

The Project site is in the High Desert region of western San Bernardino County, located approximately 68 miles from the Pacific Ocean on the trans-montane slope of the San Gabriel and San Bernardino Mountains. July is the warmest month with an average high temperature of 98.1°F, and December is the coolest month with an average low temperature of 29.2°F (WRCC 2023). Significant rainfall occurs primarily between November and March, with the maximum average precipitation occurring in January and February. The average annual precipitation for Victorville is 5.52 inches (WRCC 2023). Periods of extended drought are common throughout the region.

Topography and Soils

The Project site is in Victor Valley, which lies northeast the San Gabriel Mountains and northwest of the San Bernardino Mountains. The topography of the Project site and surrounding area is generally a flat plane, which slopes gently in a northeasterly direction. The Project site is located approximately 3.6 miles southwest of the Mojave River and approximately 7.2 miles southeast of Quartzite Mountain (USGS 2015b). Elevations within the Project site range from approximately 2,957 feet above mean sea level in the northeastern portion to 3,014 feet above mean sea level in the southwestern portion.

According to the U.S. Department of Agriculture, Natural Resources Conservation Service Web Soil Survey (USDA 2023), the Project site is included within the Soil Survey for the San Bernardino County, Mojave River Area (USDA 1986). The Project site consists of six soil mapping unit types: Bryman loamy fine sand, 2% to 5% slopes; Cajon sand, 0% to 2% slopes; Cajon sand, 2% to 9% slopes; Helendale loamy sand, 2% to 5% slopes; Lavic loamy fine sand; and Rosamond loam, saline-alkali.

Vegetation

The Project site is primarily composed of creosote bush scrub. Dominant plants include creosote bush (*Larrea tridentata*), with white bursage (*Ambrosia dumosa*), Nevada joint-fir (*Ephedra nevadensis*), rubber rabbitbrush (*Ericameria nauseosa*), and Mexican bladdersage (*Scutellaria mexicana*) also present with significant cover. Western Joshua trees were scattered throughout the creosote bush scrub community; however, they make up less than 1% absolute cover and therefore did not warrant their own community. Existing dirt roads within the site and areas along the site boundaries are generally unvegetated or paved.

2 Policy and Permits

2.1 City of Victorville

2.1.1 City Policy and Permits

Per Chapter 13.3 of the VMC (2023a), it is determined by the City council that proper and necessary steps be taken to protect and preserve, to the greatest extent possible, Joshua trees in all areas of the City to preserve the unique natural desert environment throughout the City and for the health, safety, and welfare of the community (VMC 13.33.010). The VMC continues to state that it is unlawful for any person to cut, damage, destroy, dig up, or harvest any Joshua tree without the prior written consent of the Director of Parks and Recreation or their designee (VMC 13.33.040).

Furthermore, Section 16-5.02.060 of the VMC states the following regarding western Joshua trees and as a requirement of the grading and permit requirements of Article 2, Grading Regulations VMC (2023b):

All Joshua trees, as per Chapter 13.33 of the Victorville Municipal Code, shall be indicated by showing the exact center of its trunk as established by a licensed surveyor. Its tag number, trunk diameter and height must be indicated. The health and proposed disposition of the tree must be indicated. Where a tree or trees are to be removed, the applicant shall meet all current requirements and standards as set forth by the California Department of Fish and Wildlife, and proof shall be submitted to the Building Department prior to issuance of a permit. Alternatively, the Applicant may provide a detailed report, from a licensed Arborist or Biologist, for protecting and preserving, the tree or trees in accordance with applicable California Department of Fish and Wildlife standards, which may be affected by the proposed grading.

2.2 California Department of Fish and Wildlife

2.2.1 Western Joshua Tree Conservation Act

Background

The WJTCA was enacted in July 2023 with the primary objective of preserving the western Joshua tree and its associated habitat, while aligning with the state's broader renewable energy and housing priorities.

The WJTCA introduces a streamlined permitting framework that applies to specific development activities and mandates the collection of mitigation fees. These fees are intended to facilitate the acquisition and preservation of western Joshua tree habitat, as well as to support conservation measures aimed at safeguarding the western Joshua tree. The underlying goal is to counterbalance the adverse impacts on western Joshua trees resulting from authorized projects and to promote species conservation on a landscape scale.

Under the WJTCA, CDFW is authorized to perform the following key functions:

- Issue permits for the trimming and removal of hazardous or deceased western Joshua trees

- Grant permits for the incidental take of western Joshua trees, contingent upon the fulfillment of specific conditions
- Establish agreements with counties or cities to delegate limited authority for the issuance of the aforementioned permits, provided that predetermined conditions are met

Furthermore, the WJTCA instructs CDFW to develop a comprehensive conservation plan for the western Joshua tree by the conclusion of 2024.

The WJTCA institutes two categories of mitigation fees, reduced fees and standard fees, depending on the geographical location, as defined in the California Fish and Game Code (Section 1927). It empowers CDFW to issue permits for the incidental take of one or more western Joshua trees, subject to compliance with stipulated conditions. Permit holders may opt to remit specified fees in lieu of undertaking mitigation activities. Additionally, the WJTCA authorizes CDFW to issue permits for the removal of deceased western Joshua trees and the trimming of live western Joshua trees under specific circumstances.

Notably, all in-lieu fees collected under the WJTCA are directed to the Western Joshua Tree Conservation Fund, with the explicit purpose of allocation to CDFW. These funds are designated exclusively for the acquisition, conservation, and management of western Joshua tree conservation lands, as well as the execution of other initiatives designed to safeguard the western Joshua tree.

Permitting

The initial step in the Project permitting process necessitates the comprehensive survey and documentation of western Joshua trees located on the Project site and within a 50-foot radius surrounding the Project site. This census must adhere to precise specifications outlined on CDFW's official website.

Simultaneously, a permit application, available on CDFW's website, must be completed. The application mandates that the Applicant complies with the California Environmental Quality Act. There are no stipulated statutory deadlines governing the permitting process; however, CDFW is committed to expeditiously processing the applications upon receipt. Upon successful processing of the application by CDFW, the permittee will be issued an invoice for the mandatory mitigation fee. This fee is to be remitted via check or money order, with the invoice securely attached, following the precise instructions provided by CDFW.

3 Joshua Tree Survey

3.1 Joshua Tree Survey Methods

Per Chapter 13.3 and Section 16-5.02.060 of the VMC, and the WJTCA, Dudek's International Society of Arboriculture (ISA) Certified Arborist performed a Joshua tree survey to inventory and evaluate the health and relocation potential for each Joshua tree located on and within 50 feet of the Project site (Appendix A, Joshua Tree Locations). The inventory was conducted by ISA Certified Arborist Ana Pfleeger (WE-13583A) and biology field assistant Luz Badillo on November 7, 2023, and by ISA Certified Arborist Sarah Tian (WE-13677A) on January 22, 2024. During the inventory, the GPS position of each Joshua tree found on site was recorded. The Dudek Certified Arborist and biology field assistant walked the entire site in parallel transects to ensure documentation of each Joshua tree on site.

Dudek collected the following attributes of each tree:

- Species
- Size class (Size A = <1 meter, Size B = >1 meter and <5 meters, and Size C = >5 meters)
- Actual height (meters)
- Health (excellent, good, fair, poor, critical, and dead)¹
- Live or dead
- Tree maturity (mature if branching occurs, not mature if no branching occurs)
- Flowering or fruiting stage (flowers or fruits present)

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, which was placed on the main trunk on the north side of each Joshua tree. Tagging on the north side allows for proper orientation during relocation (each relocated Joshua tree will need 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.

¹ 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 Joshua Tree Survey Findings

Dudek’s arborist recorded 1,19 Joshua trees within and adjacent to (within 50 feet of) the limits of the Project site, as presented in Appendix B, Tree Information Matrix. In total, 101 Joshua trees are located within the Project site, and an additional 18 trees are located within 50 feet of the Project site (survey area). Trees in the tree survey area vary in size and stature according to age and location. Most of the trees within the survey area fall into CDFW’s size class B, which are those trees greater than 1 meter in height but less than 5 meters in height (73.95%). Most of the trees with the survey area are mature (68.07%). Because the Joshua tree survey was conducted in the fall and winter, no trees were flowering or fruiting. The health of the Joshua trees varies across the site and ranges from good to dead. In total, 27 (22.69%) trees exhibit good health, 2 (1.68%) trees exhibit fair health, 1 (0.84%) tree exhibits poor health, 2 (1.68%) trees exhibit very poor health, and 87 (73.11%) trees are dead. Individual attributes of each tree are presented in Appendix B, and individual photographs are presented in Appendix C, Site Photographs.

3.3 Project Impacts: Joshua Trees

There is wide variation in tolerance to construction impacts among tree species, and the response of an individual tree to impacts also varies with age and condition. Impacts assessed for the Project include western Joshua trees that are located within the proposed Project footprint that will require removal (as defined in the Project site plan). The impact discussion in this section identifies all impacts to protected Joshua trees that are anticipated to occur based on an evaluation of tree locations compared with the Project site plan. Trees identified for retention and removal are graphically presented in Appendix D, Joshua Tree Impacts.

Based on grading and development plans for the proposed Project, it is estimated that 101 trees (84.87%) will require removal to accommodate the Project. The remaining 18 trees are within the 50-foot buffer off site and will not require removal. Table 1 summarizes impact determinations for Joshua trees within the tree survey area that are subject to regulation under Chapter 13.3 of the VMC (2023a) and CDFW’s WJTCA.

Table 1. Summary of Protected Tree Impact Determinations

Health	Impact Determination		Total (number)
	Removal (number)	No Impact (number)	
Good	26	1	27
Fair	1	1	2
Poor	1	0	1
Very Poor	2	0	2
Dead	71	16	87
Total	101	18	1,19

4 City of Victorville Requirements

4.1 Plot Plan Requirements

Section 16-5.02.060 of the VMC (2023b) states the following:

All Joshua trees, as per Chapter 13.33 of the Victorville Municipal Code, shall be indicated by showing the exact center of its trunk as established by a licensed surveyor. Its tag number, trunk diameter and height must be indicated. The health and proposed disposition of the tree must be indicated. Where a tree or trees are to be removed, the applicant shall meet all current requirements and standards as set forth by the California Department of Fish and Wildlife, and proof shall be submitted to the Building Department prior to issuance of a permit. Alternatively, the Applicant may provide a detailed report, from a licensed Arborist or Biologist, for protecting and preserving, the tree or trees in accordance with applicable California Department of Fish and Wildlife standards, which may be affected by the proposed grading.

As such, Appendices A and D details the current location and status of each mapped and evaluated Joshua tree found on the Project site.

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5 Relocation and Protection Trees

As of the date of this Joshua Tree Plan, relocation of western Joshua trees is not a City or CDFW requirement. However, relocation may be requested by CDFW following review of the WJTCA ITP application and, as such, each western Joshua tree found within the Project area was evaluated for its relocation potential. Due to the low success rate of mature western Joshua tree relocation, only single-stemmed trees in good health and less than 15 feet in height were selected as potential relocation candidates. Based on Project-related impacts, 101 Joshua trees would be directly impacted by the Project. Of the 101 direct impacts, 21 directly impacted Joshua trees met the defined criteria for improved likelihood of post-transplant success. As such, the site contains 21 potentially relocatable trees. As stated, relocation may be requested by CDFW following review of the WJTCA ITP application; should relocation be required by CDFW, it is recommended that any potentially transplantable western Joshua trees, as required by CDFW, be relocated in accordance with the relocation specifications detailed in Section 5.1 of this Joshua Tree Plan.

Furthermore, based on the impact analysis, 18 Joshua trees would not be directly impacted by the proposed Project. As such, it is recommended that the 18 non-impacted trees be protected in place in accordance with the tree protection measures identified in this Joshua Tree Plan. The 21 impacted Joshua trees that are potential candidates for relocation and the 18 preservations are presented in Appendix B.

5.1 Relocation Specifications

The following sections provide details and specifications for the relocation of potentially transplantable western Joshua trees should relocation be required by the CDFW. Details and specifications for the Joshua tree relocation, storage, and care in the post-development landscape are also provided in this section.

5.1.1 Salvage

Joshua trees have fragile, shallow root systems that are easily damaged during the salvaging and relocation process. During the excavation of the root ball, it is important that as much of the existing root structure as possible be captured so that an intact root ball is maintained during the salvaging and relocation process. The following sections include recommendations to help increase the chances of successful salvage/relocation.

5.1.1.1 Contractor

Joshua tree salvage and relocation should be completed by an experienced Joshua tree relocation specialist.

5.1.1.2 Pre-salvage Meeting

Prior to initiating Joshua tree salvage, all contractors involved in the salvage project should attend a site meeting with the Project arborist. The Project arborist should provide the contractor(s) with a copy of the Joshua Tree Plan and should review all relevant components of the Joshua Tree Plan.

5.1.1.3 Salvage Timing

To increase the chances of a successful relocation, trees should be relocated during October through February. To increase Joshua tree survivability, the trees should not be dug out and/or salvaged in warmer months (April through September). However, should Project limitations and timing require a date not during the recommended October through February salvage period, salvaged trees should be stored in a temporary, on-site location, per the recommendations in Section 5.2, Storage.

5.1.1.4 Pre-Irrigation

Prior to Joshua tree digging, each identified Joshua tree relocation candidate should be pre-watered. Specifically, each tree should be watered 24 hours prior to relocation. Pre-watering should thoroughly soak the root ball of each tree.

5.1.1.5 Equipment Sanitization

Equipment should be sterilized prior to digging up and transplanting each tree. Equipment sterilization will reduce the likelihood of pathogens being passed from tree to tree.

5.1.1.6 Digging

Tree relocation is best completed through the use of machinery. A front-end loader or hydraulic tree spade is recommended. The hydraulic tree spade may be best used in instances where the soil type is sandy or silty. However, hand-digging of smaller Joshua trees (1 to 2 feet in height) is acceptable. The goal of relocation is to maintain a high root-to-shoot ratio. Joshua tree excavation should capture as much of the root ball as possible; however, due to the tree's shallow root system, holes do not need to be deep. In general, the digging holes may range from 12 to 18 inches in depth for smaller trees (1 to 2 feet tall) to 24 to 36 inches in depth for larger trees. The entire root ball should be removed intact, if possible.

5.1.1.7 Root Maintenance

All attempts should be made to minimize exposure of the root ball to air; exposed roots should be kept wet at all times during the relocation process. Damaged and exposed roots should be cleaned and dusted with sulfur or a fungicide to decrease the likelihood of root pathogens.

5.2 Storage

All Joshua trees recommended for relocation should be transplanted to locations throughout the Project site. Trees may be stored within a temporary storage location approved by a qualified arborist. The temporary storage location should be based on the development schedule. The storage location should be determined at a later date once the final schedule is confirmed. Trees requiring storage or stockpiling in the short term (i.e., 1 to 4 weeks) should adhere to the storage recommendations provided in the following sections.

5.2.1 Storage Guidelines

Trees stockpiled for longer than 2 weeks should be temporarily stored in shallow ditches, backfilled with native soils, and tamped down. The shallow ditches should be dug prior to tree relocation, and the final depth should be comparable to the depth at which each Joshua tree is dug. Temporary storage trench depths should be approximately 12 to 24 inches deep, depending on the size of the tree's root ball. Trench widths should be 1 foot larger than the root ball of the tree, and long enough to accommodate the tree, with enough room for equipment between each tree. Multiple trenches may be required to accommodate all salvaged trees.

5.2.2 Storage Direction

During storage, all trees should be oriented in the same direction that they were prior to removal. Each Joshua tree should be tagged on its northern side and should be reoriented with the tagged side facing north. Prior to tree relocation, each tag should be inspected to ensure that it is securely attached to the tree.

5.2.3 Stabilization

Larger plants, more than 5 feet tall, may require stabilization until the roots have had the opportunity to become reestablished. To support larger trees, guy-wire staking may be necessary. Guy-wires should be connected to the ground (i.e., preferably via a "dead-man" anchor below grade) and attached to the trunk or limbs with an expandable, non-abrasive connector. Multiple guy-wires may be required (i.e., recommended three equally spaced around the root ball for stability).

5.2.4 Irrigation

Stored trees should be watered 1 to 2 times per week during the storage period to ensure tree health and increase relocation success. During the storage period, the trees should be watered by hand or by temporary irrigation. Should temporary irrigation be installed, the use of drip emitters is recommended. Irrigation emitters should be spaced according to the watering zone specified for each tree. The total amount of water required for each tree will be dependent on the season and tree size. Irrigation needs may range from 2 to 20 gallons per watering cycle and will be dependent on ambient daytime temperatures and rainfall totals. Additionally, persistent wet soil will cause mildew and root rot. As such, soil moisture levels should be routinely checked at the time of watering and allowed to dry out between watering cycles. The irrigation schedule should be adjusted to meet the conditions described above.

5.2.5 Duration

Trees should not be stockpiled or stored for longer than 45 days.

5.2.6 Summer Salvage: Temporary Shade Structure

Per Section 5.1.1.3, Salvage Timing, should Project limitations and timing require an earlier start date than the recommended October through February salvage period, salvaged trees should be stored as described in Section 5.1.1, Salvage. Furthermore, to reduce tree stress and reduce the risk of post-transplant mortality, the salvaged trees should be stored underneath a temporary shade structure. The temporary shade structure should be sufficient in size to cover the salvaged trees and provide protection from the direct heat of the summer sun. The shade

structure should use a minimum 30% shade cloth to shade the trees during the warmer months. The shade structure should be attached to galvanized steel structural poles (or similar) to ensure the shade structure is structurally stable. The shade structure should be installed per the manufacturer's recommendations. Due to the potential for high winds, the shade structure should be attached to the ground using diagonal "dead-man" cable supports and concrete-post footings. The shade structure should be of adequate height to cover the trees. For trees that are greater than 10 feet in height, individual shade structures may be established for each tree. The remaining trees, under 10 feet in height, may be stored under a contiguous structure. In addition to the temporary shade structure, all salvaged trees should be relocated and maintained per the recommendations specified throughout this Joshua Tree Plan.

5.3 Transplant Planting

The following sections detail transplanting guidelines for the salvaged Joshua trees.

5.3.1 Site Preparation

Prior to tree transplantation, each receiver location should be dug. The final planting locations should be finalized once the final landscape plan has been developed and approved. Prior to digging, the sites should be flagged for identification by the Project arborist or registered botanist. In general, the digging hole may range from 12 to 18 inches in depth for smaller trees (1 to 2 feet tall) to 24 to 36 inches in depth for larger trees. The width of the hole should be approximately 1 foot larger than the root ball of the transplanted tree. Holes may require additional digging prior to Joshua tree installation.

5.3.2 Pre-watering

A water and root hormone mixture should be prepared prior to transplanting the trees. The mixture should be composed of vitamin B1, which is commonly sold by nurseries. The mixture should be mixed per the manufacturer's directions, which is typically at a 1:250 ratio (B1-to-water ratio). The receiving hole should be filled with the diluted mixture of rooting hormone and water and allowed to drain prior to placing the tree in the hole.

5.3.3 Planting Direction

Proper orientation of the relocated trees is important to the success of the salvaged trees. Improper planting can result in sunburn and growth distortion. As such, the north side of each tree should be clearly marked/tagged prior to digging, and each tree should be replanted (and stored) in the same orientation as it was in prior to removal.

5.3.4 Planting

Prior to final installation, the hole size should be inspected by the Project arborist to ensure that the planting hole is at minimum 1 foot wider than the root ball and is neither too deep nor too shallow. The hole may require minor adjustments prior to installation. The depth of the hole must be less than the height of the root ball. If the hole is inadvertently dug too deep, soil should be added and compacted by hand or foot. Breaking up compacted soil in a large area around the tree (outside the drip line of the tree) provides the newly emerging roots room to expand into loose soil. This will hasten root growth, translating into quicker establishment. Once the size of the hole is finalized,

the tree should be lowered into the hole in the proper orientation, backfilled with native soil, and watered again. Following backfilling and placement, the root ball should be tamped down into the hole to eliminate water pockets.

Following planting, a water basin should be installed approximately 1 foot outside of the pre-determined watering zone. The watering basin should be approximately 3 to 4 inches in height and should surround the tree. The basin should be left intact throughout the establishment period.

5.3.5 Post-transplant Stabilization

Larger plants, more than 5 feet tall, may require stabilization until the roots have had the opportunity to become reestablished. To support larger trees, guy-wire staking may be necessary. Guy-wires should be connected to the ground (i.e., preferably via a “dead-man” anchor below grade) and attached to the trunk or limbs with an expandable, non-abrasive connector. Multiple guy-wires may be required (i.e., recommended three equally spaced around the root ball for stability). Guy-wires should be removed once the tree is determined to be established by the Project arborist.

5.4 Post-relocation Care

5.4.1 Irrigation

Trees that have been relocated to their final planting location should be watered 1 to 2 times per week for an initial 2 to 3 months, depending on the season, rainfall totals, tree size, and watering zone size. Irrigation should be adjusted seasonally with a goal of removing the transplanted trees from supplemental irrigation after 2 years have passed and growth has resumed. The total amount of water required for each tree will be dependent on the season and tree size. Persistent wet soil will cause mildew and root rot. As such, soil moisture levels should be routinely checked at the time of watering, and the soil should be allowed to drain and dry out between watering cycles. Watering should be accomplished by hand or by a temporary irrigation system. During irrigation, the tree basin should be filled and allowed to fully drain. Irrigation needs may range from 2 to 20 gallons per watering. The watering cycle should be adjusted based on tree health and season.

5.4.2 Stabilization

Trees that have been stabilized should be routinely inspected by the Project arborist to ensure that the guy-wires and straps are not damaging the trees. The expandable, non-abrasive connectors should be adjusted, as needed, to minimize damage to the trees. The guy-wires can be removed once the Project arborist has determined that the trees have become established. In general, little to no movement should be observed on the root ball when the tree is gently pushed. Once the roots are well established, it is important to remove the tree stakes. This will encourage a natural strengthening of the tree trunk so it can support the weight of the branches as they begin grow and spread.

5.4.3 Fertilization

Post-transplantation fertilization is not required.

5.5 Monitoring and Reporting

Tree relocation, stockpiling, maintenance, and watering should be monitored by a Certified Arborist or registered botanist.

5.5.1 Monitoring

Neither the City nor CDFW define a minimum post-transplantation monitoring period. However, an annual inspection and report for a 4-year period is recommended. For the initial 3 months following transplantation, weekly monitoring by a Certified Arborist or registered botanist should occur to ensure that the watering needs of each relocated tree are being met. Following the initial 3-month monitoring period, the relocated trees should be monitored on a monthly basis for 9 months. Following the first year of monitoring, the trees should be monitored quarterly (every 3 months) for 3 years to ensure tree establishment. Monitoring may be adjusted based on tree health and observations by the Project arborist. The monitoring period should begin once all trees have been installed.

5.5.2 Reporting

Annual reports should be prepared at the end of each calendar year to document the status of the transplantation program and the health/survivability of the relocated trees. Reports of all monitoring should be submitted to the City and CDFW, if required. Monitoring should track the location, health, and status of each transplanted Joshua tree. The monitoring arborist or registered botanist should include recommendations for maintenance and irrigation, should they be needed.

5.6 Transplantation Success Criteria

The City does not define a minimum success ratio for transplanted Joshua trees. However, per CDFW requirements, adherence to an 80% survivability rate is required. As such, the transplantation program would be considered successful if, after four growing seasons (4 years)—including two growing seasons with supplemental irrigation and two without—the transplanted trees maintain a minimum of 80% survivability. Should the surviving number of trees drop below 80%, it is recommended that trees be obtained from a local adoption program or from a local nursery to meet the 4-year, 80% threshold. The City or CDFW may define alternative minimum success criteria. The final 80% survivability rate will be based on the total number of western Joshua trees required for relocation by CDFW, should relocation be required.

6 California Department of Fish and Wildlife Minimization and Mitigation

The following section details the proposed mitigation program described within the ITP application for the Project (Item No. 9 in the ITP application).

6.1 Proposed Minimization and Mitigation

As described in Section 1, Introduction, under the WJTCA, relocation of western Joshua trees is considered a minimization measure, in contrast to the previous Section 2081 ITP process, where relocation was viewed as an experimental approach. Relocation in the WJTCA is described as follows:

(4) (A) The department [CDFW] may include permit conditions that require the permittee to relocate one or more of the western Joshua trees. If relocation is required, the permittee shall implement measures to assist the survival of relocated trees, and to comply with any other reasonable measures required by the department to facilitate the successful relocation and survival of the western Joshua trees. These relocation measures shall include, but are not limited to, all of the following:

(i) A requirement that the relocated western Joshua tree is placed in a location and with proper orientation to improve its survival.

(ii) A requirement that western Joshua trees are relocated at a time that maximizes their survival when feasible.

(iii) A requirement that a desert native plant specialist be onsite to oversee relocation

Beyond the option of relocation, the California Fish and Game Commission also established the Western Joshua Tree Conservation Fund. This dedicated fund serves the acquisition, preservation, and responsible management of western Joshua tree conservation lands, as well as the facilitation of various other initiatives aimed at the conservation of the western Joshua tree.

Regarding the acquisition of permits for the incidental take of western Joshua trees, permittees are required to remit an in-lieu fee contingent on the project's geographical location. This fee structure is divided into two categories: (1) the reduced mitigation fee area, characterized by lower mitigation fees, and (2) the standard fee area, where mitigation fees are comparatively higher. The Project is situated within the reduced fee area. The reduced fees are as follows:

- Trees 5 meters or greater in height: \$1,000
- Trees 1 meter or greater but less than 5 meters in height: \$200
- Trees less than 1 meter in height: \$150

Mitigation for Direct Impacts

Mitigation for direct impacts to 101 western Joshua trees will be fulfilled through the WJTCA in-lieu fee program. As described, the Project is located in the reduced fee area. Table 2 summarizes the impacts to western Joshua trees

by height class, the mitigation fee per tree by height class, and the total cost of mitigation. However, note that CDFW calculates the mitigation fee and sends an invoice to the Applicant after the application is submitted.

Table 2. In-Lieu Mitigation Fees for Impacts to Western Joshua Tree

Western Joshua Height Class	Count of Western Joshua Trees	Mitigation Fee Per Tree by Height Class	Total Cost
5 m or greater in height	2	\$1,000	\$2,000
1 m to less than 5 m in height	74	\$200	\$14,800
Less than 1 m in height	25	\$150	\$3,750
Total	101	—	\$20,550

Notes: m = meter(s).

7 Tree Protection

For Joshua trees that do not require relocation, the following measures are recommended so that they have protected zones (crown/canopy width plus 6 feet) around each tree within and immediately adjacent to (within 25 feet of) all active construction areas. For protected trees on site that remain within undisturbed areas, similar tree protection measures are recommended to ensure against potential inadvertent disturbance.

7.1 Tree Protection Measures Prior to Construction

Fencing: Orange polyethylene construction fencing, no less than 4 feet in height, with tree protection signs, should be erected around all undisturbed trees (or tree groups). The protective fencing should be installed at the protected zone boundary of each tree (or tree group), which is defined as 6 feet beyond the tree crown/canopy dripline. The intent of protective fencing is to prevent root damage and/or compaction of the soil by grading equipment. An ISA Certified Arborist may be required on site if grading activities occur within a tree's protected zone. Fencing should be secured to 6-foot-tall, heavy-gauge T-bar posts pounded into the ground a minimum of 18 inches and spaced a minimum of 8 feet on center. Fencing should be attached to the T-bar posts with minimum 14-gauge wire fastened to the top, middle, and bottom of each post. Tree protection signs should be attached to every fourth post. The contractor should maintain the fence to keep it upright, taut, and aligned at all times. Fencing should be removed only after all construction activities in the vicinity of the protected trees are complete.

Pre-construction Meeting: A pre-construction meeting should be held between all contractors (including grading, tree removal/pruning, and builders) and an ISA Certified Arborist or registered botanist. The meeting should focus on instructing the contractors on tree protection practices and on answering any questions. All equipment operators and spotters, assistants, and those directing operators from the ground should provide written acknowledgment of having received tree protection training. This training should include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish these tasks.

7.2 Protection and Maintenance during Construction

Once construction activities have begun, the following protection measures should be followed:

Equipment Operation and Storage: Contractors should avoid heavy equipment operation around protected trees. Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and consequently reduces water penetration into the soil. All heavy equipment and vehicles should, at minimum, stay out of the fenced protected tree zone except where specifically approved in writing and under the supervision of a Certified Arborist or registered botanist.

Materials Storage and Disposal: Contractors should not store or discard any supplies or materials, including paint, lumber, and concrete overflow, within the protected zone, and should remove all foreign debris within the protected zone. However, the contractors should leave the duff, mulch, chips, and other organic material around the retained trees for water retention and nutrient supply. In addition, the contractors should avoid draining or leakage of equipment fluids near retained trees. Fluids such as gasoline, diesel, oils, paint, paint thinners, and glycol (anti-freeze), as well as hydraulic, brake, and transmission fluids, should be disposed of properly. Contractors should

ensure that equipment is parked outside of the protected zone to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the trees could result in tree decline and mortality.

Grade Changes: Contractors should ensure that grade changes, including adding fill, are not permitted within the protected zone without special written authorization and under supervision by an ISA Certified Arborist or registered botanist. Lowering the grade within the protected zone would necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the trees. Adding soil, even temporarily, on top of the existing grade would compact the soil further and decrease water and air availability to the tree roots. Contractors should ensure that grade changes made outside of the protected tree zone will not create conditions that allow water to pond at the base of trees. Water trapped at the base of a tree could lead to root rot and other detrimental tree impacts.

Moving Construction Materials: Contractors should ensure that care is exercised when moving construction equipment and supplies near undisturbed Joshua trees, especially overhead. Contractors should ensure that damage to the trees is avoided when transporting or moving construction materials and working around trees (even outside of the fenced protected zone). Contractors should flag aboveground tree parts that could be damaged (e.g., low limbs, scaffold branches, and trunks) with high-visibility flagging, such as fluorescent red or orange flagging.

Trenching: Except where specifically approved in writing beforehand, all trenching should be outside the fenced protected zone. Where trenching is necessary in areas that contain roots from retained trees, contractors should use trenching techniques that include the use of either a root pruner (Dosko root pruner or equivalent) or an Air-Spade to limit root impacts. An ISA Certified Arborist or registered botanist should ensure that all pruning cuts are clean and sharp to minimize ripping, tearing, and fracturing of the root system. Root damage caused by backhoes, earthmovers, dozers, or graders is severe and may result in tree mortality. Use of root-pruning and Air-Spade equipment should be accompanied only by hand removal of soil from trench locations. The trench should be made no deeper than necessary to accommodate the intended materials.

Irrigation/Hand Watering: Irrigation/hand watering of retained Joshua trees on site should seek to mimic natural rainfall patterns in Southern California. As such, irrigation/hand watering is not required unless recommended by the monitoring ISA Certified Arborist or registered botanist.

Inspection/Reporting: An ISA Certified Arborist or registered botanist should inspect the preserved trees adjacent to grading and construction activity on a monthly basis for the duration of the Project's construction period. A site observation report summarizing site conditions, observations, tree health, and recommendations for minimizing tree damage should be submitted by the ISA Certified Arborist or registered botanist following each inspection. Annual monitoring reports to document year-end conditions should also be submitted.

7.3 Maintenance after Construction

Following completion of the construction activity within 20 feet of the protected zones of undisturbed Joshua trees, the tree protection fencing may be removed, and the following measures may be performed to sustain and enhance the vigor of the trees:

Pruning: Regular pruning of the trees is not required.

Watering: The retained trees should not require regular irrigation/hand watering, other than during the 12 months following substantial root pruning, if applicable. Supplemental irrigation/hand watering for the retained trees that sustained root pruning and any newly planted trees may be necessary, especially in years with low winter rainfall.

Watering Adjacent Plant Material: All watering near retained Joshua trees and adjacent vegetation should mimic natural rainfall patterns. Supplemental irrigation of adjacent plant material should not be required.

Monitoring: For the initial 3 months, weekly monitoring by an ISA Certified Arborist or registered botanist is recommended to ensure that the watering needs of each tree are being met. Following the initial 3-month monitoring period, it is recommended that the trees be monitored on a monthly basis for 9 months. Following the first year of monitoring, it is recommended that the trees be monitored quarterly (every 3 months) for 3 years. Following each monitoring visit, a site observation report summarizing site conditions, observations, tree health, and recommendations for promoting tree health should be submitted. Any tree mortality should be noted, and any tree dying during the monitoring period should be replaced with the same species as specified per City replacement standards.

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8 Fees

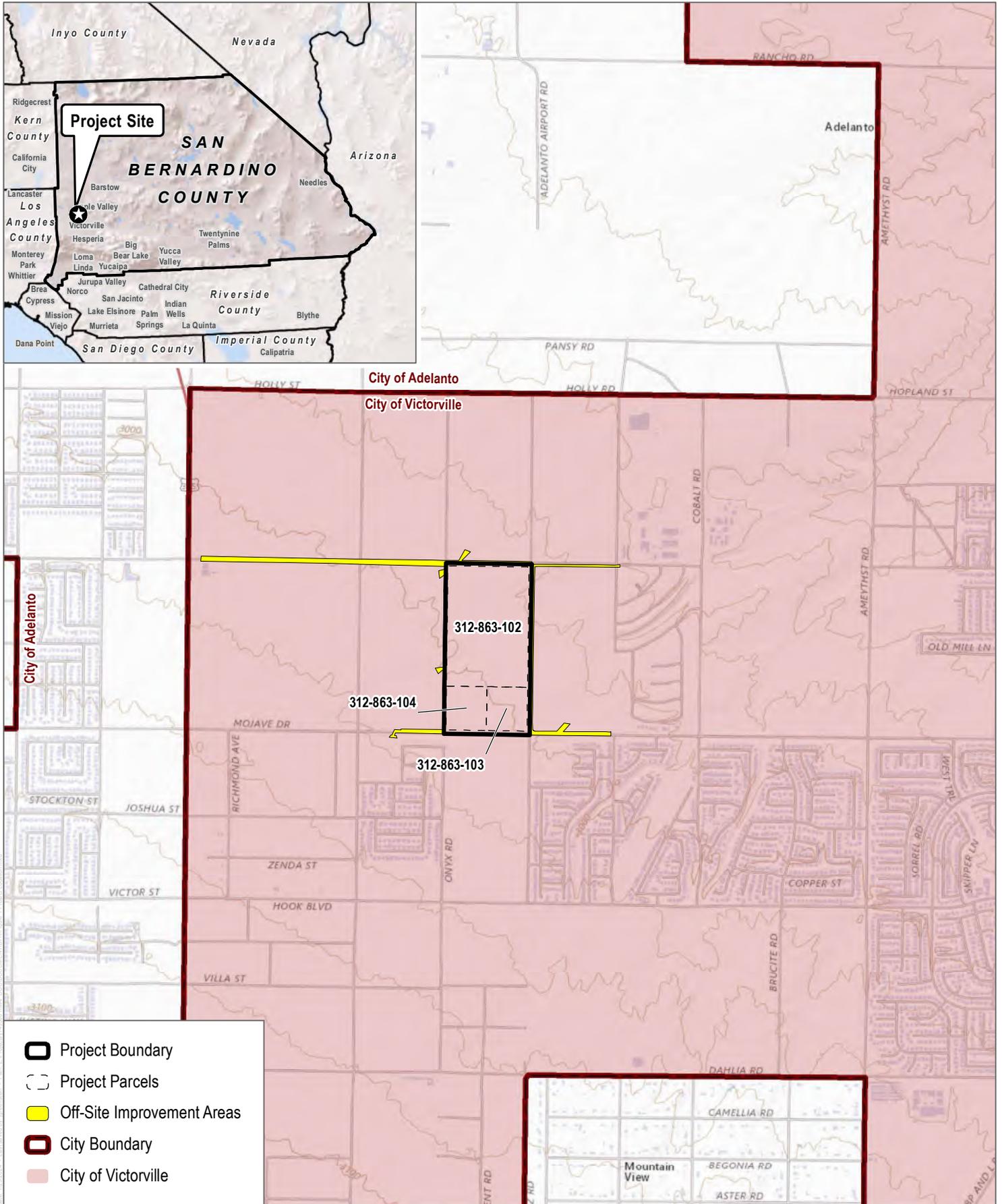
Where permits or reviews are required and they are not incorporated into other review or permit procedures, fees should be paid in accordance with the City's fee schedule. In addition to any City-required fees, per Section 6, California Department of Fish and Wildlife Minimization and Mitigation, of this report, mitigation for direct impacts to 101 western Joshua trees should be fulfilled through the WJTCA in-lieu fee program. As described, the Project is in the reduced fee area. Table 2 summarizes the impacts to western Joshua trees by height class, the mitigation fee per tree by height class, and the total cost of mitigation. However, note that CDFW calculates the mitigation fee and sends an invoice to the Applicant after the application is submitted.

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SOURCE: Maxar 2020; County of San Bernardino 2023

FIGURE 1

Project Location

Mojave Industrial Park Project

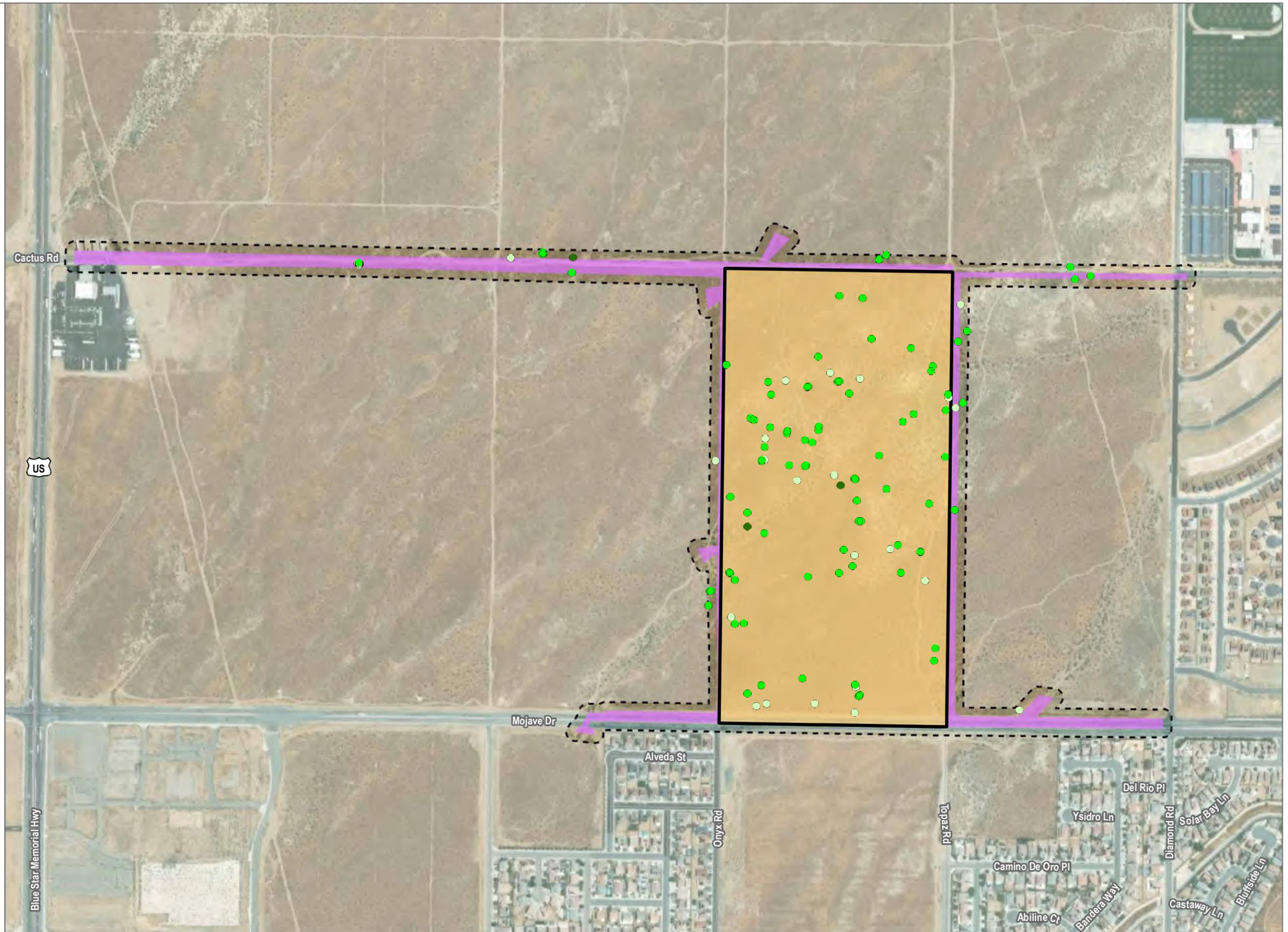
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Appendix A

Joshua Tree Locations

- Project Site
- Impacts**
- On-Site
- Off-Site
- Joshua Tree Inventory Survey Area
- Western Joshua Tree (*Yucca brevifolia*) Observations**
- Size A (< 1 m) (n=28)
- Size B (> 1 m and < 5m) (n=88)
- Size C (> 5m) (n=3)



SOURCE: Maxar 2020; Open Street Map 2023

Appendix B

Tree Information Matrix

Appendix B- Tree Information Matrix

Tree No.	Size Class	Height (m)	Mortality	Mature (Branched)	Flower or Fruit	Tree Health	Relocation Potential	Notes	Impact Status	Photograph No.	Project Location	Within 15 m of Construction	Longitude	Latitude
1	Size B (> 1 m and < 5m)	2.3	Live	No	None	Good	Yes		Direct	MIP_WJT_1	Project Footprint	Yes	-117.379061	34.535719
2	Size B (> 1 m and < 5m)	2.5	Dead	Yes	None	Dead	No		Direct	MIP_WJT_2	Project Footprint	Yes	-117.383932	34.535352
3	Size B (> 1 m and < 5m)	1.1	Dead	Yes	None	Dead	No		Direct	MIP_WJT_3	Project Footprint	Yes	-117.383482	34.535317
4	Size A (< 1 m)	0.5	Dead	No	None	Dead	No		None	MIP_WJT_4	50-ft Buffer	Yes	-117.381575	34.535238
5	Size B (> 1 m and < 5m)	4.0	Dead	Yes	None	Dead	No		None	MIP_WJT_5	50-ft Buffer	Yes	-117.381444	34.534811
6	Size B (> 1 m and < 5m)	4.0	Dead	Yes	None	Dead	No		Direct	MIP_WJT_6	Project Footprint	Yes	-117.381619	34.534641
7	Size B (> 1 m and < 5m)	4.3	Live	Yes	None	Good	Yes		Direct	MIP_WJT_7	Project Footprint	Yes	-117.382527	34.534527
8	Size B (> 1 m and < 5m)	3.0	Dead	Yes	None	Dead	No		Direct	MIP_WJT_8	Project Footprint	Yes	-117.383298	34.534669
9	Size B (> 1 m and < 5m)	3.4	Dead	Yes	None	Dead	No		Direct	MIP_WJT_9	Project Footprint	Yes	-117.384334	34.534377
10	Size B (> 1 m and < 5m)	4.0	Dead	Yes	None	Dead	No		Direct	MIP_WJT_10	Project Footprint	Yes	-117.386111	34.534226
11	Size B (> 1 m and < 5m)	1.6	Live	No	None	Good	Yes		Direct	MIP_WJT_11	Project Footprint	Yes	-117.385230	34.533756
12	Size B (> 1 m and < 5m)	1.0	Dead	Yes	None	Dead	No		Direct	MIP_WJT_12	Project Footprint	Yes	-117.385294	34.533962
13	Size A (< 1 m)	0.6	Dead	Yes	None	Dead	No		Direct	MIP_WJT_13	Project Footprint	Yes	-117.384958	34.533986
14	Size B (> 1 m and < 5m)	2.5	Dead	Yes	None	Dead	No		Direct	MIP_WJT_14	Project Footprint	Yes	-117.384538	34.533883
15	Size B (> 1 m and < 5m)	2.0	Dead	Yes	None	Dead	No		Direct	MIP_WJT_15	Project Footprint	Yes	-117.384517	34.533895
16	Size A (< 1 m)	0.8	Live	No	None	Good	Yes		Direct	MIP_WJT_16	Project Footprint	Yes	-117.384092	34.534120
17	Size B (> 1 m and < 5m)	4.9	Dead	Yes	None	Dead	No		Direct	MIP_WJT_17	Project Footprint	Yes	-117.383948	34.533978
18	Size B (> 1 m and < 5m)	1.7	Dead	Yes	None	Dead	No		Direct	MIP_WJT_18	Project Footprint	Yes	-117.383915	34.533985
19	Size B (> 1 m and < 5m)	4.6	Live	Yes	None	Good	No		Direct	MIP_WJT_19	Project Footprint	Yes	-117.383721	34.533793
20	Size A (< 1 m)	0.6	Dead	No	None	Dead	No		Direct	MIP_WJT_20	Project Footprint	Yes	-117.383515	34.534030
21	Size B (> 1 m and < 5m)	2.1	Live	Yes	None	Very poor	No		Direct	MIP_WJT_21	Project Footprint	Yes	-117.382138	34.534166
22	Size B (> 1 m and < 5m)	3.8	Dead	Yes	None	Dead	No		Direct	MIP_WJT_22	Project Footprint	Yes	-117.382102	34.534243
23	Size B (> 1 m and < 5m)	4.6	Dead	Yes	None	Dead	No		Direct	MIP_WJT_23	Project Footprint	Yes	-117.381800	34.533792
24	Size A (< 1 m)	0.9	Dead	No	None	Dead	No		Direct	MIP_WJT_24	Project Footprint	Yes	-117.381784	34.533740
25	Size B (> 1 m and < 5m)	1.5	Live	No	None	Good	Yes		None	MIP_WJT_25	50-ft Buffer	Yes	-117.381510	34.533656
27	Size A (< 1 m)	0.9	Live	No	None	Good	Yes		Direct	MIP_WJT_27	Project Footprint	Yes	-117.381653	34.533578
28	Size B (> 1 m and < 5m)	3.1	Live	Yes	None	Good	No		Direct	MIP_WJT_28	Project Footprint	Yes	-117.381839	34.533538
29	Size B (> 1 m and < 5m)	3.8	Live	Yes	None	Poor	No		Direct	MIP_WJT_29	Project Footprint	Yes	-117.382466	34.533472
30	Size B (> 1 m and < 5m)	2.7	Live	Yes	None	Good	Yes		Direct	MIP_WJT_30	Project Footprint	Yes	-117.382669	34.533348
31	Size B (> 1 m and < 5m)	3.7	Dead	Yes	None	Dead	No		Direct	MIP_WJT_31	Project Footprint	Yes	-117.383121	34.532804
32	Size B (> 1 m and < 5m)	3.7	Dead	Yes	None	Dead	No		Direct	MIP_WJT_32	Project Footprint	Yes	-117.384309	34.533197
33	Size B (> 1 m and < 5m)	1.2	Dead	Yes	None	Dead	No		Direct	MIP_WJT_33	Project Footprint	Yes	-117.384306	34.533255
34	Size B (> 1 m and < 5m)	4.6	Dead	Yes	None	Dead	No		Direct	MIP_WJT_34	Project Footprint	Yes	-117.384429	34.533001
35	Size B (> 1 m and < 5m)	1.1	Live	No	None	Good	Yes		Direct	MIP_WJT_35	Project Footprint	Yes	-117.384571	34.533037
36	Size B (> 1 m and < 5m)	2.4	Dead	Yes	None	Dead	No		Direct	MIP_WJT_36	Project Footprint	Yes	-117.384910	34.533181
37	Size B (> 1 m and < 5m)	2.3	Dead	Yes	None	Dead	No		Direct	MIP_WJT_37	Project Footprint	Yes	-117.384912	34.533174
38	Size B (> 1 m and < 5m)	1.4	Dead	Yes	None	Dead	No		Direct	MIP_WJT_38	Project Footprint	Yes	-117.384917	34.533140
39	Size B (> 1 m and < 5m)	3.7	Live	Yes	None	Good	Yes		Direct	MIP_WJT_39	Project Footprint	Yes	-117.385243	34.533238
40	Size C (> 5m)	6.1	Live	Yes	None	Fair	No		None	MIP_WJT_40	50-ft Buffer	Yes	-117.389108	34.535919
41	Size B (> 1 m and < 5m)	1.2	Live	No	None	Fair	No		Direct	MIP_WJT_41	Project Footprint	Yes	-117.389132	34.535678
42	Size B (> 1 m and < 5m)	4.9	Dead	Yes	None	Dead	No		None	MIP_WJT_42	50-ft Buffer	Yes	-117.389690	34.535977
43	Size B (> 1 m and < 5m)	4.9	Dead	Yes	None	Dead	No		None	MIP_WJT_43	50-ft Buffer	Yes	-117.389699	34.536002
44	Size B (> 1 m and < 5m)	2.4	Dead	Yes	None	Dead	No		None	MIP_WJT_44	50-ft Buffer	Yes	-117.389707	34.535969

Appendix B- Tree Information Matrix

Tree No.	Size Class	Height (m)	Mortality	Mature (Branched)	Flower or Fruit	Tree Health	Relocation Potential	Notes	Impact Status	Photograph No.	Project Location	Within 15 m of Construction	Longitude	Latitude
45	Size B (> 1 m and < 5m)	2.5	Dead	Yes	None	Dead	No		None	MIP_WJT_45	50-ft Buffer	Yes	-117.389682	34.535990
46	Size A (< 1 m)	0.5	Live	No	None	Good	No		Direct	MIP_WJT_46	Project Footprint	Yes	-117.390317	34.535905
47	Size A (< 1 m)	0.9	Dead	Yes	None	Dead	No		Direct	MIP_WJT_47	Project Footprint	Yes	-117.393250	34.535791
48	Size B (> 1 m and < 5m)	1.2	Dead	Yes	None	Dead	No		Direct	MIP_WJT_48	Project Footprint	Yes	-117.393265	34.535798
49	Size A (< 1 m)	0.9	Dead	Yes	None	Dead	No		Direct	MIP_WJT_49	Project Footprint	Yes	-117.393258	34.535786
50	Size A (< 1 m)	0.6	Dead	Yes	None	Dead	No		Direct	MIP_WJT_50	Project Footprint	Yes	-117.393250	34.535779
51	Size A (< 1 m)	0.9	Dead	No	None	Dead	No		Direct	MIP_WJT_51	Project Footprint	Yes	-117.393263	34.535782
52	Size A (< 1 m)	0.6	Dead	Yes	None	Dead	No		Direct	MIP_WJT_52	Project Footprint	Yes	-117.393268	34.535761
53	Size A (< 1 m)	0.5	Dead	No	None	Dead	No		Direct	MIP_WJT_53	Project Footprint	Yes	-117.393292	34.535789
54	Size B (> 1 m and < 5m)	1.1	Dead	No	None	Dead	No		None	MIP_WJT_54	50-ft Buffer	Yes	-117.379452	34.535858
55	Size B (> 1 m and < 5m)	2.7	Dead	Yes	None	Dead	No		Direct	MIP_WJT_55	Project Footprint	Yes	-117.381846	34.532793
56	Size B (> 1 m and < 5m)	2.7	Dead	Yes	None	Dead	No		Direct	MIP_WJT_56	Project Footprint	Yes	-117.382977	34.532266
57	Size B (> 1 m and < 5m)	1.2	Dead	Yes	None	Dead	No		Direct	MIP_WJT_57	Project Footprint	Yes	-117.383599	34.532427
58	Size B (> 1 m and < 5m)	1.7	Dead	Yes	None	Dead	No		Direct	MIP_WJT_58	Project Footprint	Yes	-117.383580	34.532414
59	Size C (> 5m)	5.2	Dead	Yes	None	Dead	No		Direct	MIP_WJT_59	Project Footprint	Yes	-117.383869	34.532315
60	Size A (< 1 m)	0.6	Dead	No	None	Dead	No		Direct	MIP_WJT_60	Project Footprint	Yes	-117.383998	34.532478
61	Size B (> 1 m and < 5m)	3.7	Dead	Yes	None	Dead	No		Direct	MIP_WJT_61	Project Footprint	Yes	-117.384561	34.532615
62	Size B (> 1 m and < 5m)	1.8	Dead	Yes	None	Dead	No		Direct	MIP_WJT_62	Project Footprint	Yes	-117.384546	34.532630
63	Size B (> 1 m and < 5m)	1.5	Dead	No	None	Dead	No		Direct	MIP_WJT_63	Project Footprint	Yes	-117.384866	34.532631
64	Size B (> 1 m and < 5m)	4.3	Dead	Yes	None	Dead	No		Direct	MIP_WJT_64	Project Footprint	Yes	-117.385350	34.532921
65	Size A (< 1 m)	0.6	Live	No	None	Good	Yes		Direct	MIP_WJT_65	Project Footprint	Yes	-117.385339	34.533059
66	Size B (> 1 m and < 5m)	3.4	Dead	Yes	None	Dead	No		Direct	MIP_WJT_66	Project Footprint	Yes	-117.385587	34.533361
67	Size B (> 1 m and < 5m)	1.8	Dead	Yes	None	Dead	No		Direct	MIP_WJT_67	Project Footprint	Yes	-117.385559	34.533346
68	Size B (> 1 m and < 5m)	2.4	Dead	Yes	None	Dead	No		Direct	MIP_WJT_68	Project Footprint	Yes	-117.385626	34.533380
69	Size B (> 1 m and < 5m)	1.5	Dead	Yes	None	Dead	No		Direct	MIP_WJT_69	Project Footprint	Yes	-117.385406	34.532691
70	Size B (> 1 m and < 5m)	4.3	Live	Yes	None	Good	No		Direct	MIP_WJT_70	Project Footprint	Yes	-117.385396	34.532708
71	Size A (< 1 m)	0.5	Dead	Yes	None	Dead	No		Direct	MIP_WJT_71	Project Footprint	Yes	-117.385347	34.532716
72	Size B (> 1 m and < 5m)	1.2	Live	No	None	Good	Yes		Direct	MIP_WJT_72	Project Footprint	Yes	-117.386005	34.532114
73	Size A (< 1 m)	0.6	Dead	No	None	Dead	No		Direct	MIP_WJT_73	Project Footprint	Yes	-117.384710	34.532388
74	Size B (> 1 m and < 5m)	1.0	Dead	No	None	Dead	No		Direct	MIP_WJT_74	Project Footprint	Yes	-117.383554	34.532077
75	Size B (> 1 m and < 5m)	1.4	Live	No	None	Good	Yes		Direct	MIP_WJT_75	Project Footprint	Yes	-117.382149	34.532039
76	Size B (> 1 m and < 5m)	3.5	Dead	Yes	None	Dead	No		Direct	MIP_WJT_76	Project Footprint	Yes	-117.381646	34.531941
79	Size B (> 1 m and < 5m)	2.7	Dead	Yes	None	Dead	No		None	MIP_WJT_79	50-ft Buffer	Yes	-117.383162	34.535949
80	Size B (> 1 m and < 5m)	1.8	Dead	Yes	None	Dead	No		None	MIP_WJT_80	50-ft Buffer	Yes	-117.383173	34.535939
81	Size B (> 1 m and < 5m)	2.1	Dead	Yes	None	Dead	No		None	MIP_WJT_81	50-ft Buffer	No	-117.383032	34.536018
82	Size A (< 1 m)	0.3	Dead	No	None	Dead	No		None	MIP_WJT_82	50-ft Buffer	Yes	-117.386298	34.532688
83	Size B (> 1 m and < 5m)	3.2	Dead	Yes	None	Dead	No		Direct	MIP_WJT_83	Project Footprint	Yes	-117.385670	34.531866
84	Size C (> 5m)	5.2	Dead	Yes	None	Dead	No		Direct	MIP_WJT_84	Project Footprint	Yes	-117.385667	34.531640
85	Size B (> 1 m and < 5m)	4.3	Dead	Yes	None	Dead	No		Direct	MIP_WJT_85	Project Footprint	Yes	-117.383511	34.531749
86	Size B (> 1 m and < 5m)	3.0	Dead	Yes	None	Dead	No		Direct	MIP_WJT_86	Project Footprint	Yes	-117.383462	34.531746
87	Size B (> 1 m and < 5m)	3.0	Dead	Yes	None	Dead	No		Direct	MIP_WJT_87	Project Footprint	Yes	-117.382302	34.531266
88	Size B (> 1 m and < 5m)	1.8	Dead	Yes	None	Dead	No		Direct	MIP_WJT_88	Project Footprint	Yes	-117.382307	34.531261
89	Size B (> 1 m and < 5m)	3.5	Dead	Yes	None	Dead	No		Direct	MIP_WJT_89	Project Footprint	Yes	-117.382743	34.531371

Appendix B- Tree Information Matrix														
Tree No.	Size Class	Height (m)	Mortality	Mature (Branched)	Flower or Fruit	Tree Health	Relocation Potential	Notes	Impact Status	Photograph No.	Project Location	Within 15 m of Construction	Longitude	Latitude
90	Size A (< 1 m)	0.4	Dead	No	None	Dead	No		Direct	MIP_WJT_90	Project Footprint	Yes	-117.382893	34.531304
91	Size A (< 1 m)	0.6	Live	No	None	Good	Yes		Direct	MIP_WJT_91	Project Footprint	Yes	-117.383583	34.531196
92	Size B (> 1 m and < 5m)	4.9	Dead	Yes	None	Dead	No		Direct	MIP_WJT_92	Project Footprint	Yes	-117.383796	34.531288
93	Size B (> 1 m and < 5m)	2.1	Live	No	None	Good	Yes		Direct	MIP_WJT_93	Project Footprint	Yes	-117.385336	34.531534
94	Size B (> 1 m and < 5m)	3.0	Dead	Yes	None	Dead	No		Direct	MIP_WJT_94	Project Footprint	Yes	-117.385999	34.530889
95	Size B (> 1 m and < 5m)	3.0	Dead	Yes	None	Dead	No		Direct	MIP_WJT_95	Project Footprint	Yes	-117.386008	34.530902
96	Size B (> 1 m and < 5m)	2.2	Live	No	None	Good	No		Direct	MIP_WJT_96	Project Footprint	Yes	-117.385898	34.530782
97	Size B (> 1 m and < 5m)	1.2	Live	No	None	Very poor	No		Direct	MIP_WJT_97	Project Footprint	Yes	-117.384483	34.530850
98	Size B (> 1 m and < 5m)	1.6	Live	No	None	Good	Yes		Direct	MIP_WJT_98	Project Footprint	Yes	-117.383882	34.530913
99	Size B (> 1 m and < 5m)	1.2	Live	No	None	Good	Yes		Direct	MIP_WJT_99	Project Footprint	Yes	-117.383621	34.531025
100	Size B (> 1 m and < 5m)	2.0	Dead	No	None	Dead	No		Direct	MIP_WJT_100	Project Footprint	Yes	-117.382677	34.530928
101	Size A (< 1 m)	0.7	Dead	No	None	Dead	No		Direct	MIP_WJT_101	Project Footprint	Yes	-117.382204	34.530804
103	Size A (< 1 m)	0.8	Dead	Yes	None	Dead	No		Direct	MIP_WJT_103	Project Footprint	Yes	-117.385962	34.530188
104	Size B (> 1 m and < 5m)	1.8	Dead	Yes	None	Dead	No		Direct	MIP_WJT_104	Project Footprint	Yes	-117.385888	34.530081
105	Size B (> 1 m and < 5m)	4.9	Dead	Yes	None	Dead	No		Direct	MIP_WJT_105	Project Footprint	Yes	-117.385719	34.530091
106	Size B (> 1 m and < 5m)	2.4	Dead	Yes	None	Dead	No		None	MIP_WJT_106	50-ft Buffer	Yes	-117.386387	34.530602
107	Size B (> 1 m and < 5m)	1.2	Dead	Yes	None	Dead	No		None	MIP_WJT_107	50-ft Buffer	Yes	-117.386357	34.530606
108	Size B (> 1 m and < 5m)	4.6	Dead	Yes	None	Dead	No		None	MIP_WJT_108	50-ft Buffer	Yes	-117.386407	34.530368
109	Size B (> 1 m and < 5m)	1.2	Dead	Yes	None	Dead	No		Direct	MIP_WJT_109	Project Footprint	Yes	-117.381996	34.529725
110	Size B (> 1 m and < 5m)	1.5	Dead	No	None	Dead	No		Direct	MIP_WJT_110	Project Footprint	Yes	-117.382015	34.529523
111	Size B (> 1 m and < 5m)	2.7	Live	Yes	None	Good	Yes		Direct	MIP_WJT_111	Project Footprint	Yes	-117.385634	34.528965
112	Size A (< 1 m)	0.5	Live	No	None	Good	Yes		Direct	MIP_WJT_112	Project Footprint	Yes	-117.385454	34.528765
113	Size A (< 1 m)	0.8	Live	No	None	Good	Yes		Direct	MIP_WJT_113	Project Footprint	Yes	-117.385257	34.528804
114	Size B (> 1 m and < 5m)	2.7	Live	Yes	None	Good	Yes		Direct	MIP_WJT_114	Project Footprint	Yes	-117.385365	34.529101
115	Size B (> 1 m and < 5m)	2.5	Live	Yes	None	Good	Yes		Direct	MIP_WJT_115	Project Footprint	Yes	-117.384569	34.529219
116	Size A (< 1 m)	0.9	Dead	Yes	None	Dead	No		Direct	MIP_WJT_116	Project Footprint	Yes	-117.384320	34.528816
117	Size B (> 1 m and < 5m)	1.2	Dead	Yes	None	Dead	No		Direct	MIP_WJT_117	Project Footprint	Yes	-117.383546	34.529127
118	Size A (< 1 m)	0.9	Dead	No	None	Dead	No		Direct	MIP_WJT_118	Project Footprint	Yes	-117.383534	34.529090
119	Size B (> 1 m and < 5m)	2.7	Dead	Yes	None	Dead	No		Direct	MIP_WJT_119	Project Footprint	Yes	-117.383472	34.528941
120	Size B (> 1 m and < 5m)	1.2	Live	No	None	Good	Yes		Direct	MIP_WJT_120	Project Footprint	Yes	-117.383456	34.528963
121	Size A (< 1 m)	0.5	Dead	No	None	Dead	No		None	MIP_WJT_121	50-ft Buffer	Yes	-117.380345	34.528748
122	Size B (> 1 m and < 5m)	2.7	Dead	Yes	None	Dead	No		None	MIP_WJT_122	50-ft Buffer	Yes	-117.379365	34.535661

Appendix C

Site Photographs

Mojave Industrial Park Project Appendix C: Photo Log

Prepared for:

COVINGTON DEVELOPMENT PARTNERS

14180 Dallas Parkway, Suite 730

Dallas, Texas 75254

Contact: Brandon Gallup

Prepared by:

DUDEK

38 North Marengo Avenue

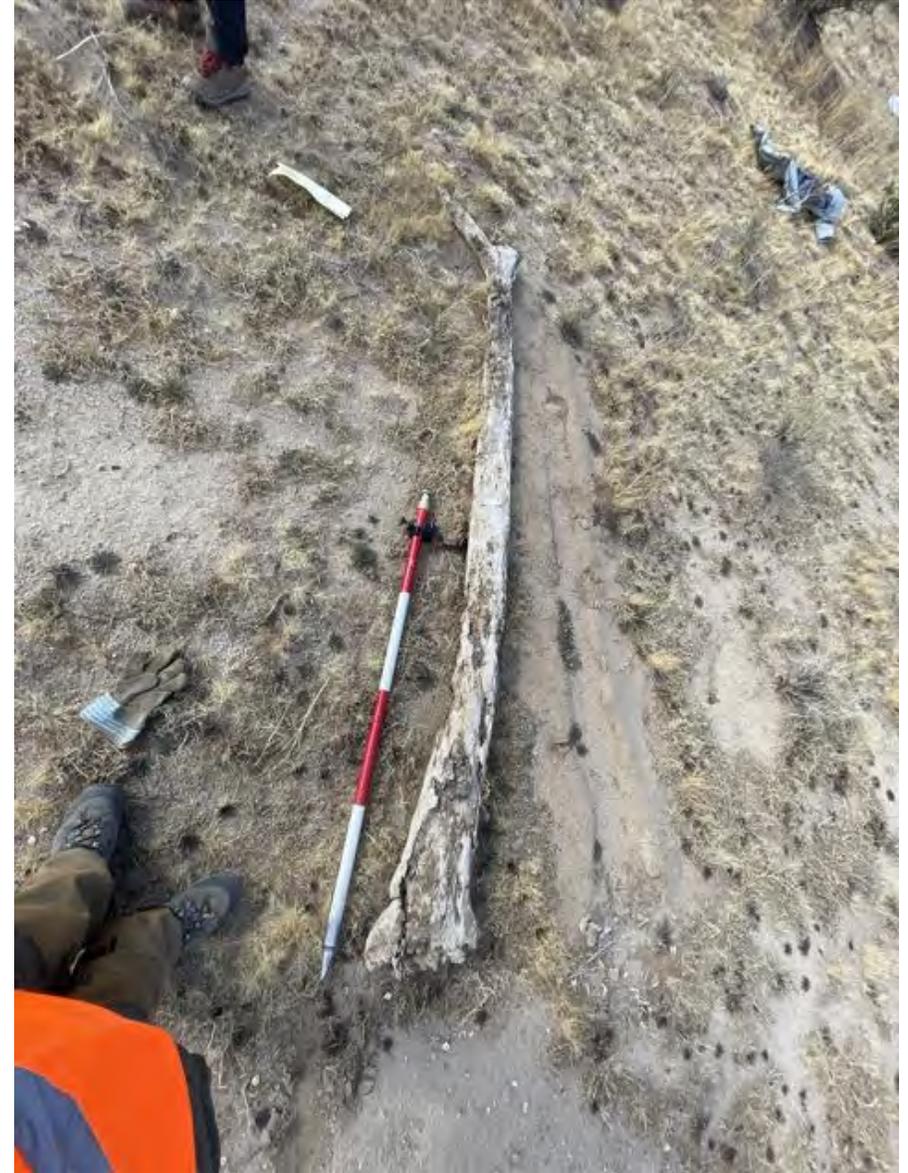
Pasadena, California 91101

Contact: Chris Kallstrand

ISA-Certified Arborist, No. WE-8208A



Tree 1



Tree 2



Tree 3



Tree 4



Tree 5



Tree 6



Tree 7



Tree 8



Tree 9



Tree 10



Tree 11



Tree 12



Tree 13



Tree 14



Tree 15



Tree 16



Tree 17



Tree 18



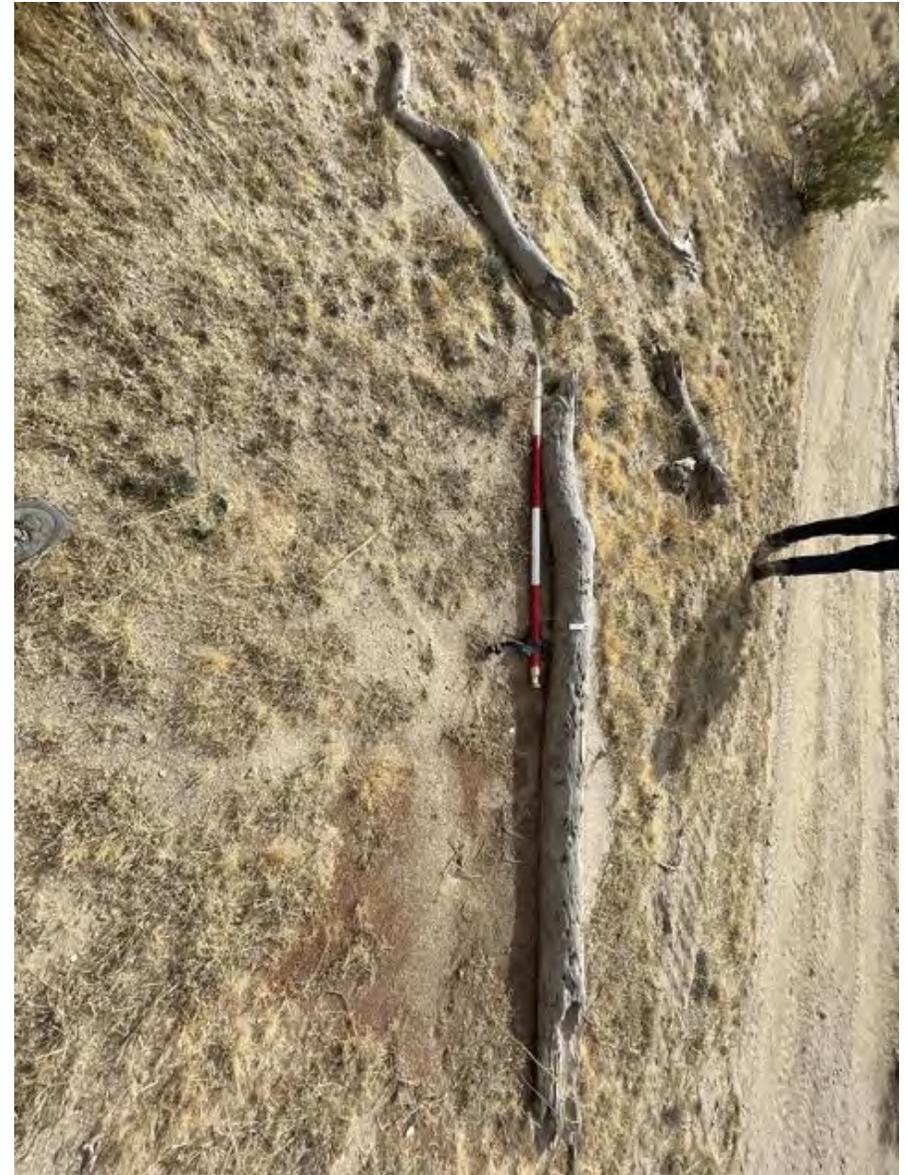
Tree 19



Tree 20



Tree 21



Tree 22



Tree 23



Tree 24



Tree 25



Tree 27



Tree 28



Tree 29



Tree 30



Tree 31



Tree 32



Tree 33



Tree 34



Tree 35



Tree 36



Tree 37



Tree 38



Tree 39



Tree 40



Tree 41



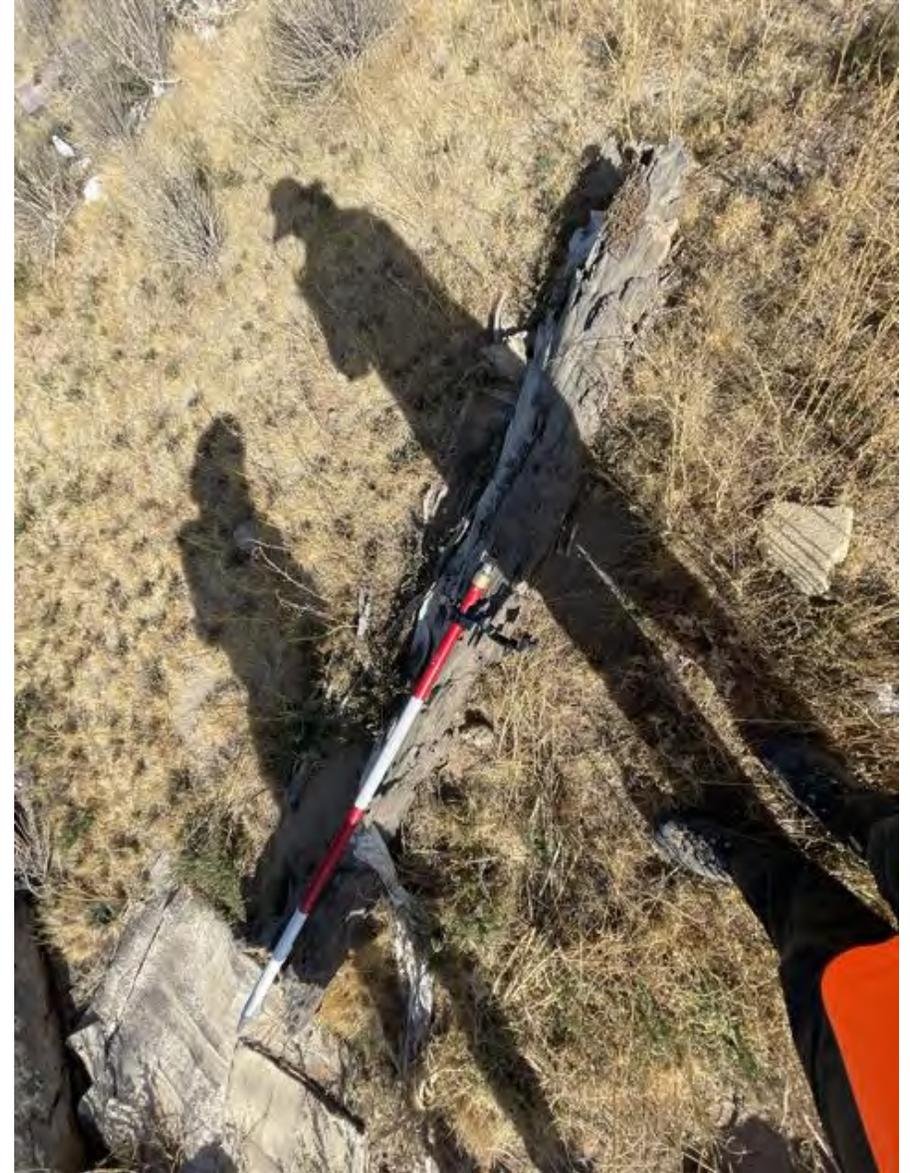
Tree 42



Tree 43



Tree 44



Tree 45



Tree 46



Tree 47



Tree 48



Tree 49



Tree 50



Tree 51



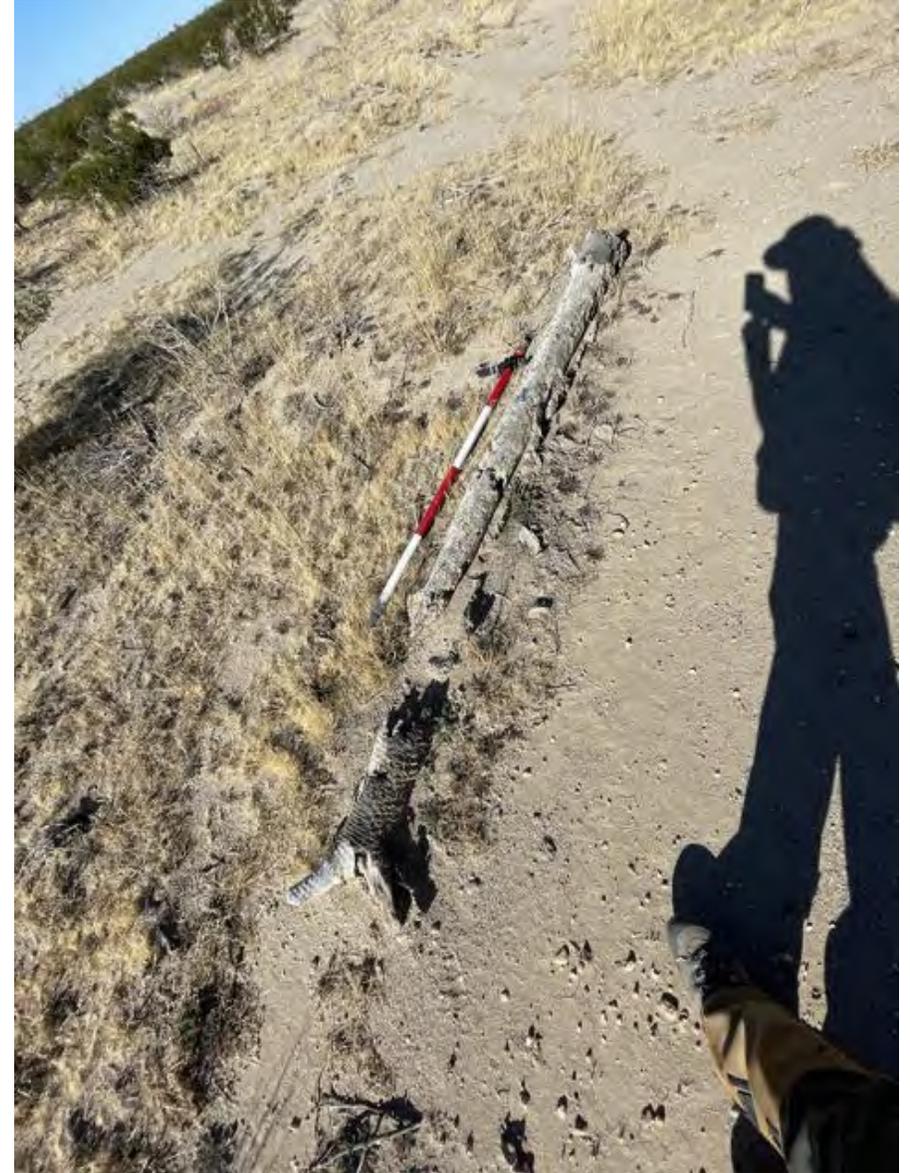
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Tree 53



Tree 54



Tree 55



Tree 56



Tree 57



Tree 58



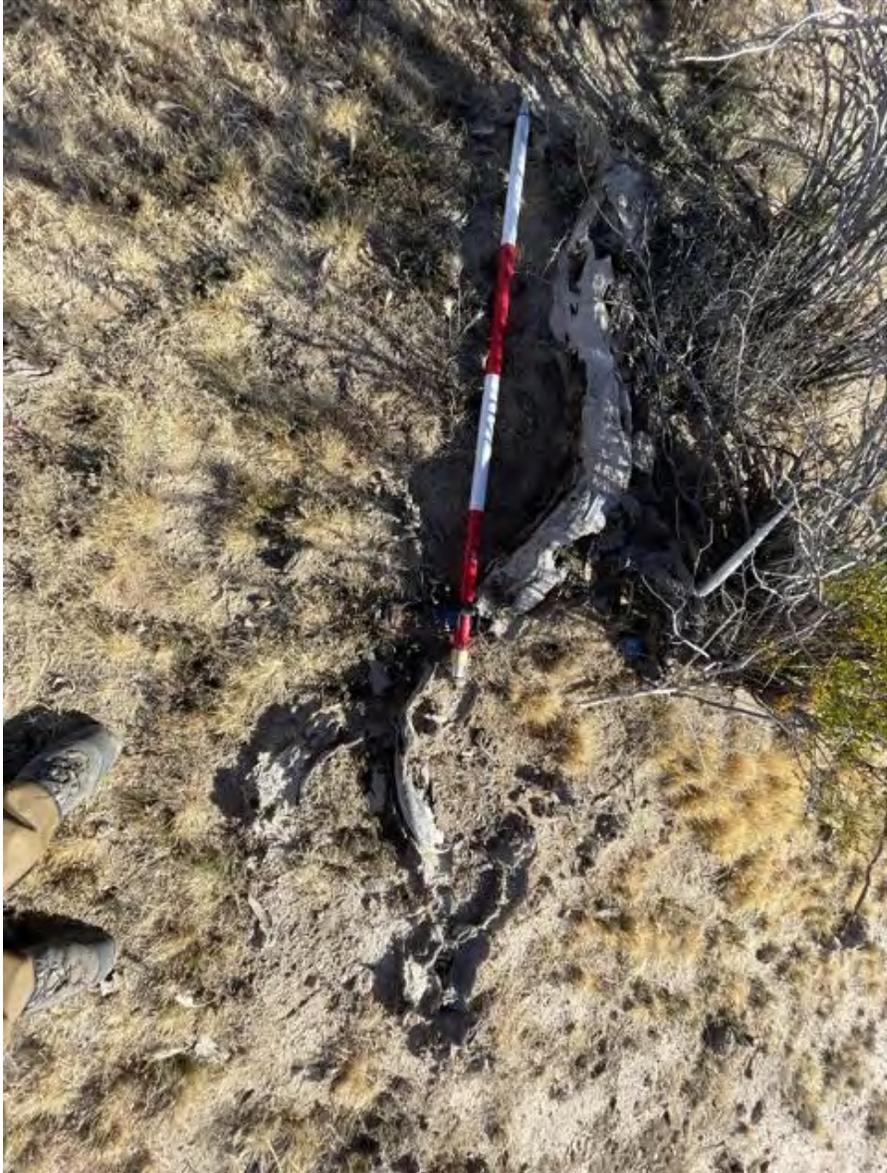
Tree 59



Tree 60



Tree 61



Tree 62



Tree 63



Tree 64



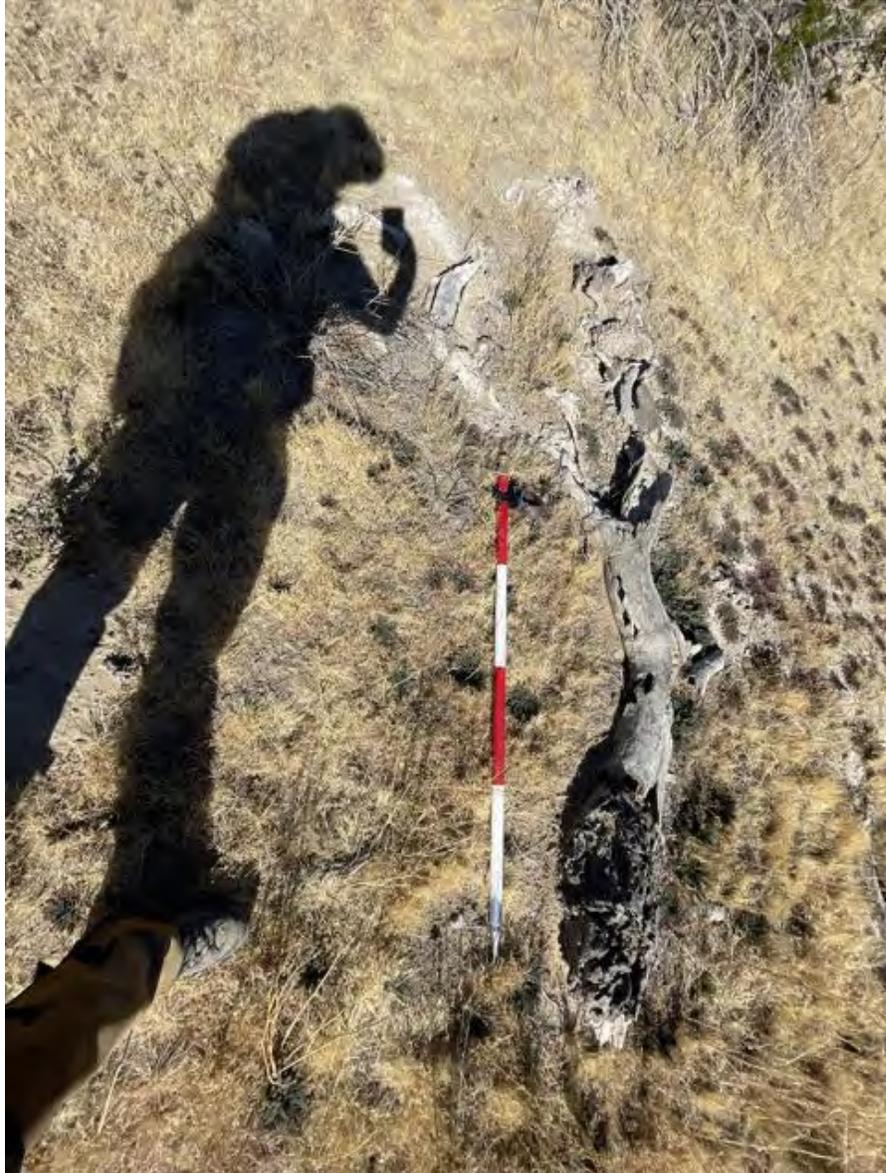
Tree 65



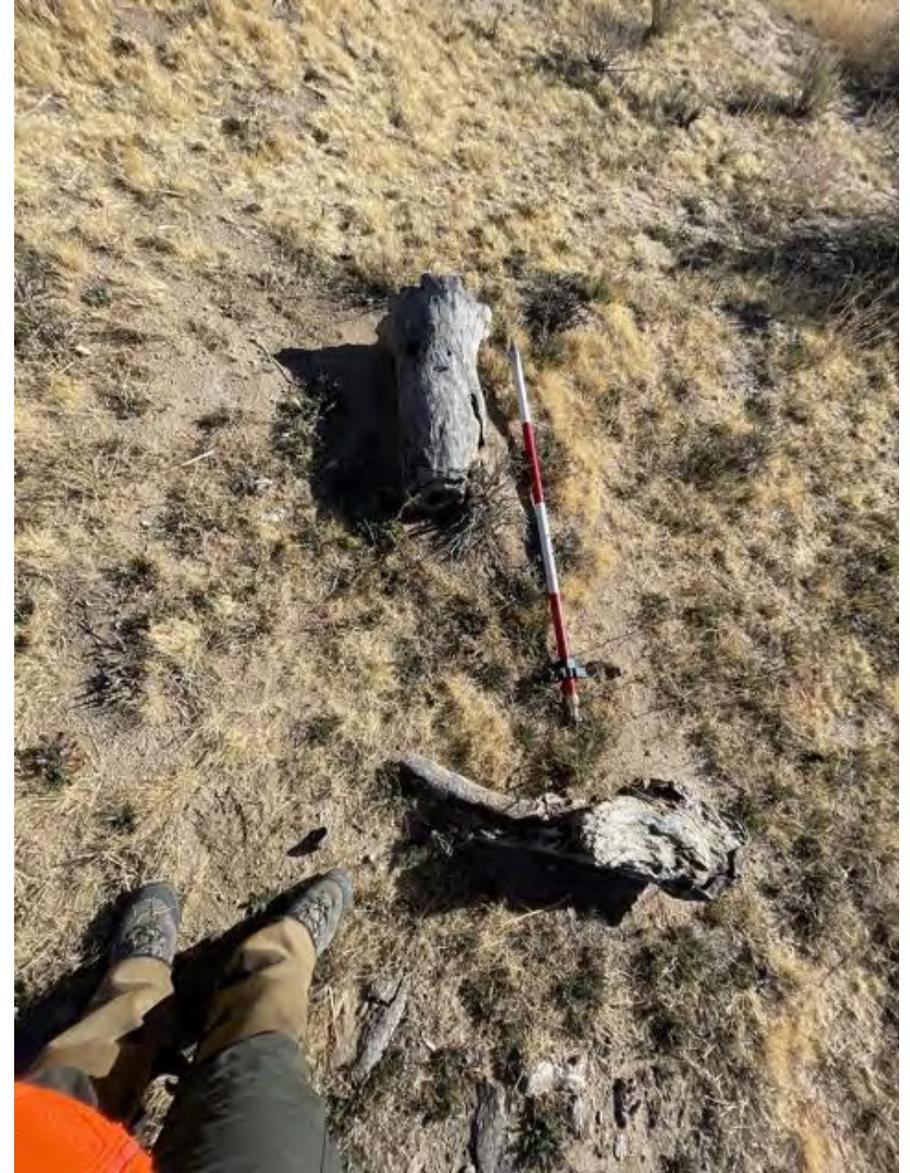
Tree 66



Tree 67



Tree 68



Tree 69



Tree 70



Tree 71



Tree 72



Tree 73



Tree 74



Tree 75



Tree 76



Tree 79



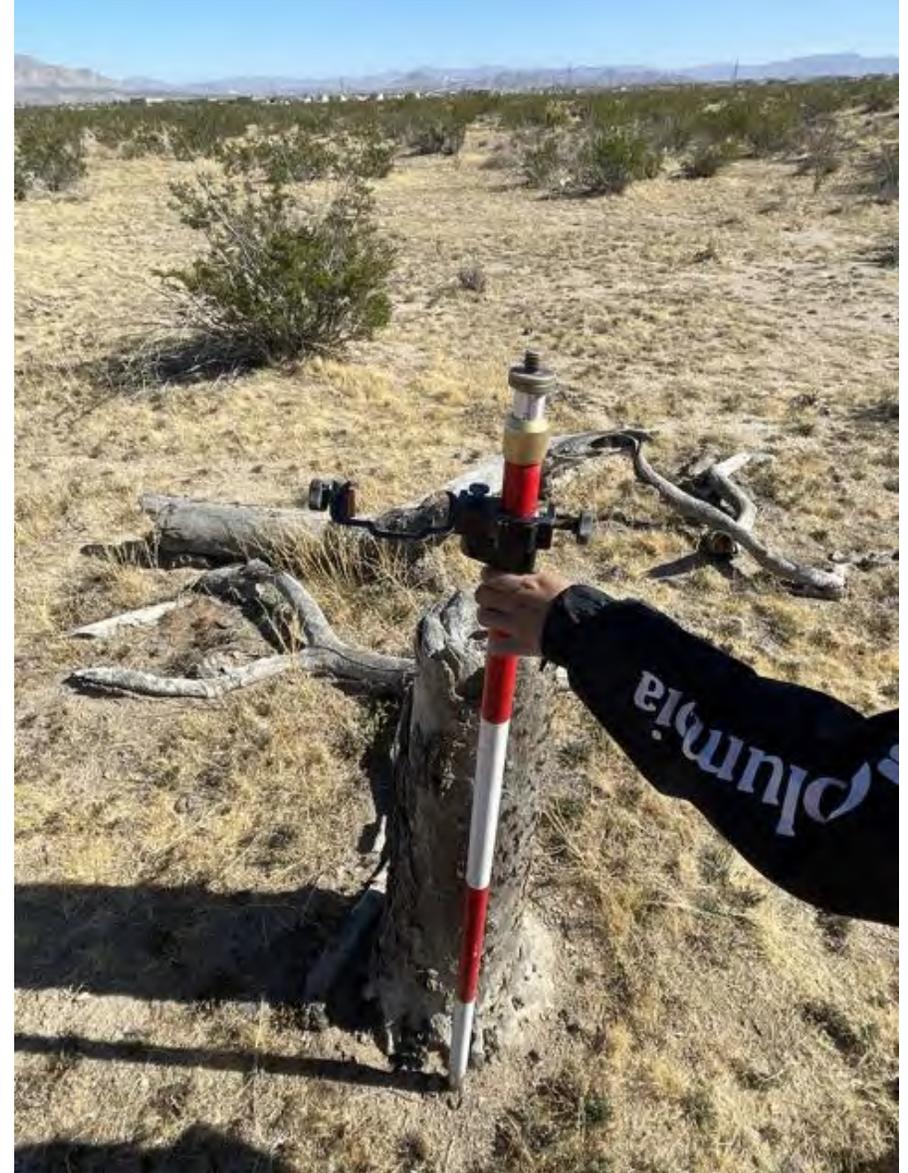
Tree 80



Tree 81



Tree 82



Tree 83



Tree 84



Tree 85



Tree 86



Tree 87



Tree 88



Tree 89



Tree 90



Tree 91



Tree 92



Tree 93



Tree 94



Tree 95



Tree 96



Tree 97



Tree 98



Tree 99



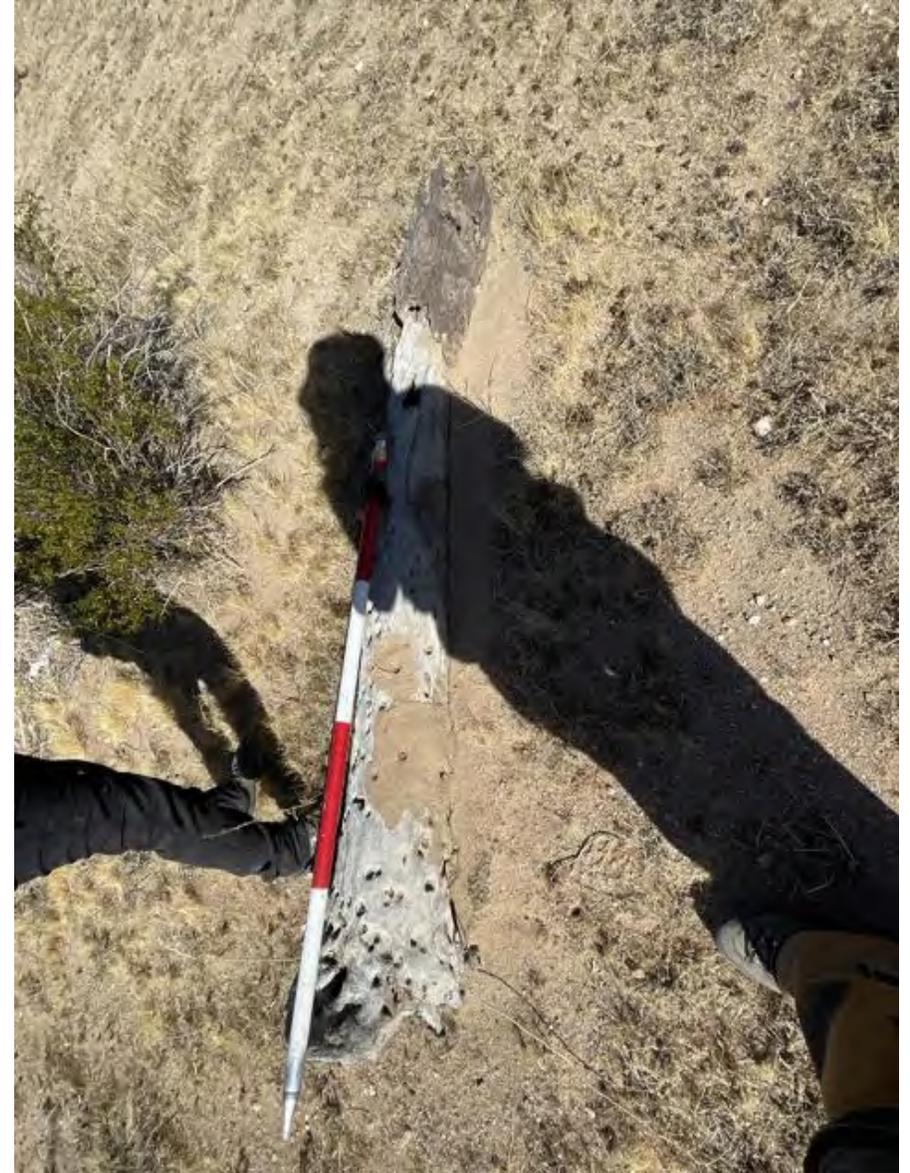
Tree 100



Tree 101



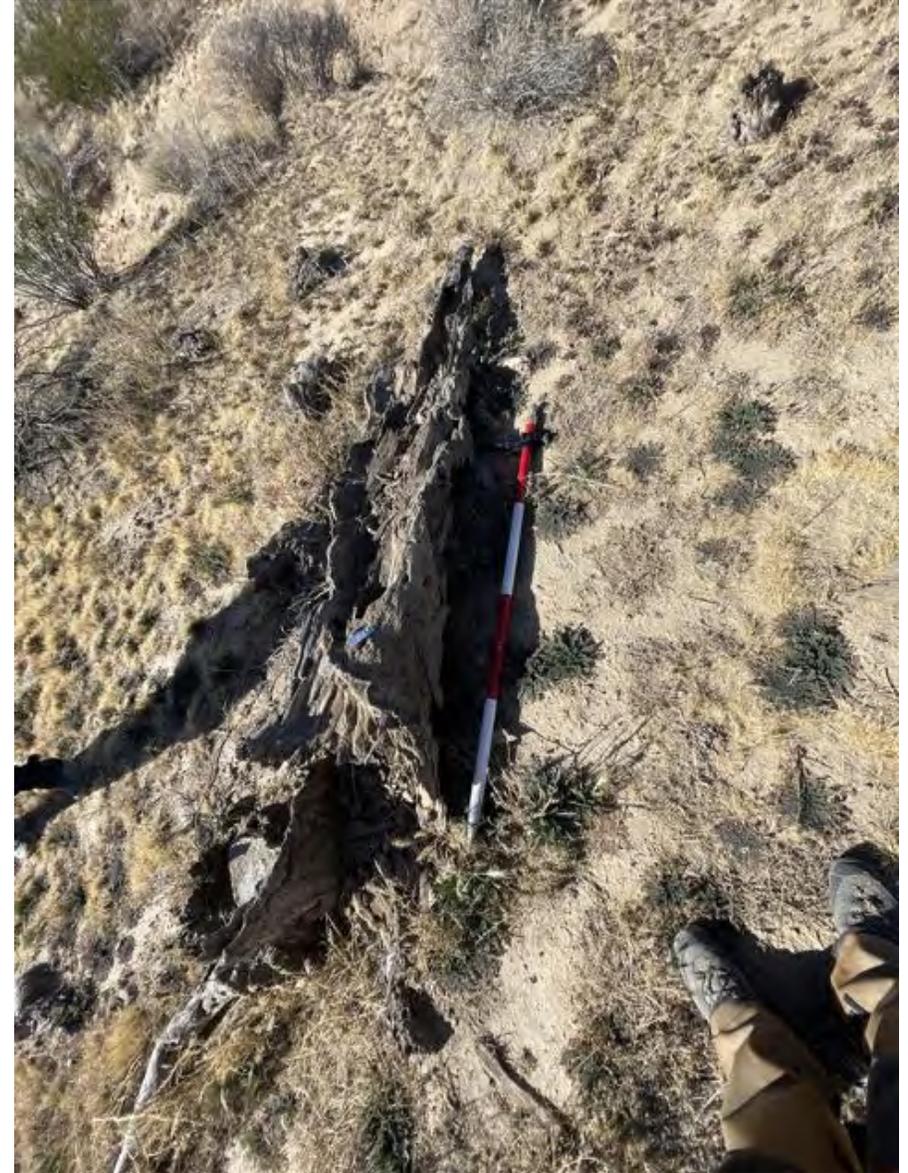
Tree 103



Tree 104



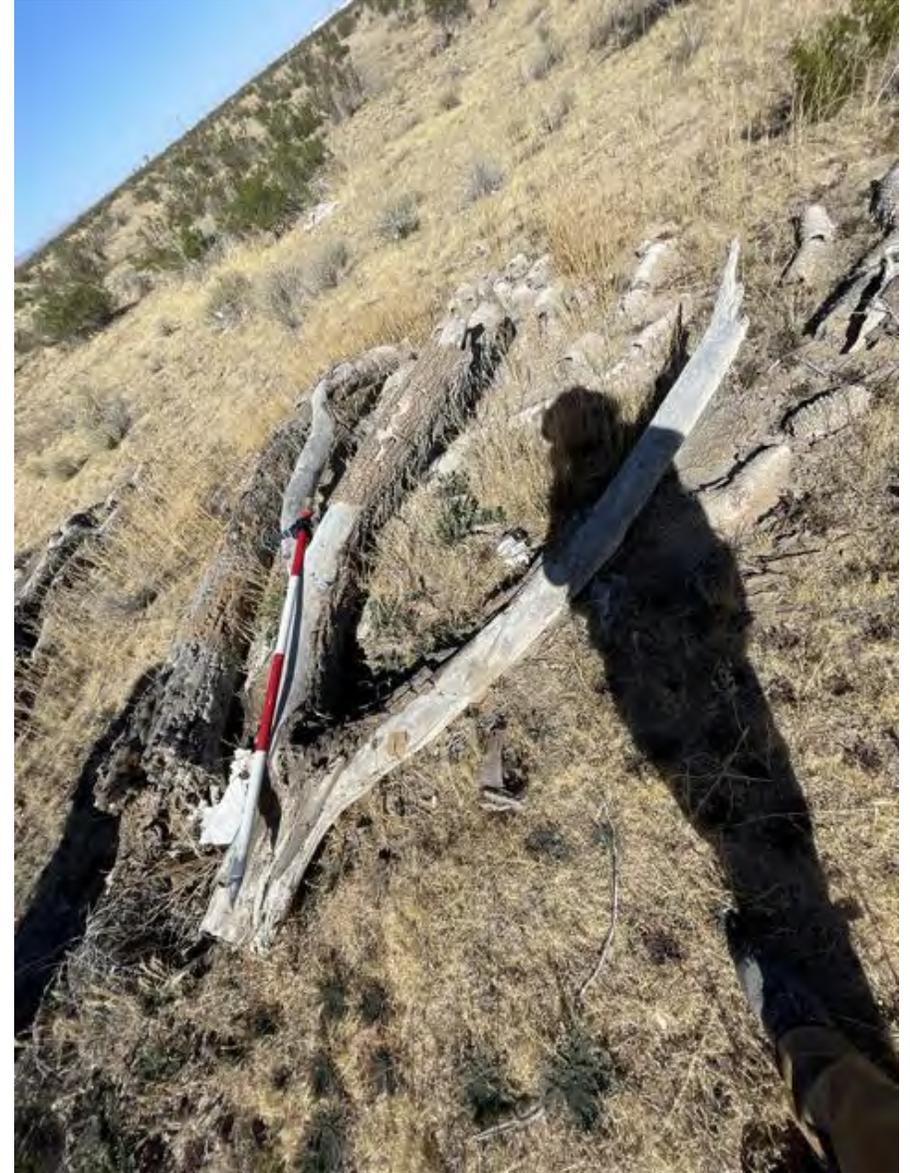
Tree 105



Tree 106



Tree 107



Tree 108



Tree 109



Tree 110



Tree 111



Tree 112



Tree 113



Tree 114



Tree 115



Tree 116



Tree 117



Tree 118



Tree 119



Tree 120



Tree 121



Tree 122



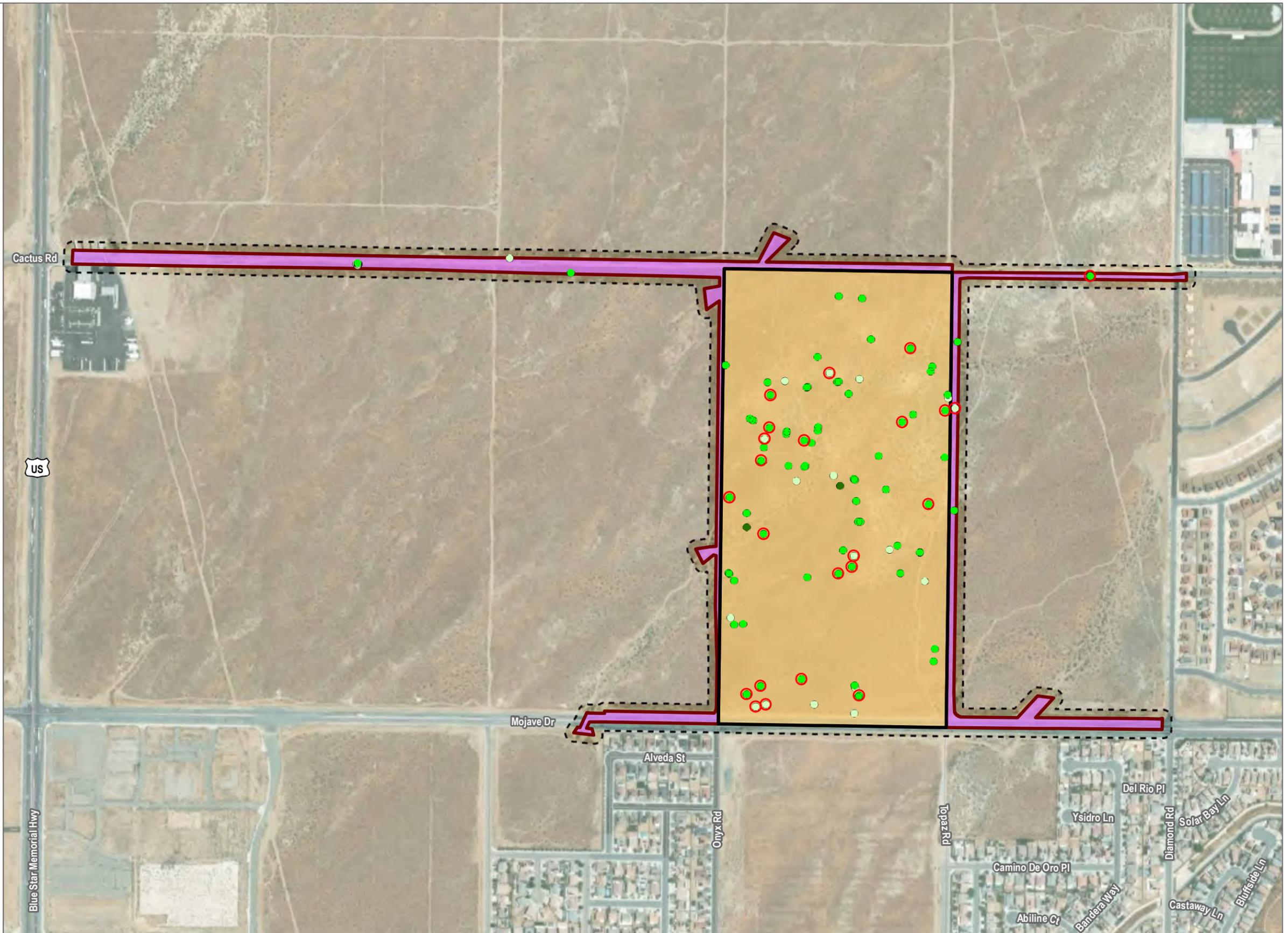
Tree 502*

*Picture taken January 22, 2024

Appendix D

Joshua Tree Impacts

-  Project Site
- Impacts**
-  On-Site
-  Off-Site
-  Joshua Tree Inventory Survey Area
-  Relocation Candidate
- Impacted Western Joshua Tree (*Yucca brevifolia*) Observations**
-  Size A (< 1 m) (n=25)
-  Size B (> 1 m and < 5m) (n=74)
-  Size C (> 5m) (n=2)



SOURCE: Maxar 2020; Open Street Map 2023



Appendix B

Mohave Ground Squirrel Survey Report

August 8, 2023

Tracy Park
Dudek
605 Third Street
Encinitas, CA 92024
Via email: tpark@dudek.com

Subject: Results of Mohave Ground Squirrel Protocol Surveys for the Mojave Industrial Park Project, Adelanto, San Bernardino County, California

Dear Ms. Park:

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 Mojave Industrial Park 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

Mojave 80 Gray, LLC proposes to develop a speculative distribution warehouse on a 110-acre parcel. The 110-acre project is located within the City of Adelanto in San Bernardino County, California. The project is bordered by Mojave Drive on the south, Poppy Road on the north, Aquadera Road on the east and undeveloped desert land on the west (**Figures 1 and 2**). Surrounding land use includes a residential development east of the project. The north, south and west portions of the project 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 Adelanto topographic quadrangle map within Section 10, Township 5 North and Range 5 West, as shown in **Figure 1, Project Location**.

Biological Setting

One vegetation community was identified within the project site: disturbed creosote bush-white bursage scrub (CDFW CA Code 33.140.00). Dominant plants present include creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), Joshua tree (*Yucca brevifolia*), Nevada jointfir (*Ephedra nevadensis*), Mojave indigo bush (*Psoralea arborescens*), winterfat (*Krascheninnikovia lanata*), and silver cholla (*Cylindropuntia echinocarpa*). Herbaceous plants present onsite include fiddleneck (*Amsinckia tessellata*), red-stemmed filaree (*Erodium cicutarium*), Mojave suncup (*Camissonia campestris*), desert mariposa lily (*Calochortus kennedyi*), Wallace's woolly daisy (*Eriophyllum wallacei*), blue dicks (*Dipterostemon capitatus*), common phacelia (*Phacelia distans*), desert dandelion (*Malacothrix glabrata*), yellow tackstem (*Calycoseris parryi*), rattlesnake sandmat (*Euphorbia albomarginata*) thistle sage (*Salvia carduacea*), Russian thistle (*Salsola tragus*), short-podded mustard (*Hirschfeldia incana*),

London rocket (*Sisymbrium irio*), Mediterranean grass (*Schismus barbatus*), cheatgrass (*Bromus tectorum*) and foxtail brome (*Bromus madritensis*). Soil consists of Bryman loamy fine sand, Cajon sand, and Rosamond loam saline alkali (WebSoil 2023). The project site is located at an elevation of approximately feet 2,900 above mean sea level.

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, Olancho 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 (CNDDDB) 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 (*Grayia spinosa*), 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 (*Lycium andersonii*), spiny horsebrush (*Tetradimya spinosa*), and Joshua tree (*Yucca brevifolia*) (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 Mojave Industrial Park 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 (CNDDDB) 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 April 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 one 100-trap 10x10 survey grid (315mx315m) within the project parcel. Coordinate locations for the grid 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

Corner	Zone	Easting	Northing
SW	11	464605	3821155
NW	11	464605	3821470
SE	11	464920	3821155
NE	11	464920	3821470

*Datum: WGS 1984

TABLE 3
MOHAVE GROUND SQUIRREL SURVEY DATE AND TYPE

Session	Date	Survey Type
1	April 21-25, 2023	LT/CT
2	May 27-31, 2023	LT/CT
3	July 4-8, 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 ten camera trapping stations throughout the project site (**Figure 2**). Each camera trap station consisted of a Bushnell Core Low Glow Trail Camera (Model 1199932CB) (or similar) 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	464695	3821527
2	11	464886	3821520
3	11	464756	3821334
4	11	464640	3820963
5	11	464849	3820989
6	11	464898	3821718
7	11	464652	3821754
8	11	464764	3821856
9	11	464665	3821991
10	11	464848	3821986

*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 winterfat are present onsite. Other plants also associated with MGS in microhistology and metabarcoding studies (Leitner 2022) are present onsite, these include: creosote bush, Joshua tree, silver cholla, sand blossoms, and red-stemmed filaree and fiddleneck. Visual observations of burrows and burrow complexes showed that soil onsite is suitable for burrowing.

Live Trapping

No Mohave ground squirrel were captured during the live trapping surveys. Live trapping captures consisted entirely of white-tailed antelope ground squirrel 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	<i>Ammospermophilus leucurus</i>	1	34	13	48
Great Basin Whiptail	<i>Aspidoscelis tigris</i>	10	1	0	11
	Total	11	35	13	59

Camera Trapping

No Mohave ground squirrels were detected in the images collected during the camera trapping surveys. Nine species were observed visiting the camera trap stations and included: white-tailed antelope ground squirrel, black-tailed jackrabbit (*Lepus californicus*), common raven (*Corvus corax*), Panamint kangaroo rat (*Dipodomys panamintinus*), long-nosed leopard lizard (*Gambelia wislizenii*), silky pocket mouse (*Perognathus* sp.), yellow-backed spiny lizard (*Sceloporus uniformis*), side-blotched lizard (*Uta stansburiana*), and desert kit fox (*Vulpes macrotis*) (Table 6).

**TABLE 6
 RESULTS OF MOHAVE GROUND SQUIRREL CAMERA TRAPPING**

Common Name	Scientific Name
White-tailed antelope ground squirrel	<i>Ammospermophilus leucurus</i>
Common raven	<i>Corvus corax</i>
Panamint kangaroo rat	<i>Dipodomys panamintinus</i>
Long-nosed leopard lizard	<i>Gambelia wislizenii</i>
Black-tailed jackrabbit	<i>Lepus californicus</i>
Silky pocket mouse sp.	<i>Perognathus sp.</i>
Yellow-backed spiny lizard	<i>Sceloporus uniformis</i>
Side-blotched lizard	<i>Uta stansburiana</i>
Desert kit fox	<i>Vulpes macrotis</i>

Conclusions

The Mojave Industrial Park 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 (CNDDDB) occurrence details for MGS in the vicinity of the project site are mapped in **Figure 3**. These occurrences show that MGS are generally extirpated from the project vicinity. The nearest and most recent MGS occurrence to the project site was recorded 3 miles northwest from the project site in 2011 (however, recent aerial photos indicate that this location has since been developed into a solar farm). Additionally, MGS were recorded visiting a camera trap station 5 miles northeast of the project across the Southern California Logistics Airport in 2021.

Although suitable habitat is present within the project, no MGS were captured 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 8, 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@dipodomys ecological.com or Karl Fairchild by phone at (541) 609-1038 or by email at kfairchild@dipodomys ecological.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)

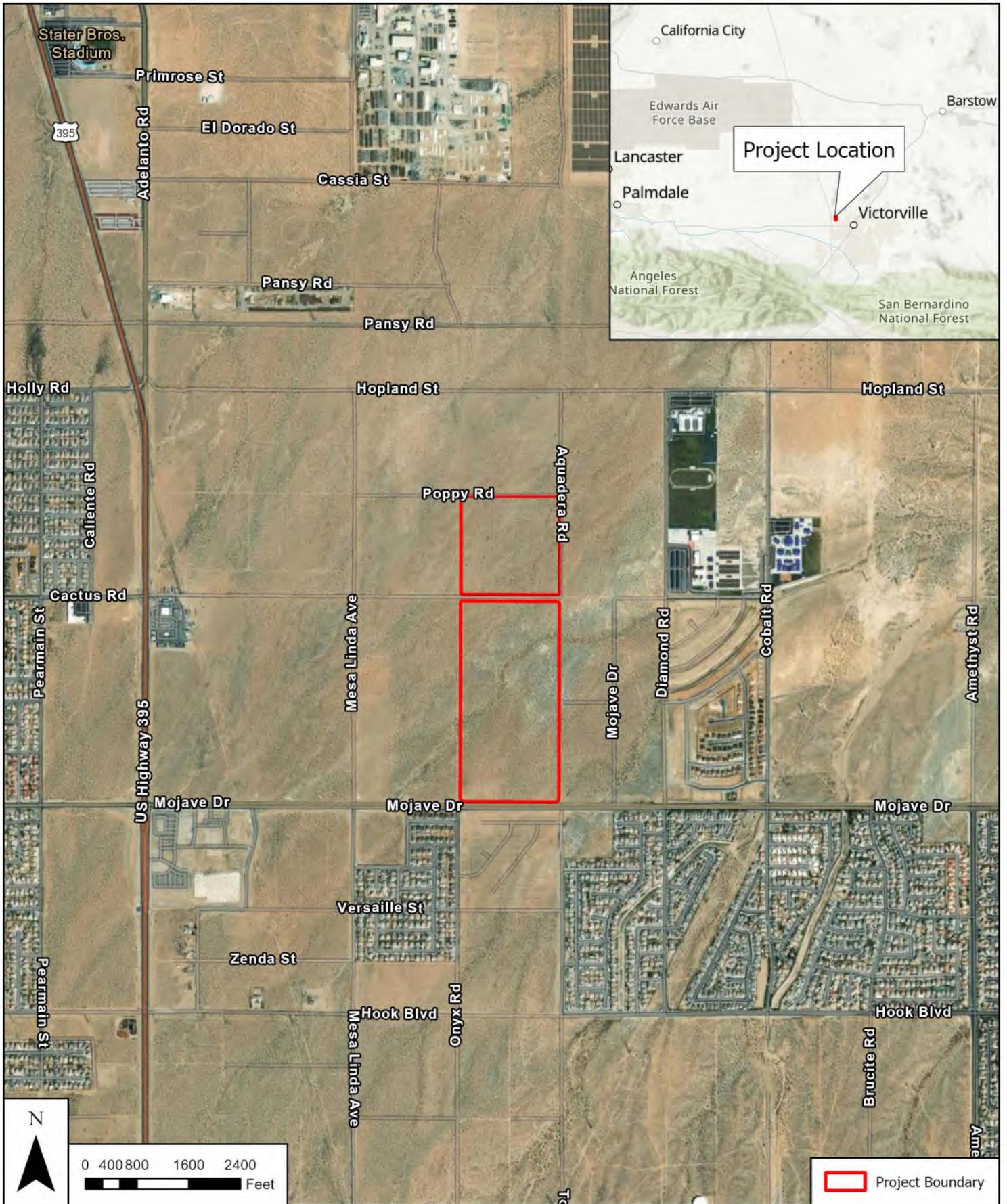
Attachment B-Weather Details

Attachment C-Species Compendium

Attachment D-Representative Photographs

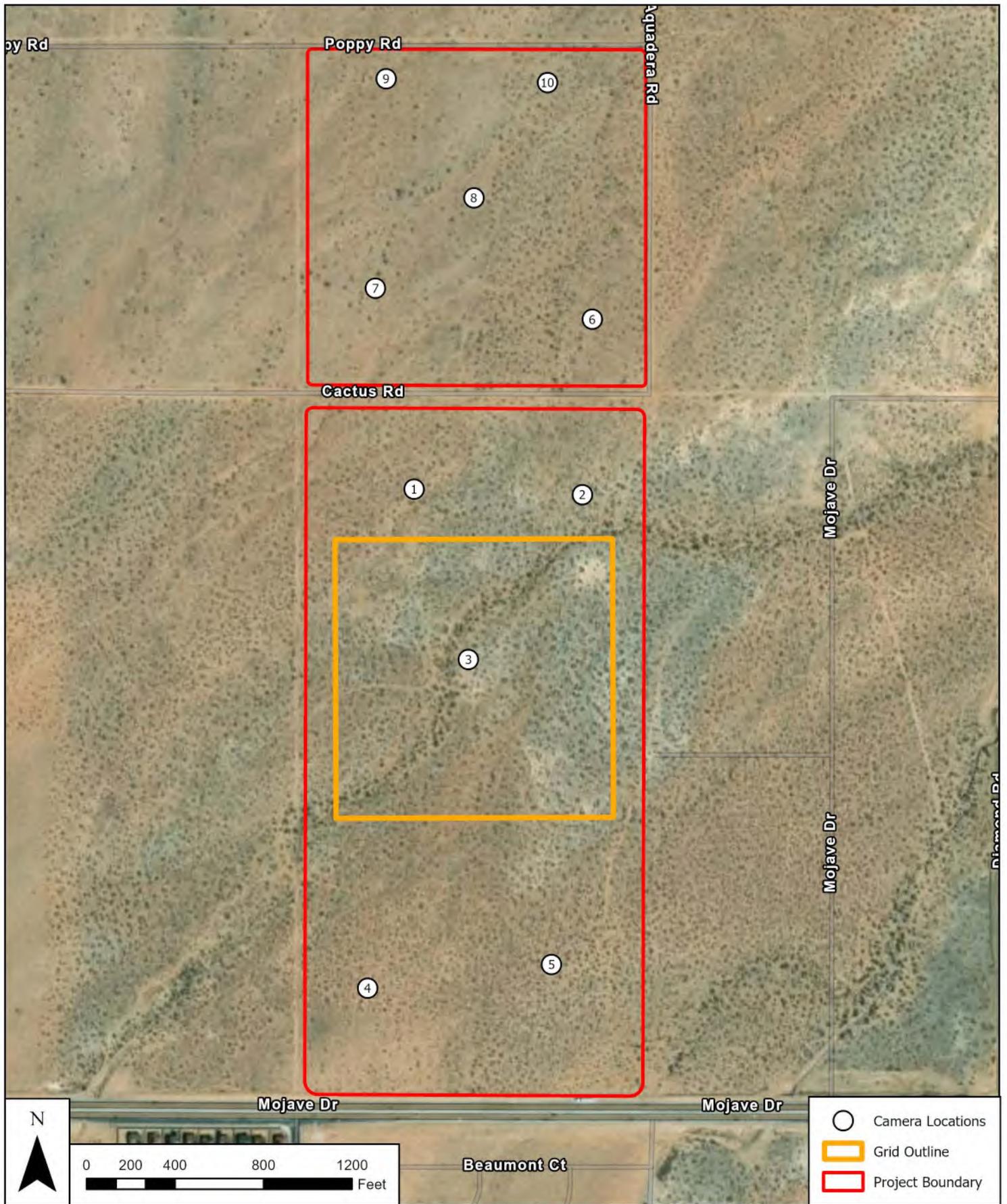
References

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- California Department of Fish and Wildlife. California Natural Diversity Database Rarefind. July 14, 2023.
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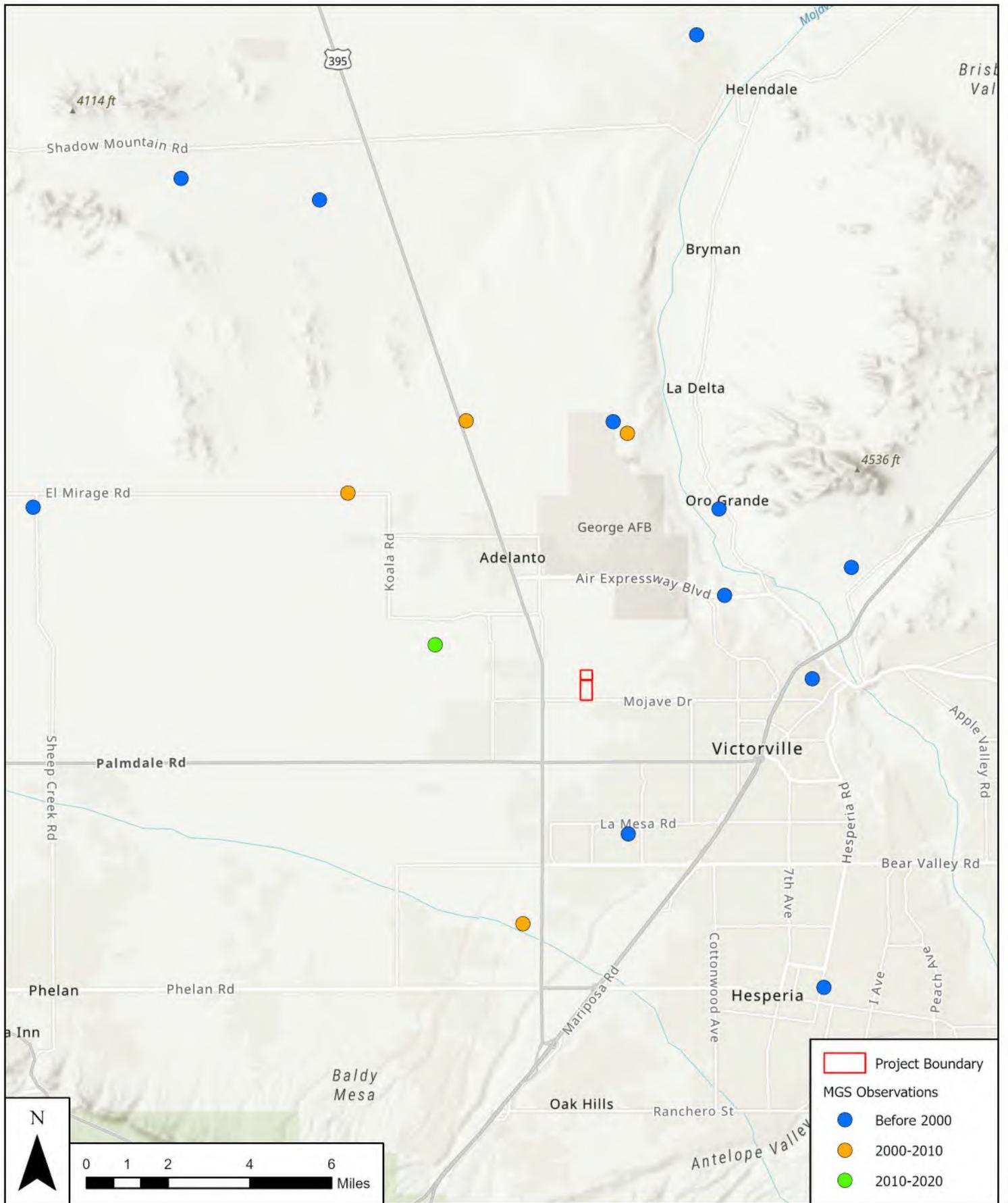
SOURCE: ESRI

Mojave Industrial Park Project



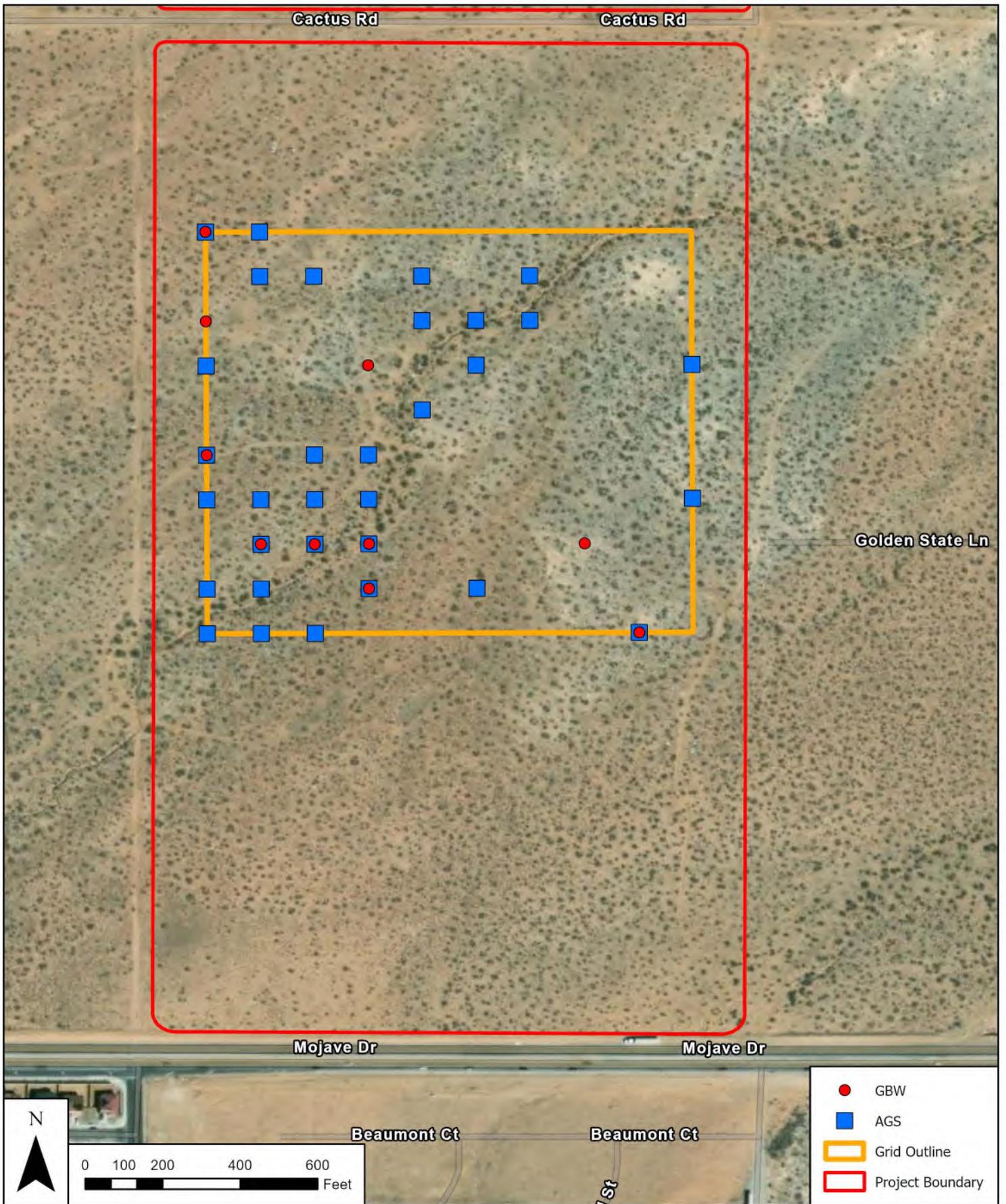
SOURCE: ESRI

Mojave Industrial Park Project



SOURCE: ESRI

Mojave Industrial Park Project



SOURCE: ESRI

Mojave Industrial Park Project

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: Mojave Industrial Park Project Property owner: Mojave 80 Gray LLC

Location: Township 5 North; Range 5 West; Section 10; ¼ Section _____

Quad map/series: Adelanto UTM coordinates: SW 464605 3821155 NW 464605 3821470
SE 464920 3821155 NE 464920 3821470
GPS coordinates of trapping-grid corners

Acreage of Project Site: 110 acres Acreage of potential MGS habitat on site: 110 acres

Total acreage visually surveyed on project site: 110 acres Date(s): April 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: 110 acres Number of sampling grids: 1

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 April 21-25, 2023 SECOND May 27-31, 2023 THIRD July 4-8, 2023
if required if required

PART II - GENERAL HABITAT DESCRIPTION (use back of form, if needed)

Vegetation: dominant perennials: creosote bush, Joshua tree, white bursage, Mojave indigo bush,

other perennials: Nevada jointfir, winterfat, silver cholla

dominant annuals: fiddleneck, red-stemmed filaree

other annuals: thistle sage, blue dicks, common phacelia, sun cups, desert dandelion, yellow tackstem, rattlesnake sandmat,

Wallace's woolly daisy, short-podded mustard, Russian thistle

Land forms (mesa, bajada, wash): desert plain

Soils description: Bryman loamy fine sand (57%); Cajon sand (20%); Rosamond loam saline alkali (22%)

Elevation: 884 meters Slope: 2-9%

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
4/21/2023	1	63.4	82.2	59	77	3.3	4.2	0	2
4/22/2023	1	69.3	88.6	64.4	68.9	2.6	3.4	10	20
4/23/2023	1	67.8	88	63.8	68.9	2.4	6.7	0	5
4/24/2023	1	63.5	82.7	64.1	80.6	12.2	21.5	1	0
4/25/2023	1	66.3	82.8	64.8	83.6	6.7	3.7	5	0
5/27/2023	2	62.4	90	71.2	84.2	2.4	4.3	0	2
5/28/2023	2	61.5	82.1	73.4	88.3	1.2	21.3	0	2
5/29/2023	2	64.2	78.6	70.2	82.9	6.3	15.8	5	5
5/30/2023	2	66.9	78.2	70.7	83.3	5.7	17.8	15	50
5/31/2023	2	71.5	82.3	67.1	77	5.1	7.5	2	5
7/4/2023	3	72.5	89.8	84.2	85.1	9.6	4.3	0	0
7/5/2023	3	66.5	90	81.5	82.4	9	6.5	0	0
7/6/2023	3	68.3	90	82.4	84.2	6	6.4	0	0
7/7/2023	3	69.5	87.1	80.6	82.4	6.6	8.7	0	0
7/8/2023	3	68.8	88.9	80.6	83.3	2.7	6.2	0	0

Attachment C

Common name	Scientific name	Special Status
Plants		
white bursage	<i>Ambrosia dumosa</i>	
fiddleneck	<i>Amsinckia tessellata</i>	
foxtail brome	<i>Bromus madritensis</i>	
desert mariposa lily	<i>Calochortus kennedyi</i>	
yellow tack-stem	<i>Calycoseris parryi</i>	
Mojave suncup	<i>Camissonia campestris</i>	
silver cholla	<i>Cylindropuntia echinocarpa</i>	
blue dicks	<i>Dipterostemon capitatus</i>	
Nevada jointfir	<i>Ephedra nevadensis</i>	
Wallace's woolly daisy	<i>Eriophyllum wallacei</i>	
red-stemmed filaree	<i>Erodium cicutarium</i>	
rattlesnake sandmat	<i>Euphorbia albomarginata</i>	
short-podded mustard	<i>Hirschfeldia incana</i>	
winterfat	<i>Krascheninnikovia lanata</i>	
creosote bush	<i>Larrea tridentata</i>	
sand blossoms	<i>Linanthus parryae</i>	
desert dandelion	<i>Malacothrix glabrata</i>	
common phacelia	<i>Phacelia distans</i>	
Mojave indigo bush	<i>Psorothamnus</i>	
Russian thistle	<i>Salsola tragus</i>	
thistle sage	<i>Salvia carduacea</i>	
Mediterranean grass	<i>Schismus barbatus</i>	
London rocket	<i>Sisymbrium irio</i>	
Joshua tree	<i>Yucca brevifolia</i>	
Birds		
black-throated sparrow	<i>Amphispiza bilineata</i>	
Bell's sparrow	<i>Artemisiospiza belli</i>	
burrowing owl	<i>Athene cunicularia</i>	SSC
killdeer	<i>Charadrius vociferus</i>	
rock pigeon	<i>Columba livia</i>	
common raven	<i>Corvus corax</i>	
horned lark	<i>Eremophila alpestris</i>	
American kestrel	<i>Falco sparverius</i>	
house finch	<i>Haemorhous mexicanus</i>	
loggerhead shrike	<i>Lanius ludovicianus</i>	SSC
northern mockingbird	<i>Mimus polyglottos</i>	
ash-throated flycatcher	<i>Myiarchus cinerascens</i>	
house sparrow	<i>Passer domesticus</i>	
Say's phoebe	<i>Sayornis saya</i>	
Yellow-rumped warbler	<i>Setophaga coronata</i>	
Lawrence's goldfinch	<i>Spinus lawrencei</i>	
western meadowlark	<i>Sturnella neglecta</i>	

Common name	Scientific name	Special Status
European starling	<i>Sturnus vulgaris</i>	
mourning dove	<i>Zenaida macroura</i>	
white-crowned sparrow	<i>Zonotrichia leucophrys</i>	
Mammals		
white-tailed antelope ground squirrel	<i>Ammospermophilus leucurus</i>	
domestic dog	<i>Canis familiaris</i>	
kangaroo rat	<i>Dipodomys sp.</i>	
black-tailed jackrabbit	<i>Lepus californicus</i>	
desert kit fox	<i>Vulpes macrotis</i>	
Reptiles		
Great Basin whiptail	<i>Aspidoscelis tigris tigris</i>	
Mojave green rattlesnake	<i>Crotalus scutulatus</i>	
long-nosed leopard lizard	<i>Gambelia wislizenii</i>	

Attachment D



Photograph 1: Representative vegetation on grid, facing northwest.



Photograph 2: Representative vegetation on grid, facing south.



Photograph 3: Representative vegetation on grid, facing west.



Photograph 4: Representative camera trap station.



Photograph 5: Representative live trap station.



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



Photograph 7: Winterfat (*Krascheninnikovia lanata*), MGS food plant.



Photograph 8: Burrowing owl (*Athene cunicularia*) active on project site.



Photograph 9: Desert kit fox (*Vulpes macrotis*) visiting camera trap station.



Photograph 10: Black-tailed jackrabbit (*Lepus californicus*) visiting camera trap station.



Photograph 11: Mojave green rattlesnake (*Crotalus scutulatus*).

Appendix C

Aquatic Resources Delineation Report

Aquatic Resources Delineation Report

Mojave Industrial Park

Project

FEBRUARY 2024

Prepared for:

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APPENDICES

- A Request for a Jurisdictional Determination
- B Antecedent Precipitation Tool Output
- C Data Forms
- D Review Area Photos

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
amsl	above mean sea level
APN	Assessor's parcel number
APT	Antecedent Precipitation Tool
CDFW	California Department of Fish and Wildlife
GIS	geographic information systems
HUC	hydrologic unit code
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWW	non-wetland water
OHWM	ordinary high-water mark
PDSI	Palmer Drought Severity Index
project	Mojave Industrial Park Project
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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1 Introduction

This Aquatic Resources Delineation Report was prepared in accordance with the U.S. Army Corps of Engineers (USACE) Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017). This report and supporting appendices provide the 20 items listed in the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports and presents the results of the jurisdictional aquatic resources delineation conducted by Dudek for the proposed Mojave Industrial Park Project (project) in the City of Victorville in San Bernardino County, California. The delineation was conducted to identify and map existing aquatic resources potentially subject to the regulatory jurisdiction of the USACE pursuant to Section 404 of the Clean Water Act (33 USC 1344), waters of the state potentially subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act, and stream and riparian habitats potentially subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Section 1602 of the California Fish and Game Code (collectively referred to as jurisdictional aquatic resources).

1.1 Disclaimer Statement

This report presents Dudek’s best efforts to quantify the extent of jurisdictional aquatic resources potentially regulated by USACE, RWQCB, and CDFW (i.e., regulatory agencies) within the identified review areas using the current regulations, written policies, and guidance of these regulatory agencies. The potential jurisdictional resources described in this report are subject to verification by the regulatory agencies. Only the regulatory agencies can make a final determination on whether the features present are subject to USACE, RWQCB, and/or CDFW regulation. A request for a USACE Jurisdictional Determination is provided in Appendix A.¹

1.2 Contact Information

Contact information for the project applicant and agent are provided in Table 1.² Access to the review area is not restricted, but if a site visit is requested, the project applicant or agent will accompany regulatory staff to the review area.³ Covington Development Partners, LLC is the project applicant and landowner.

Table 1. Contact Information

Project Applicant	Covington Development Partners, LLC	Agent	Dudek
Contact Name	Brandon Gallup	Contact Name	Tracy Park
Address	14180 Dallas Parkway, Suite 730 Dallas, Texas 75254	Address	605 Third Street Encinitas, California 92024
Phone	949.514.0274	Phone	442.287.3435
Email	bgallup@covingtongroupinc.com	Email	tpark@dudek.com

¹ Minimum Standards Item 1 (Request for Jurisdictional Determination)

² Minimum Standards Item 2 (Contact Information)

³ Minimum Standards Item 3 (Site Access Statement)

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2 Review Area Description and Landscape Setting⁴

The approximately 152.4-acre review area, which includes the 81.1-acre Project site, 17.4 acres of off-site improvement areas, and a 100-foot buffer, is within the City of Victorville, San Bernardino, California. The review area is east of U.S. Highway 395 at 34.531931° N and 117.383972° W (Figure 1, Project Location).⁵ Directions to the review area are as follows⁶: From Interstate 15 northbound, take exit 151B for Mojave Drive; turn left onto Mojave Drive and head west; turn right onto Cobalt Road and head north; turn left onto Tawney Ridge Lane and head west; and continue west (straight) where the paved road ends onto Cactus Road (dirt road).

The on-site portion of the project is generally located north of Mojave Drive, east of Onyx Road, west of Topaz Road, and south of Cactus Road/Tawney Ridge Lane, consisting of Assessor's Parcel Numbers (APNs) 312-863-102, 312-863-103, and 312-863-104 and extends to the center line of the adjacent rights-of-way (ROWs). Off-site improvement areas associated with the project also include ROWs along Cactus Road, between U.S. Highway 395 and Diamond Road, and along Mojave Drive, from approximately 730 feet west of Onyx Road to Diamond Road, as well as the remainder of the adjacent ROWs and adjacent parcels comprised of APNs 045-505-392, 312-861-104, 312-862-102, 312-862-106, and 313-537-101. The review area occurs within Sections 10 and 11, Township 5N, Range 5W of the Public Land Survey System, as depicted on the U.S. Geological Survey Adelanto, California 7.5-minute topographic quadrangle map. Regional access to the review area is provided via Interstate 15, approximately 3.8 miles east of the review area.

2.1 Topography and Land Use

Topography within the review area is generally a flat plane, slightly sloping downward in the northeasterly direction. Elevation ranges from approximately 2,957 feet above mean sea level in the northeastern portion of the review area to 3,014 feet above mean sea level in the southwestern portion of the review area. Adjacent land uses include undeveloped land immediately north, west, and east of the subject parcels; cleared but vacant land immediately to the south of the subject parcels across Mojave Drive; school campuses north of Tawney Ridge Lane and east of Diamond Road; a truck stop where Cactus Road meets U.S. Highway 395; and existing residential developments south of Mojave Drive, east of Topaz Road and west of Onyx Road. In addition, a residential development actively under construction at the time of surveys is located south of Tawney Ridge Lane and east of Diamond Road.

2.2 Soils⁷

According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2023a), the review area is included within the Soil Survey for the San Bernardino County, Mojave River Area (USDA 1986). There are six soil map units mapped in the review area: Bryman loamy fine sand, 2% to 5% slopes; Cajon sand, 0% to 2% slopes; Cajon sand, 2% to 9% slopes; Helendale loamy sand, 2% to 5% slopes;

⁴ Minimum Standards Item 10 (Description of Existing Field Conditions)

⁵ Minimum Standard Item 14 (Site Location Map)

⁶ Minimum Standard Item 4 (Directions to the Survey Area)

⁷ Minimum Standards Item 13 (Soil Descriptions)

Lavic loamy fine sand; and Rosamond loam, saline-alkali. The soil types comprising the major components of these map units are described in more detail below and the distribution of these soil map units are presented on Figure 2, Soils.

Three of the soil map units within the review area are included in the USDA NRCS hydric soils list: Cajon sand, 0% to 2% slopes; Lavic loamy fine sand; and Rosamond loam, saline-alkali (USDA 2023b). However, all three of these soil map units have a hydric rating of 'predominantly nonhydric', meaning that no major component of the map unit is rated as hydric but at least one minor component is rated hydric (USDA 2023c).

Bryman Series consists of very deep, well drained soils formed in alluvial material derived mainly from granitic rocks. The Bryman loamy fine sand, 2% to 5% slopes, map unit occurs on terraces at elevations between 3,000 to 3,400 feet above mean sea level (amsl) (USDA 1986).

Cajon Series consists of very deep, somewhat excessively drained soils formed in alluvial material derived mainly from granitic rocks. Both the Cajon sand, 0% to 2% slopes, and the Cajon sand, 2% to 9% slopes, map units occur on alluvial fans at elevations between 1,800 to 3,500 feet amsl (USDA 1986).

Helendale Series consists of very deep, well drained soils formed in alluvial material derived mainly from granitic rocks. The Helendale loamy sand, 2% to 5% slopes, map unit occurs on alluvial fans and terraces at elevations between 2,700 to 3,800 feet amsl (USDA 1986).

Lavic Series consists of very deep, moderately well drained soils formed in alluvial material derived mainly from granitic rocks. The Lavic loamy fine sand map unit occurs on alluvial fans and basin rims at elevations between 2,800 to 3,100 feet amsl (USDA 1986).

Rosamond Series consists of very deep, well drained soils formed in alluvial material derived mainly from granitic rocks. The Rosamond loam, saline-alkali flats, map unit occurs on the lower margins of alluvial fans and on basin rims at elevations between 1,700 to 2,800 feet amsl (USDA 1986).

2.3 Vegetation

Three vegetation communities and land cover types were mapped within the review area: creosote bush scrub, disturbed habitat, and urban/developed land. The review area is dominated by creosote bush scrub, which comprises approximately 78% of the review area. Disturbed habitat is characterized by existing dirt roads within and surrounding the subject parcels and ROWs, as well as cleared areas bordering Mojave Drive and adjacent to the truck stop off of U.S. Highway 395. The review area contains minimal areas mapped as urban/developed land, which consist of paved roads and lots associated with Mojave Drive Road along the southern boundary, the Diamond Road-Tawney Ridge Lane intersection, and the truck stop off of U.S. Highway 395.

2.4 Watershed⁸

The review area occurs within the southwestern portion of the Mojave River subbasin, Hydrologic Unit Code [HUC] 18090208 (Figure 3, Hydrologic Setting). The Mojave River subbasin comprises approximately 4,600 square miles and is almost entirely within San Bernardino County (U.S. Geological Survey [USGS] 2023). The primary geographic

⁸ Minimum Standards Item 11 (Discussion of Hydrology)

and surface hydrologic feature of the watershed is the Mojave River, which flows north for approximately 120 miles until it reaches Silver Dry Lake near the community of Baker. Some reaches of the Mojave River flow underground in the confined riverbed channel. The Mojave River is approximately 3.6 miles northeast of the review area. The drainage located within the review area flows into stormwater collection infrastructure that ultimately flows into an un-named tributary to the Mojave River.

The review area occurs primarily within the Burkhardt Lake-Mojave River subwatershed (HUC 180902080706) of the Bell Mountain Wash-Mojave River watershed (HUC 1809020807). The Bell Mountain Wash-Mojave River watershed comprises approximately 276 square miles (176,739 acres) (USGS 2023). The main hydrologic feature of this watershed is the Mojave River, which extends from the northwestern edge of the San Bernardino Mountains, through the Cities of Hesperia and Victorville, and continues past Bell Mountain Wash and Silver Mountain toward Helendale, a census-designated place.

The northeastern extent of the review area, which includes the northeastern corner of the subject parcels and the portion of Cactus Road that extends to U.S. Highway 395, occurs within the Manzanita Wash subwatershed (HUC 180902080503) of the Upper Fremont Wash Watershed (HUC 1809020805). The Upper Fremont Wash Watershed comprises approximately 169 square miles (107,895 acres) (USGS 2023). This watershed originates in Wrightwood and extends through the unincorporated communities of Phelan and Baldy Mesa, toward the City of Adelanto and the Shadow Mountains. It appears to be comprised of sheet flow and dispersed stream features that sometimes appear to flow underground until it collects into the Fremont Wash located east of the Shadow Mountains. Fremont Wash continues to flow out of this watershed and eventually terminates into the Mojave River.

2.5 Review Area Alterations, Current and Past Land Use

The review area is primarily comprised of undeveloped lots planned for light industrial use in the City of Victorville General Plan Land Use Map (City of Victorville 2022). Dirt roads along Cactus Road and Onyx Road have been present since the mid-1980s and were observed to be frequently used by local commuters at the time of the site visits. However, a significant increase in bare patches and trails along these roads and within the main portion of the project site appear in aerial imagery between 2016 and 2020, likely due to an increase in foot traffic, trash dumping, homeless encampments, and off-road vehicular recreation. Evidence of these activities were observed throughout the review area, with active off-road vehicle use directly observed during 2022 and 2023 field surveys.

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3 Precipitation Data and Analysis

The USACE-developed Antecedent Precipitation Tool (APT) was used to assess whether the delineation date occurred in a drier, average, or wetter than normal period (USACE 2023a). To determine what constitutes a “typical year,” USACE developed the APT. The information generated from the APT can help to determine whether normal hydrologic and/or climatic conditions were present during the site visit and assist with completing the Wetland Determination Data Form.

The APT provides three climatological parameters: Palmer Drought Severity Index (PDSI), season, and antecedent precipitation condition. The PDSI is a standardized index calculated on a monthly basis, with PDSI value outputs ranging from -4 (extreme drought) to +4 (very wet) (National Oceanic and Atmospheric Administration [NOAA] 2023) to assess drought conditions (i.e., PDSI Class). The APT determines wet vs. dry season based on related procedures provided in the applicable regional supplement for the review area (in this case, the Arid West Region supplement [USACE 2008a]). If the Precipitation Normalcy Index score is less than 10, then the antecedent precipitation condition is classified as drier than normal; normal conditions are present with a Precipitation Normalcy Index score of 10 to 14; conditions are wetter than normal when a Precipitation Normalcy Index score is greater than 14 (USACE 2023a).

Table 2 summarizes the key data extrapolated from the APT output: estimated drought conditions (PDSI Class), wet or dry season determination, Precipitation Normalcy Index score, and antecedent precipitation condition. Based on the APT output provided in Appendix B and summarized in Table 2, the precipitation and climatic conditions for the review area were within the wetter than normal and within the normal range during the time of the delineations. According to the USDA Agricultural Applied Climate Information System (USDA 2023d), the area around the review area receives an average of 4.56 inches of precipitation annually between the years 2000 to 2023.

Table 2. Antecedent Precipitation Tool Data for the Review Area

Main Field Survey Date	PDSI Class	Season	Precipitation Normalcy Index Score	Antecedent Precipitation Condition
09/15/2022	Incipient wetness	Dry Season	17	Wetter than normal
09/29/2023	Severe wetness	Dry Season	17	Wetter than normal

Notes: PDSI = Palmer Drought Severity Index.

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4 Investigation Methods⁹

A jurisdictional delineation of the on-site portion of the review area was conducted by Dudek biologists Tracy Park and Shana Carey on September 13 through 15, 2022 (Table 3). Jurisdictional delineation surveys were also conducted on September 29, 2023, and January 24, 2024, to incorporate areas in the off-site portions of the review area (Table 3). Prior to conducting the jurisdictional delineation, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory data (USFWS 2023) was reviewed to determine if the review area contained any features mapped by the U.S. Fish and Wildlife Service. Site-specific topographical data was reviewed in conjunction with aerials, both current and historical, to determine the potential presence of non-wetland waters. Current vegetation mapping was reviewed to assess whether the review area supported hydrophytic vegetation and potential wetlands. No areas within the review area supported hydrophytic vegetation, and therefore wetland data station forms were not completed. Jurisdictional boundaries were mapped in the field using ESRI Collector on a mobile device with submeter accuracy. Remote sensing was not used for the delineation.¹⁰

Table 3. Schedule of the Aquatic Resources Delineation¹¹

Date	Hours	Personnel	Conditions
09/13/2022	8:00 a.m.–3:00 p.m.	Tracy Park, Shana Carey	68–82 °F; 1–7 mph wind; 70–80% cloud cover
09/14/2022	8:00 a.m.–4:30 p.m.	Tracy Park, Shana Carey	64–80 °F; 1–3 mph; 10% cloud cover
09/15/2022	8:00 a.m.–2:30 p.m.	Tracy Park, Shana Carey	60–84 °F; 1–4 mph wind; 0% cloud cover
9/29/2023	11:30 a.m.–4:00 p.m.	Tracy Park	76–75 °F; 3–10 mph wind; 0% cloud cover
1/24/2024	12:45 p.m.–2:07 p.m.	Tracy Park	56–57 °F; 0–5 mph wind; 100% cloud cover

Notes: °F = degrees Fahrenheit; mph = miles per hour.

⁹ Minimum Standard Item 19 (Methods)

¹⁰ Minimum Standard Item 12 (Statement Regarding Use of Remote Sensing)

¹¹ Minimum Standard Item 8 (Dates of Field Work)

4.1 U.S. Army Corps of Engineers

The USACE wetlands delineation was conducted in accordance with the 1987 USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a).¹² A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b) was used to determine the limits of non-wetland waters.¹³ Non-wetland waters were delineated on aerial maps in conjunction with ESRI Collector on a mobile device. The widths of each non-wetland water were determined in the field according to the OHWM manual. USACE OHWM Forms were completed at representative cross-sections of non-wetland waters to capture their characteristics and widths. All data forms can be found in Appendix C.¹⁴

4.2 Regional Water Quality Control Board

Waters of the state regulated by the RWQCB were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2021). As described in these procedures, wetland waters of the state are mapped based on the procedures in USACE's 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters are mapped at the OHWM based on the procedures defined in USACE's 2008 A Field Guide to Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b).

4.3 California Department of Fish and Wildlife

CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code Section 1602. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979).

¹² Minimum Standard Item 5 (Use of 1987 Manual, Regional Supplement, and OHWM guide)

¹³ Minimum Standard Item 5 (Use of 1987 Manual, Regional Supplement, and OHWM guide)

¹⁴ Minimum Standard Item 18 (Data Forms)

5 Aquatic Resource Narrative¹⁵¹⁶

5.1 Waters of the United States (USACE)

There are no non-wetland waters, culverts, or wetlands potentially regulated by USACE present in the review area (Figure 4, Potential Jurisdictional Aquatic Resources – USACE).¹⁷ Three hydrological features identified within the review area are presumed to be non-jurisdictional by USACE because they do not meet the relatively permanent standard as waters of the United States. Non-Wetland Water (NWW)-01 through NWW-03 are all are ephemeral drainages and are discussed in further detail below. A copy of the ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet is not submitted with this report because Table 4 in this section provides all of the information requested.¹⁸

Photos of the areas reviewed for the presence of potential resources are provided in Appendix D, Review Area Photos.¹⁹ The locations of these photos are shown in Figure 4.

Table 4. Potential USACE Aquatic Resource Summary for the Review Area²⁰

Feature Name	Cowardin ¹	OHWI Indicators	Location (Latitude/ Longitude; Decimal Degrees)	Acres/ Linear Feet ²
Non-Wetland Waters				
NWW-01	Riverine, ephemeral	CAST, CVS, CVC, BBS, SD, DP, DW	34.532584, -117.384343	0.26/2,733
NWW-02	Riverine, ephemeral	CAST, CVC, BBS, SD, DP, DW	34.536032, -117.398004	0.01/129
NWW-03	Riverine, ephemeral	CAST, CVC, BBS, SD, DP, DW	34.528635, -117.380136	0.13/531
Grand Total				0.40/3,392

Notes:

OHWI = ordinary high-water mark; NWW = non-wetland water; CAST = change in average sediment texture; BBS = break in bank slope; CVS = change in vegetation species; CVC = change in vegetation cover; DP = drainage patterns; DW = debris wracking; SD = sediment deposition; SS = saturated soils.

¹ Pursuant to Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979) and USACE Cowardin Codes for ORM Data Entry (USACE 2023b).

² Totals may not sum due to rounding.

Non-Wetland Water 1

NWW-01 is a feature recorded at Transects 1 and 2 and is located in the center and southwestern corner of the review area. NWW-01 is 5 and 6 feet wide at each of the transects' OHWI. The drainage is an ephemeral desert feature with minimal vegetation cover (0-5%). The cross-sections of NWW-01 at Transects 1 and 2 show the

¹⁵ Minimum Standards Item 6 (Aquatic Resource Narrative)

¹⁶ Minimum Standards Item 11 (Discussion of Hydrology)

¹⁷ Minimum Standards Items 7 and 16 (Delineation Maps)

¹⁸ Minimum Standards Item 15 (ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet)

¹⁹ Minimum Standards Item 17 (Ground Photos)

²⁰ Minimum Standards Item 9 (Table Listing All Aquatic Resources)

following OHWM indicators: change in average sediment texture, change in vegetation species, change in vegetation cover, break in bank slope, sediment deposition, drainage pattern, and debris wracking. This feature originates south of Mojave Drive, where it likely receives sheet flow from creosote bush scrub habitat from the south and storm water runoff from the adjacent paved road. The drainage is conveyed underneath Mojave Drive by two pipe culverts and continues to flow northeast into the on-site portion of the review area. Dirt roads follow and bisect the drainage for much of its length within the review area before it leaves the project site along its eastern boundary. The feature flows into an underground storm drain approximately 0.2-mile east from where it leaves the review area. Extensive trash dumping and several homeless encampments were observed within and along the feature. Although this feature shows obvious indicators of hydrology, indicators are likely enhanced due to altered hydrology from recent urban development in the vicinity. The drainage does not appear to be as defined in aerial imagery dating 1994 and prior. This feature is ephemeral and does not meet the relatively permanent standard as a water of the United States and is presumed to be non-jurisdictional to USACE.

Non-Wetland Water 2

NWW-02 is a feature recorded at Transect 3 and is located in the northwestern extent of the review area. NWW-02 is 4 foot wide at its OHWM. The drainage is an ephemeral drainage feature with no vegetation cover. Much of the channel is choked with trash and tumble weeds along its entire length. A cross-section of NWW-02 shows the following OHWM indicators: change in average sediment texture, change in vegetation cover, break in bank slope, sediment deposition, drainage pattern, and debris wracking. This feature appears to originate at Cactus Road, immediately south of the transect location, and flows north-northwest away from the review area. It likely receives sheet flow and storm water runoff from nearby paved disturbed areas south and west of the review area. The drainage is choked with trash and tumbleweeds throughout its length in the review area. Although this feature shows obvious indicators of hydrology, indicators are likely enhanced due to altered hydrology from recent urban development in the vicinity. The drainage appears to have been an access road for the adjacent transmission line in aerial imagery dating as far back as 2009 and appears to show signs of hydrology after being washed out as late as 2013. This feature is ephemeral and does not meet the relatively permanent standard as a water of the United States and is presumed to be non-jurisdictional by USACE.

Non-Wetland Water 3

NWW-03 is a feature recorded at Transects 4 and 5 and is located in the southeastern extent of the review area. NWW-03 is 16 and 15 feet wide at each of the transects' OHWM, respectively. The drainage is an ephemeral feature with no vegetation cover. A cross-section of NWW-03 shows the following OHWM indicators: change in average sediment texture, change in vegetation cover, break in bank slope, sediment deposition, drainage pattern, and debris wracking. This feature originates south of Mojave Drive, where it likely receives sheet flow from creosote bush scrub habitat from the south and storm water runoff from the adjacent paved road. The drainage is conveyed underneath Mojave Drive by a concrete box culvert and continues to flow northeast away from the review area. The feature flows into a concrete-lined flood control channel, approximately 0.3-mile northeast from where it leaves the review area. Although this feature shows obvious indicators of hydrology, indicators are likely enhanced due to altered hydrology from recent urban development in the vicinity. The drainage does not appear to be as defined in aerial imagery dating 1994 and prior. This feature is ephemeral and does not meet the relatively permanent standard as a water of the United States and is presumed to be non-jurisdictional by USACE.

5.2 Waters of the State (RWQCB)

There are three features subject to regulation by the RWQCB under the Porter-Cologne Water Quality Control Act (Figure 5, Potential Jurisdictional Aquatic Resources – RWQCB/CDFW). Table 5 lists all features within the review area that are subject to RWQCB regulation.

Table 5. RWQCB Aquatic Resource Summary for the Review Area

Feature Name	Location (Latitude/Longitude; Decimal Degrees)	Acreage/Linear Feet ¹
Non-Wetland Waters		
NWW-01	34.532584, -117.384343	0.26/2,733
NWW-02	34.536032, -117.398004	0.01/129
NWW-03	34.528635, -117.380136	0.13/531
Grand Total		0.40/3,392

Notes:

RWQCB = Regional Water Quality Control Board; NWW = non-wetland water.

¹ Totals may not sum due to rounding.

5.3 CDFW Jurisdiction

There are three features subject to regulation by the CDFW under California Fish and Game Code Section 1602 (Figure 5). Table 6 lists all features within the review area that are subject to CDFW regulation.

Table 6. CDFW Aquatic Resource Summary for the Review Area

Feature Name	Location (Latitude/Longitude; Decimal Degrees)	Acreage/Linear Feet ¹
Streambed and Bank		
NWW-01	34.532584, -117.384343	0.68/2,767
NWW-02	34.536032, -117.398004	0.03/129
NWW-03	34.528635, -117.380136	0.30/534
Grand Total		1.02/3,430

Notes:

CDFW = California Department of Fish and Wildlife; NWW = non-wetland water.

¹ Totals may not sum due to rounding.

5.4 National Wetland Inventory

The review area does not contain any resources from the U.S. Fish and Wildlife Service’s National Wetland Inventory data (USFWS 2023; see Figure 3).

6 Results and Conclusions

Based on the jurisdictional delineation and review of relevant information provided in this Aquatic Resources Delineation Report, no features within the review area are regulated by USACE given their lack of relatively permanent water. However, features mapped within the review area may be regulated by the RWQCB and CDFW. In total, 0.40-acre of non-wetland waters (below OHWM) fall under RWQCB jurisdiction, and 1.02-acre of CDFW streambed occurs in the review area.

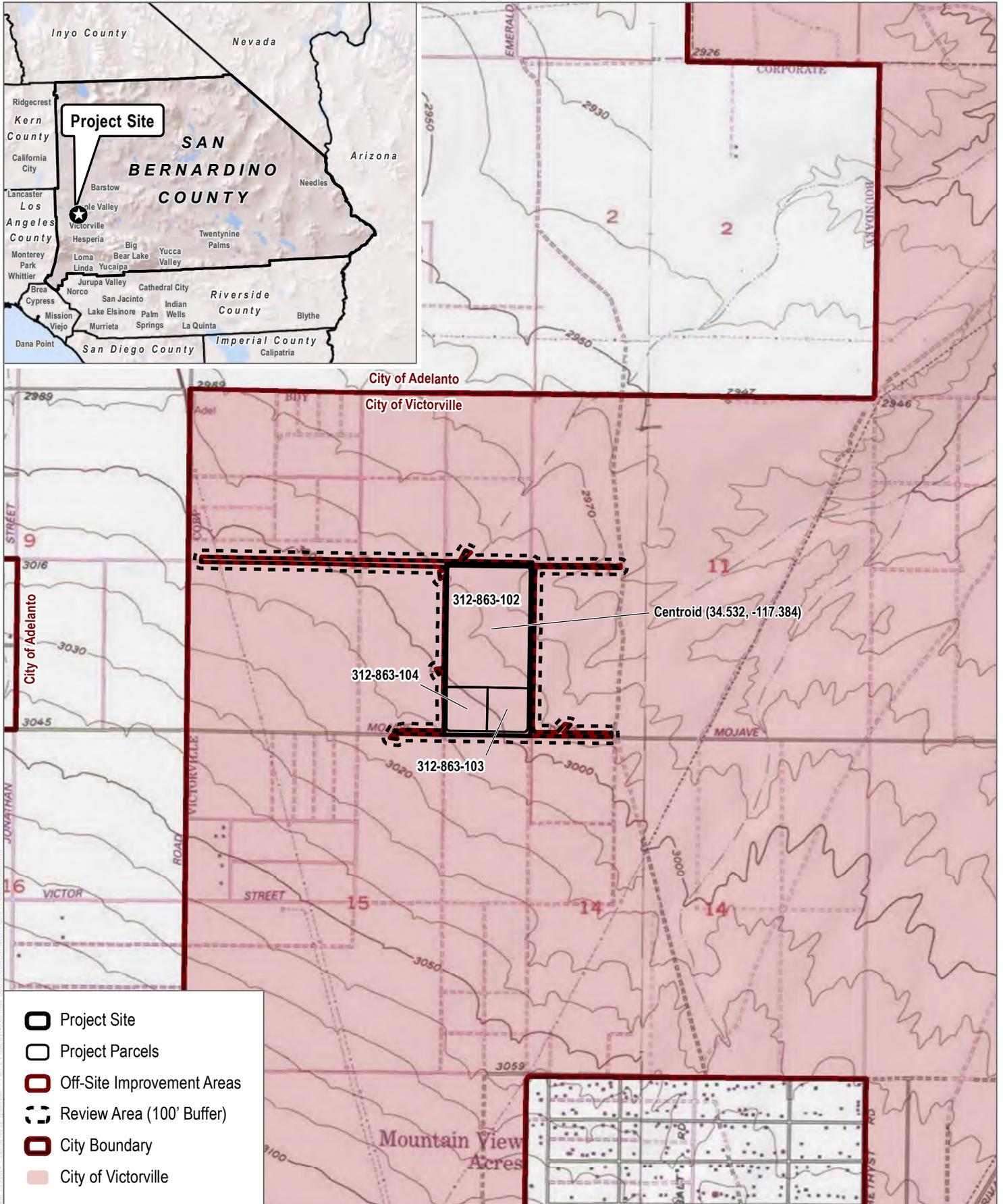
This report can be used by those agencies to determine if they would regulate the features described herein. The geographic information systems (GIS) data for the delineation is provided digitally.²¹

²¹ Minimum Standards Item 20 (Digital Data)

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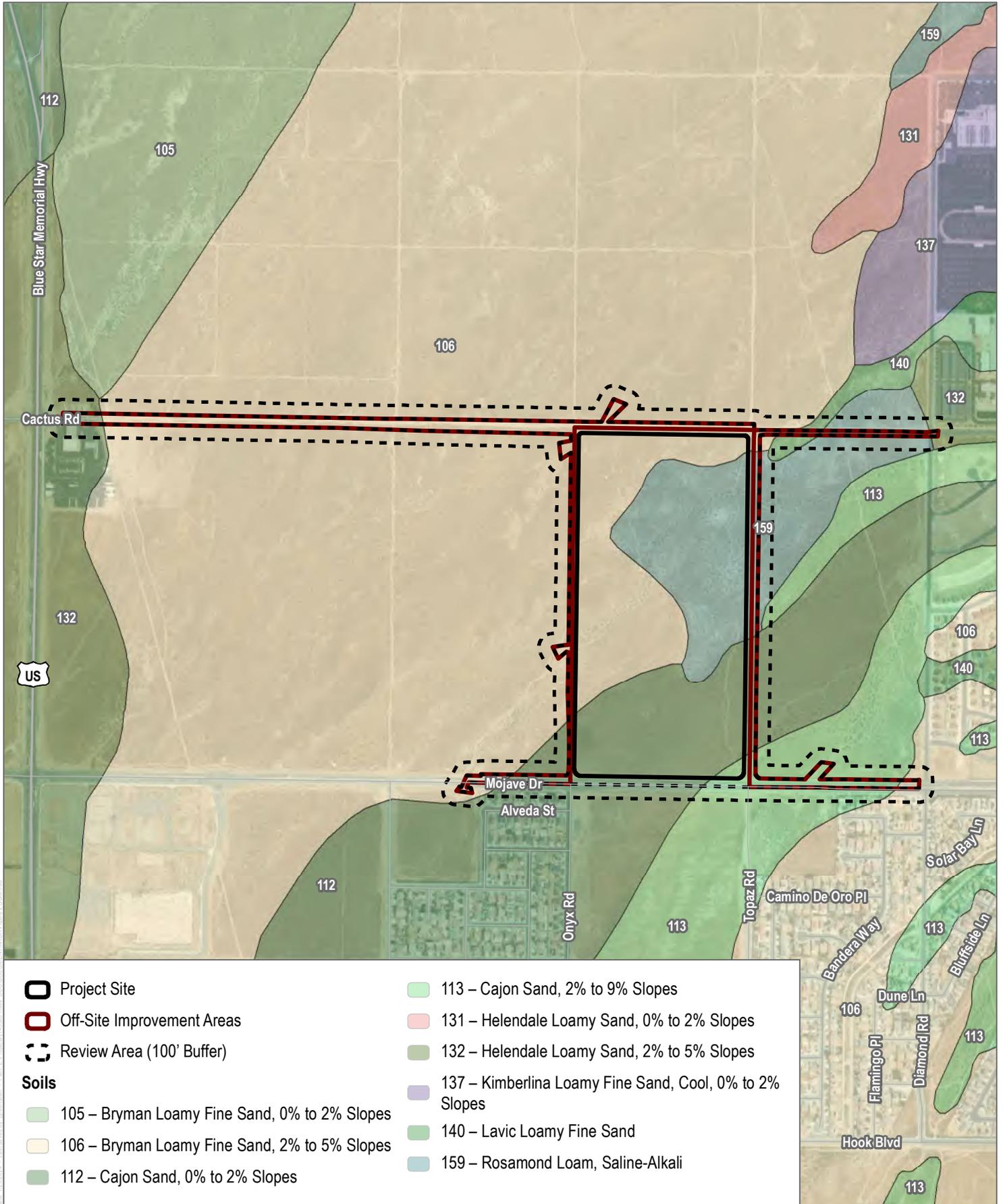
SOURCE: USGS 7.5min Adelanto Quadrangle; Township 5N / Range 5W / Section 10, 11, 14, 15

FIGURE 1

Project Location

Mojave Industrial Park Project

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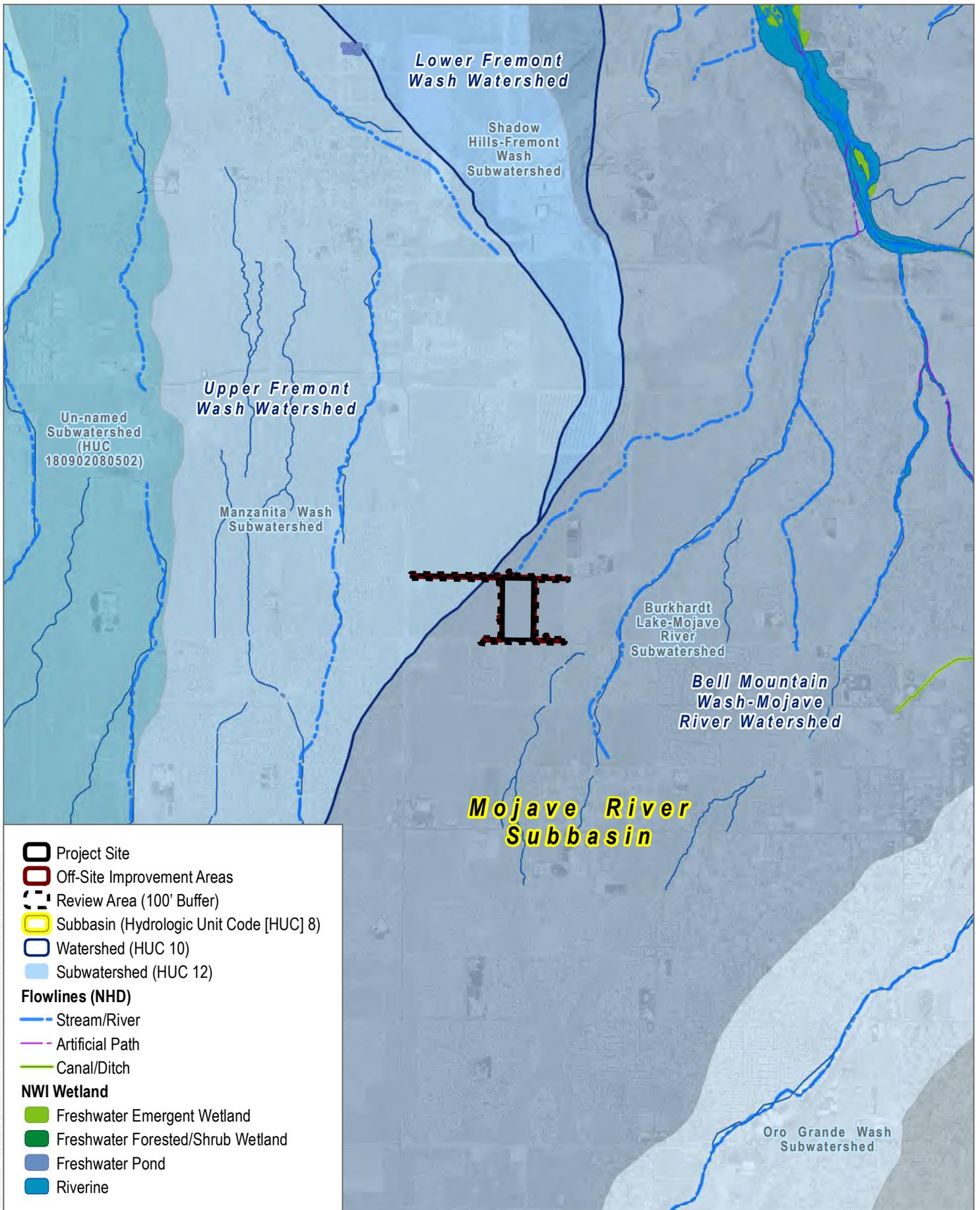


SOURCE: Maxar 2020; Open Street Map 2023; USDA SSURGO

FIGURE 2

Soils

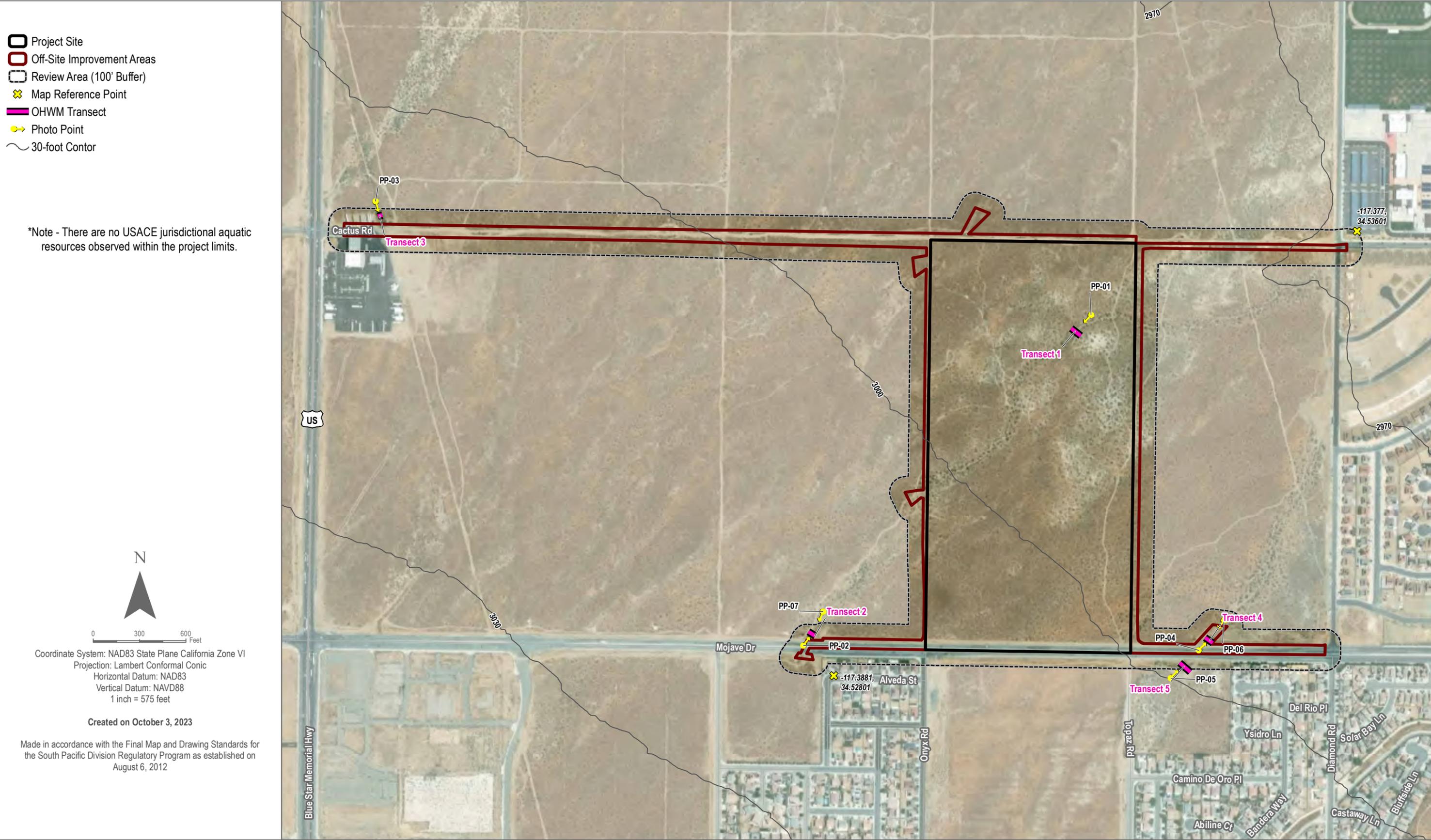
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SOURCE: Esri; USGS NHD; USFW NWI; NAIP 2020

FIGURE 3
Hydrologic Setting
Mojave Industrial Park Project

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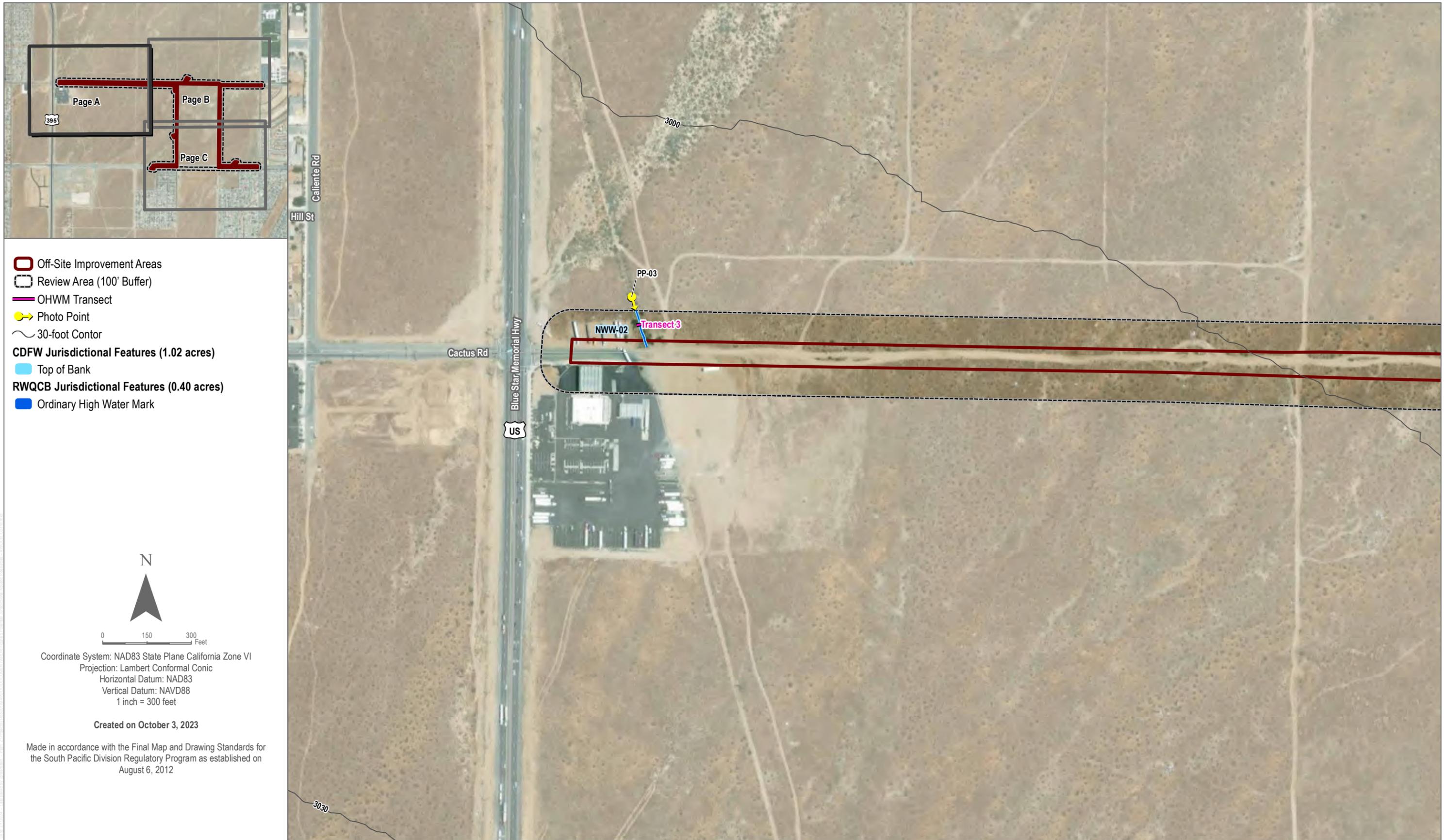


SOURCE: Maxar 2020; Open Street Map 2023

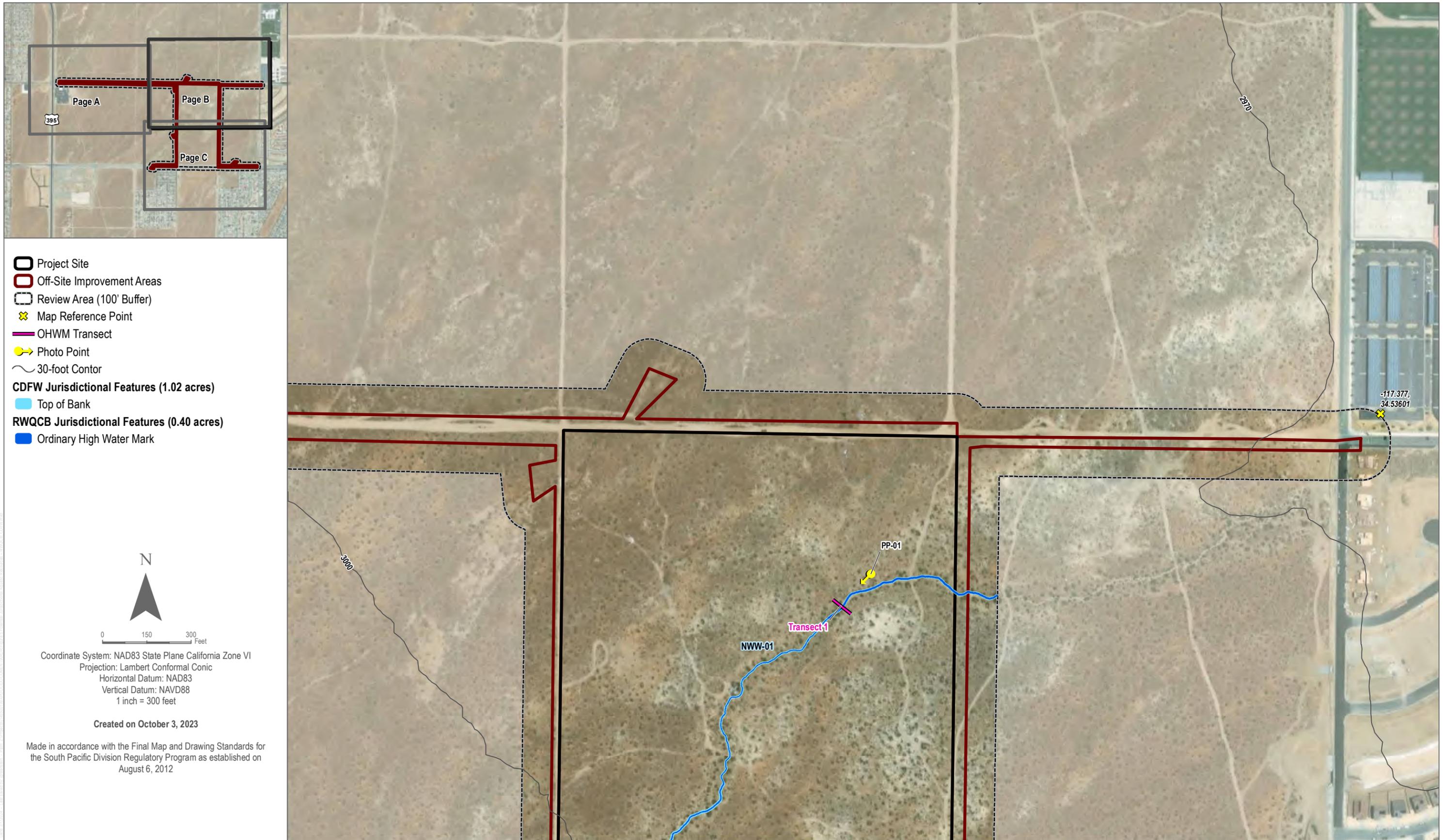


FIGURE 4
 Potential Jurisdictional Aquatic Resources - USACE
 Mojave Industrial Park Project

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SOURCE: Maxar 2020; Open Street Map 2023



- Project Site
- Off-Site Improvement Areas
- Review Area (100' Buffer)
- Map Reference Point
- OHWM Transect
- Photo Point
- 30-foot Contour
- CDFW Jurisdictional Features (1.02 acres)**
- Top of Bank
- RWQCB Jurisdictional Features (0.40 acres)**
- Ordinary High Water Mark

N

0 150 300
Feet

Coordinate System: NAD83 State Plane California Zone VI
 Projection: Lambert Conformal Conic
 Horizontal Datum: NAD83
 Vertical Datum: NAVD88
 1 inch = 300 feet

Created on October 3, 2023

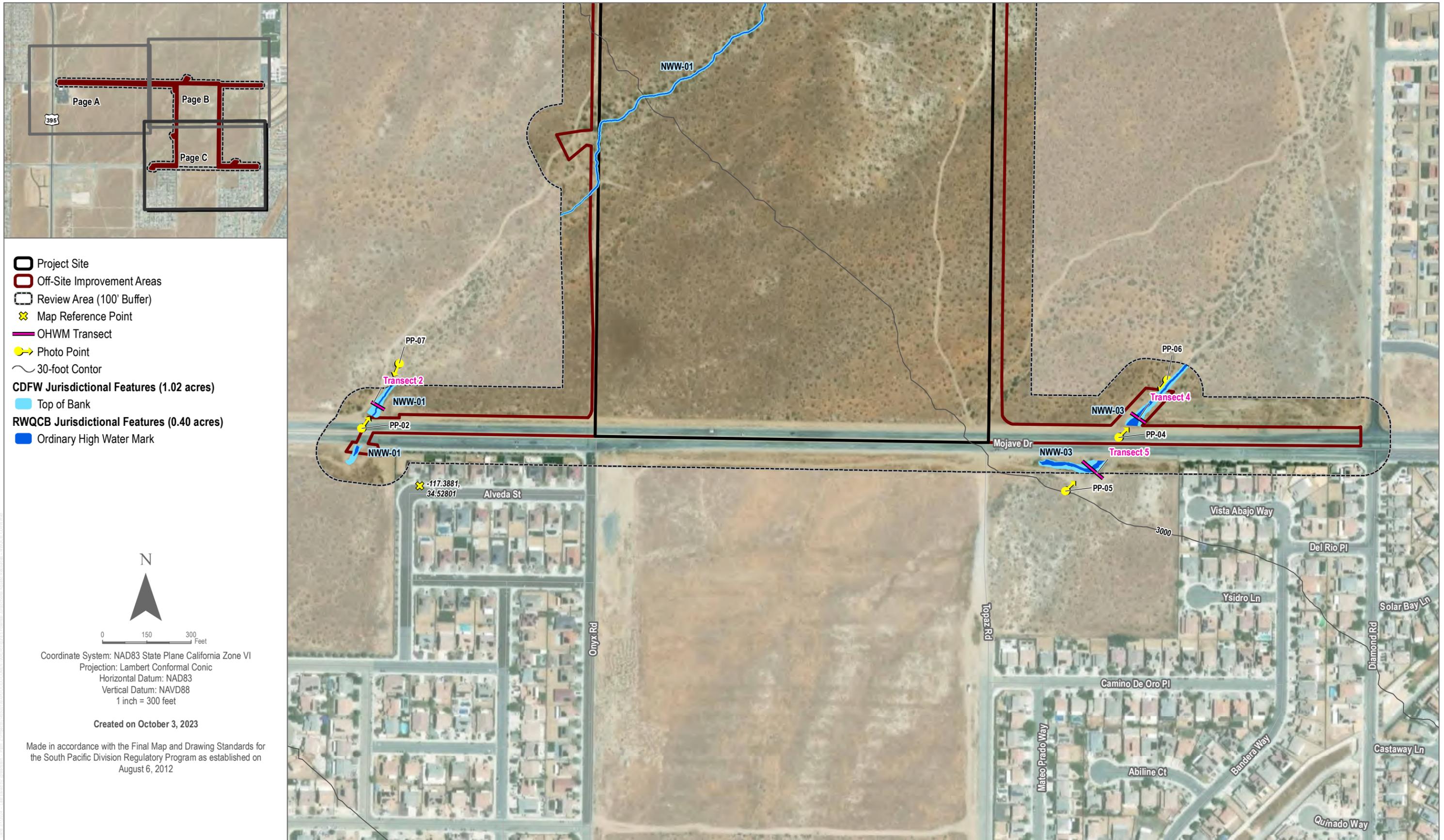
Made in accordance with the Final Map and Drawing Standards for the South Pacific Division Regulatory Program as established on August 6, 2012

SOURCE: Maxar 2020; Open Street Map 2023

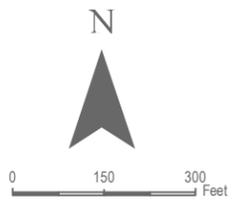


FIGURE 5B
 Potential Jurisdictional Aquatic Resources - RWQCB/CDFW
 Mojave Industrial Park Project

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- Project Site
- Off-Site Improvement Areas
- Review Area (100' Buffer)
- Map Reference Point
- OHWM Transect
- Photo Point
- 30-foot Contour
- CDFW Jurisdictional Features (1.02 acres)**
- Top of Bank
- RWQCB Jurisdictional Features (0.40 acres)**
- Ordinary High Water Mark



Coordinate System: NAD83 State Plane California Zone VI
 Projection: Lambert Conformal Conic
 Horizontal Datum: NAD83
 Vertical Datum: NAVD88
 1 inch = 300 feet

Created on October 3, 2023

Made in accordance with the Final Map and Drawing Standards for the South Pacific Division Regulatory Program as established on August 6, 2012

SOURCE: Maxar 2020; Open Street Map 2023



FIGURE 5C
 Potential Jurisdictional Aquatic Resources - RWQCB/CDFW
 Mojave Industrial Park Project

Appendix 1 - REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD)

To: Los Angeles District

- I am requesting a JD on property located at: N of Mojave Drive between Onyx Road and Topaz Road
(Street Address)

City/Township/Parish: Victorville County: San Bernardino State: CA

Acreage of Parcel/Review Area for JD: 152.4

Section: 10, 11 Township: 5N Range: 5W

Latitude (decimal degrees): 34.531931 Longitude (decimal degrees): -117.383972

(For linear projects, please include the center point of the proposed alignment.)

- Please attach a survey/plat map and vicinity map identifying location and review area for the JD.
- I currently own this property. I plan to purchase this property.
- I am an agent/consultant acting on behalf of the requestor.
- Other (please explain): _____.
- Reason for request: (check as many as applicable)
 - I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
 - I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
 - I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
 - I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
 - I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
 - A Corps JD is required in order to obtain my local/state authorization.
 - I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
 - I believe that the site may be comprised entirely of dry land.
 - Other: Non-WOTUS: tributary to (a)(1)-(4) water but not RPW or standing/continuously flowing body of water.
- Type of determination being requested:
 - I am requesting an approved JD.
 - I am requesting a preliminary JD.
 - I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
 - I am unclear as to which JD I would like to request and require additional information to inform my decision.

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

*Signature:  Date: 31 January 2024

• Typed or printed name: Tracy Park
Company name: Dudek
Address: 605 Third Street
Encinitas, CA 92024
Daytime phone no.: 442-287-3435
Email address: tpark@dudek.com

***Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

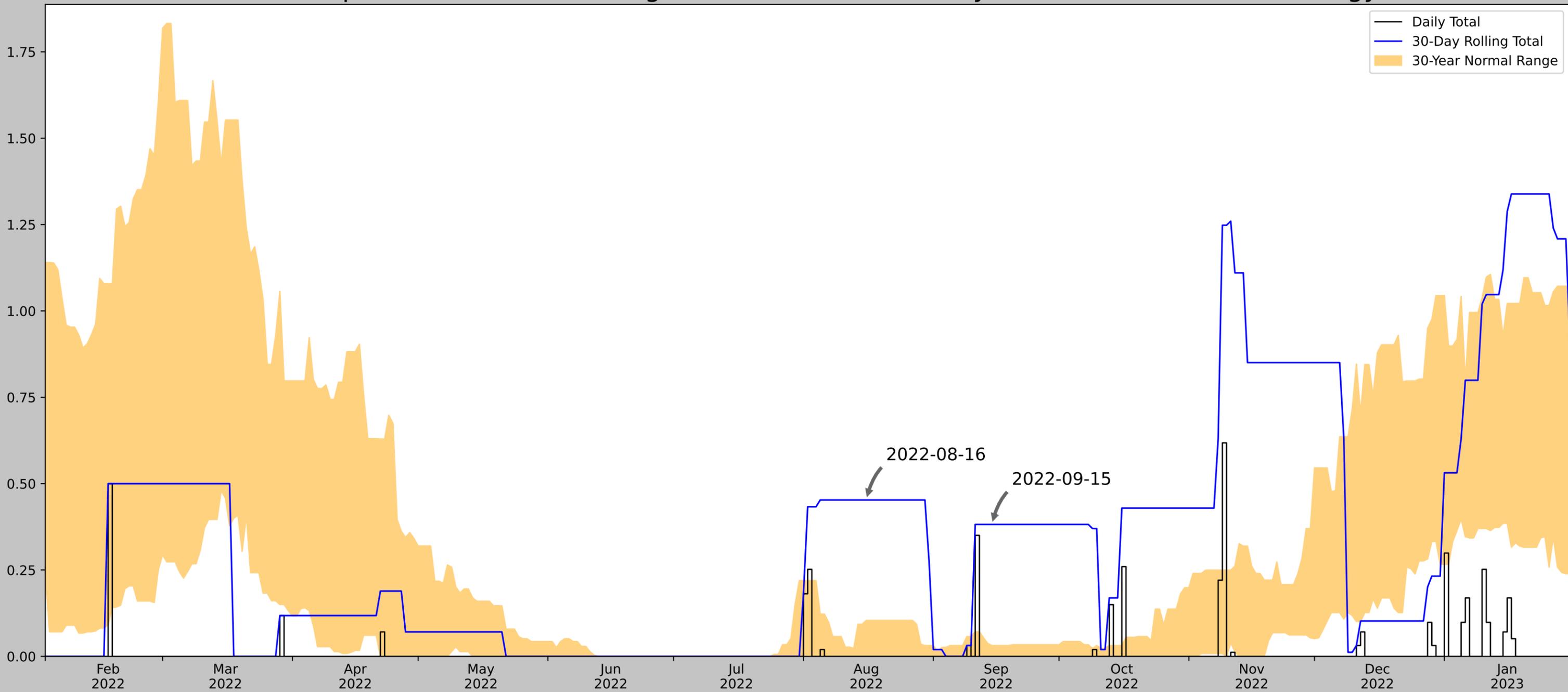
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

Appendix B

Antecedent Precipitation Tool Output

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network

Rainfall (Inches)



Coordinates	34.531931, -117.383972
Observation Date	2022-09-15
Elevation (ft)	2994.52
Drought Index (PDSI)	Incipient wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-09-15	0.0	0.031496	0.38189	Wet	3	3	9
2022-08-16	0.0	0.104331	0.452756	Wet	3	2	6
2022-07-17	0.0	0.0	0.0	Normal	2	1	2
Result							Wetter than Normal - 17



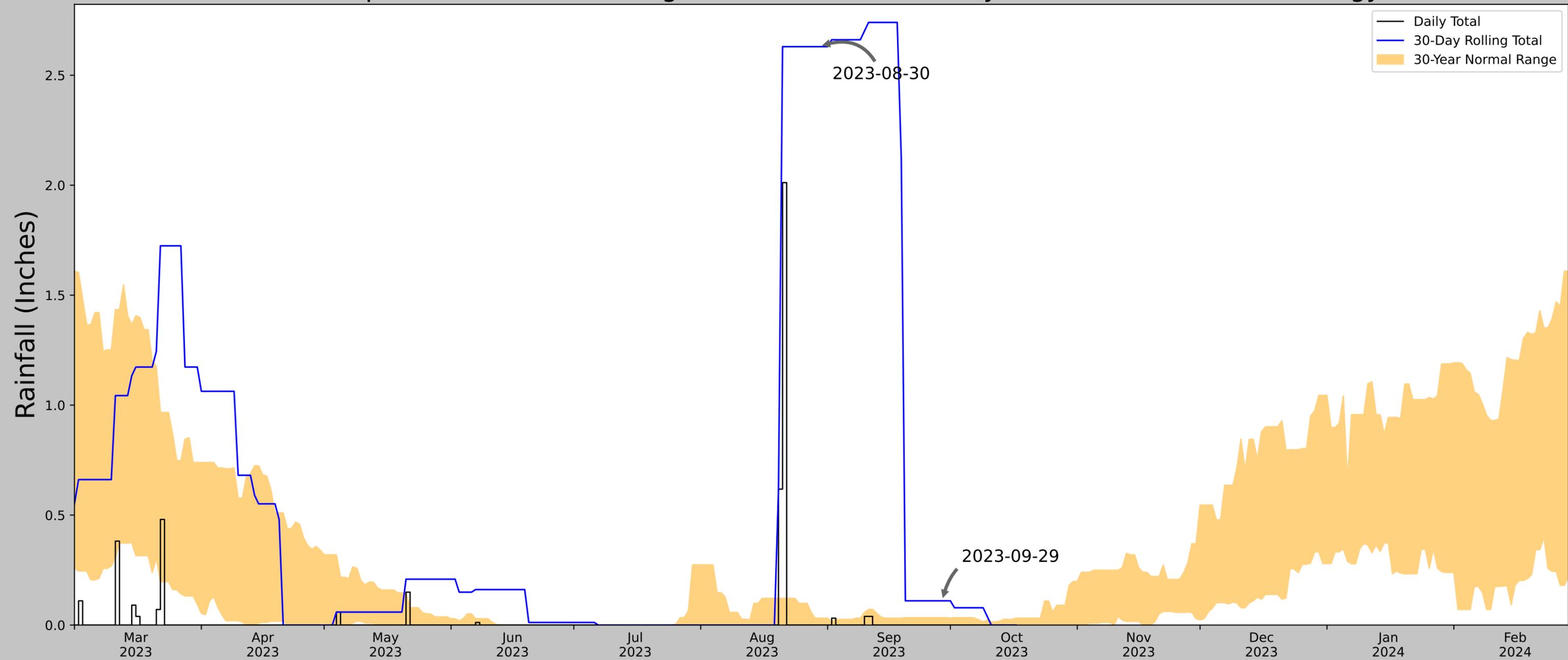
Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and Development Center



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
VICTORVILLE	34.5292, -117.2928	2879.921	5.193	114.599	2.932	11065	90
APPLE VALLEY 2.6 SSW	34.4957, -117.2353	2880.906	4.009	0.985	1.808	96	0
APPLE VALLEY 1.9 N	34.556, -117.2111	2935.039	5.005	55.118	2.528	1	0
APPLE VALLEY 2.6 SE	34.5043, -117.1808	2940.945	6.604	61.024	3.375	1	0
EL MIRAGE	34.5892, -117.6303	2950.131	19.647	70.21	10.221	188	0
LYTLE CREEK RS	34.2383, -117.4708	2729.987	22.517	149.934	13.509	2	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	34.531931, -117.383972
Observation Date	2023-09-29
Elevation (ft)	2994.52
Drought Index (PDSI)	Severe wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-09-29	0.0	0.033858	0.110236	Wet	3	3	9
2023-08-30	0.0	0.031496	2.629921	Wet	3	2	6
2023-07-31	0.0	0.274016	0.0	Normal	2	1	2
Result							Wetter than Normal - 17

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
VICTORVILLE	34.5292, -117.2928	2879.921	5.193	114.599	2.932	11065	71
APPLE VALLEY 2.6 SSW	34.4957, -117.2353	2880.906	4.009	0.985	1.808	96	0
APPLE VALLEY 1.9 N	34.556, -117.2111	2935.039	5.005	55.118	2.528	1	0
APPLE VALLEY 2.6 SE	34.5043, -117.1808	2940.945	6.604	61.024	3.375	1	0
APPLE VALLEY 3.9 SE	34.4913, -117.1636	2949.147	7.808	69.226	4.054	0	1
ADELANTO 3.1 S	34.5253, -117.4331	3084.974	7.991	205.053	5.235	0	2
APPLE VALLEY 4.1 ENE	34.5588, -117.1516	3119.095	8.292	239.174	5.715	0	16
EL MIRAGE	34.5892, -117.6303	2950.131	19.647	70.21	10.221	188	0
LYTLE CREEK RS	34.2383, -117.4708	2729.987	22.517	149.934	13.509	2	0



Figures and tables made by the
Antecedent Precipitation Tool
Version 2.0

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center



Appendix C

Data Forms

Transect #1

Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Project: Mojave Industrial Park
Project Number: 15436
Stream: NW-01, unnamed stream
Investigator(s): Tracy Park
Date: 14 Sept 2022 **Time:** _____
Town: Victorville **State:** CA
Photo begin file#: _____ **Photo end file#:** _____

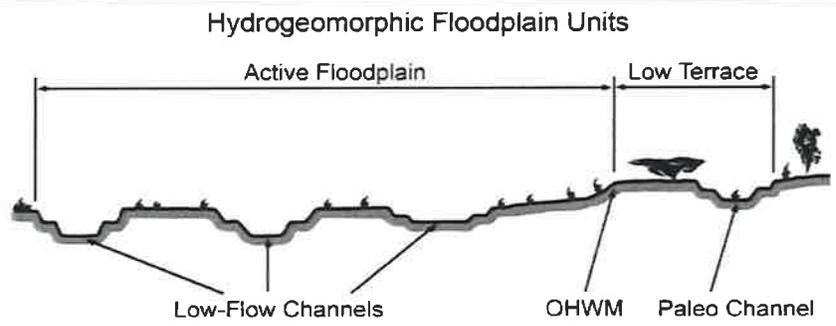
Y / N Do normal circumstances exist on the site?
 Y / N Is the site significantly disturbed?

Location Details: Drainage at center of subject parcel
Projection: EPSG 3857 **Datum:** WGS 1984
Coordinates: 34.534103, -117.383004

Potential anthropogenic influences on the channel system: Altered hydrology due to development in surrounding area. Flows from road are conveyed into subject drainage. Evidence of off-road vehicular activity throughout site. Extensive trash dumping and several homeless encampments along drainage.

Brief site description: Flows SW to NE. Vegetation comprised of creosote bush scrub, Mexican bladdergrass is also present.

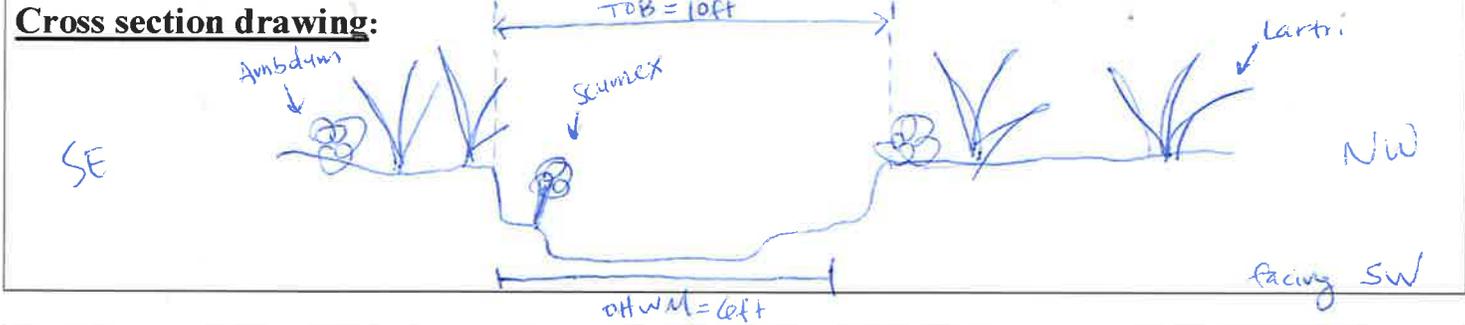
- Checklist of resources (if available):**
- | | |
|--|--|
| <input checked="" type="checkbox"/> Aerial photography
Dates: 1952 - April 2023 | <input type="checkbox"/> Stream gage data
Gage number:
Period of record: |
| <input checked="" type="checkbox"/> Topographic maps | <input type="checkbox"/> History of recent effective discharges |
| <input type="checkbox"/> Geologic maps | <input type="checkbox"/> Results of flood frequency analysis |
| <input checked="" type="checkbox"/> Vegetation maps | <input type="checkbox"/> Most recent shift-adjusted rating |
| <input checked="" type="checkbox"/> Soils maps | <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event |
| <input type="checkbox"/> Rainfall/precipitation maps | |
| <input type="checkbox"/> Existing delineation(s) for site | |
| <input checked="" type="checkbox"/> Global positioning system (GPS) | |
| <input type="checkbox"/> Other studies | |



- Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:**
- Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
 - Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
 - Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
 - Record the floodplain unit and GPS position.
 - Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
 - Identify any indicators present at the location.
 - Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
 - Identify the OHWM and record the indicators. Record the OHWM position via:

<input checked="" type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input checked="" type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:

Project ID: 15436 Cross section ID: Transect #1 Date: 14 sept 2022 Time: _____



OHWM

GPS point: NWW-01

Indicators:

<input checked="" type="checkbox"/> Change in average sediment texture	<input checked="" type="checkbox"/> Break in bank slope
<input checked="" type="checkbox"/> Change in vegetation species	<input checked="" type="checkbox"/> Other: <u>Drainage patterns</u>
<input checked="" type="checkbox"/> Change in vegetation cover	<input checked="" type="checkbox"/> Other: <u>sediment deposition</u>

Comments: Sandy clay bank. creosote in upland. Higher cover of bladder sage along edge of banks

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: NWW-01

Characteristics of the floodplain unit:

Average sediment texture: fine sand

Total veg cover: 5 % Tree: % Shrub: 5 % Herb: %

Community successional stage:

<input type="checkbox"/> NA	<input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings)
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)

Indicators:

<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief
<input type="checkbox"/> Drift and/or debris	<input checked="" type="checkbox"/> Other: <u>drainage patterns</u>
<input checked="" type="checkbox"/> Presence of bed and bank	<input checked="" type="checkbox"/> Other: <u>sediment deposition</u>
<input checked="" type="checkbox"/> Benches	<input type="checkbox"/> Other: _____

Comments: vegetation = scattered Scutellaria mexicana on banks.

Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Project: Mojave Industrial Park Project Number: 15436 Stream: NWW-01, unnamed stream Investigator(s): Tracy Park	Date: 29 sept 2023 Time: _____ Town: Victorville State: CA Photo begin file#: _____ Photo end file#: _____
---	--

Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?	Location Details: Portion of NWW-01 in SW corner of site, along off-site improvement areas. Projection: EPSG 3857 Datum: WGS 1984 Coordinates: 34.528748, -117.388624
--	---

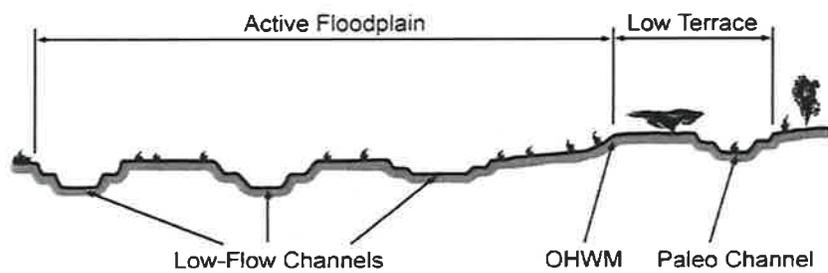
Potential anthropogenic influences on the channel system: Altered hydrology due to development in surrounding area. Flows from Mojave Drive generally flow into subject drainage. Large amounts of trash in and around drainage. Culvert underneath Mojave Drive flows into drainage.

Brief site description: Flows northeasterly. Surrounding vegetation comprised of creosote bush and bank lined with rabbitbrush.

Checklist of resources (if available):

<input checked="" type="checkbox"/> Aerial photography Dates: 1952 - April 2023 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
---	---

Hydrogeomorphic Floodplain Units

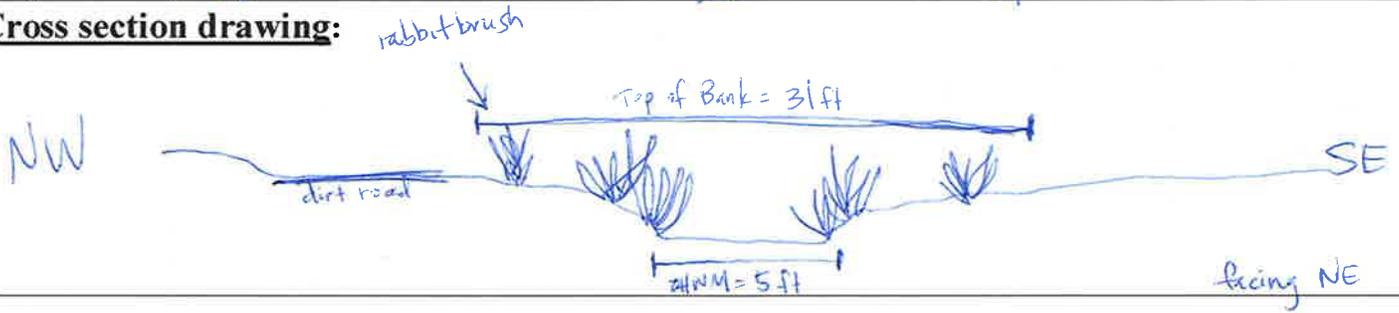


- Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW:**
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
 - a) Record the floodplain unit and GPS position.
 - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
 - c) Identify any indicators present at the location.
 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
 5. Identify the OHW and record the indicators. Record the OHW position via:

<input checked="" type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input checked="" type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:

Project ID: 15436 Cross section ID: Transect #2 Date: 29 Sept 2023 Time: _____

Cross section drawing:



OHWM

GPS point: NWW-01

Indicators:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species | <input checked="" type="checkbox"/> Other: <u>sediment deposition</u> |
| <input checked="" type="checkbox"/> Change in vegetation cover | <input checked="" type="checkbox"/> Other: <u>debris wracking, drainage patterns</u> |

Comments: sand and gravel deposited in OHWM. rabbit brush along banks.

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: NWW-01

Characteristics of the floodplain unit:

Average sediment texture: sand, gravel
Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %
Community successional stage:

- | | |
|---|--|
| <input checked="" type="checkbox"/> NA | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings) |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Mudcracks | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples | <input type="checkbox"/> Surface relief |
| <input checked="" type="checkbox"/> Drift and/or debris | <input checked="" type="checkbox"/> Other: <u>drainage patterns</u> |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input checked="" type="checkbox"/> Other: <u>sediment deposition</u> |
| <input type="checkbox"/> Benches | <input checked="" type="checkbox"/> Other: <u>debris wracking</u> |

Comments:

Arid West Ephemeral and Intermittent Streams OTHM Datasheet

Project: Mojave Industrial Park **Date:** 29 Sept 2023 **Time:** _____
Project Number: 15436 **Town:** Victorville **State:** CA
Stream: NWW-02, unnamed stream **Photo begin file#:** _____ **Photo end file#:** _____
Investigator(s): Tracy Park

Y / N Do normal circumstances exist on the site?
 Y / N Is the site significantly disturbed?

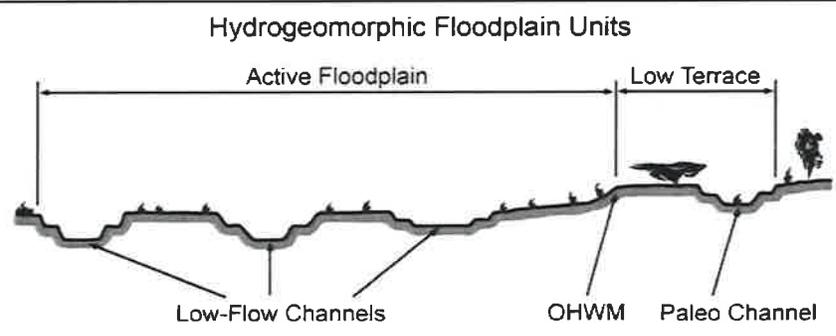
Location Details: Northwestern corner of study area off of westernmost extent of Cactus Road.
Projection: EPSG 3857 **Datum:** WGS 1984
Coordinates: 34.536098, -117.398016

Potential anthropogenic influences on the channel system: Altered hydrology due to development in surrounding area. Trucks were parked immediately west of drainager. The drainage receives water from dirt road, parking areas, truck stop in immediately vicinity. Channel is choked with trash and tumble weeds/shortprid mustard.

Brief site description: Flows north-northwesterly. Disturbed and developed land covers occur west and south of drainage. Creosote bush scrub to north and east. The drainage may be an artificial ditch.

Checklist of resources (if available):

<input checked="" type="checkbox"/> Aerial photography Dates: 1952 - April 2023	<input type="checkbox"/> Stream gage data Gage number: Period of record:
<input checked="" type="checkbox"/> Topographic maps	<input type="checkbox"/> History of recent effective discharges
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> Results of flood frequency analysis
<input checked="" type="checkbox"/> Vegetation maps	<input type="checkbox"/> Most recent shift-adjusted rating
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
<input type="checkbox"/> Rainfall/precipitation maps	
<input type="checkbox"/> Existing delineation(s) for site	
<input checked="" type="checkbox"/> Global positioning system (GPS)	
<input type="checkbox"/> Other studies	

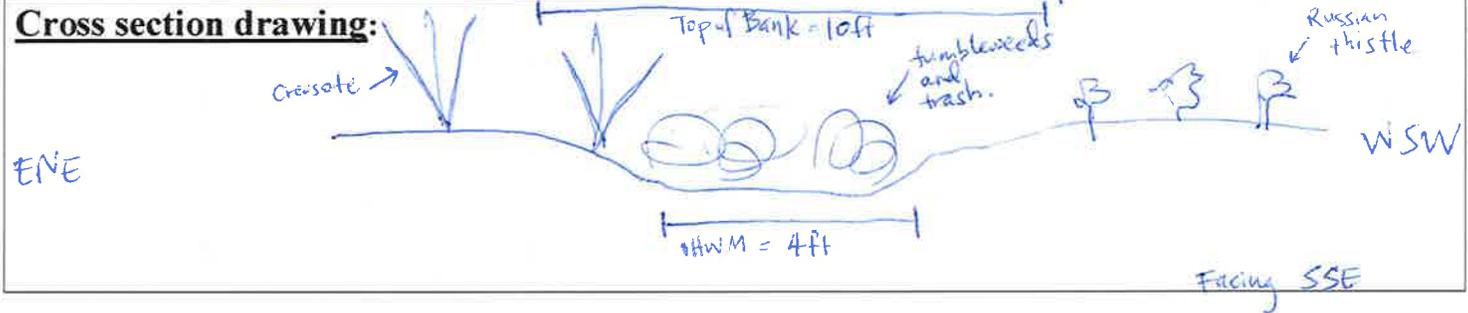


Procedure for identifying and characterizing the floodplain units to assist in identifying the OTHM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
 - a) Record the floodplain unit and GPS position.
 - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
 - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OTHM and record the indicators. Record the OTHM position via:

<input checked="" type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input checked="" type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:

Project ID: 15436 Cross section ID: Transect #3 Date: 29 Sept 2023 Time: —



OHWM

GPS point: NWW-02

Indicators:

<input checked="" type="checkbox"/> Change in average sediment texture	<input checked="" type="checkbox"/> Break in bank slope
<input type="checkbox"/> Change in vegetation species	<input checked="" type="checkbox"/> Other: <u>Sediment deposition</u>
<input checked="" type="checkbox"/> Change in vegetation cover	<input checked="" type="checkbox"/> Other: <u>debris, wracking, drainage patterns</u>

Comments: sand deposited when low flow channel widens.

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: silt, fine sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

<input checked="" type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)
<input type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)

Indicators:

<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief
<input checked="" type="checkbox"/> Drift and/or debris	<input checked="" type="checkbox"/> Other: <u>sediment deposition</u>
<input checked="" type="checkbox"/> Presence of bed and bank	<input checked="" type="checkbox"/> Other: <u>drainage patterns</u>
<input type="checkbox"/> Benches	<input checked="" type="checkbox"/> Other: <u>wracking</u>

Comments:

Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Project: Mojave Industrial Park Project Number: 15436 Stream: NWW-03, un-named stream. Investigator(s): Tracy Park	Date: 29 Sept 2023 Time: _____ Town: Victorville State: CA Photo begin file#: _____ Photo end file#: _____
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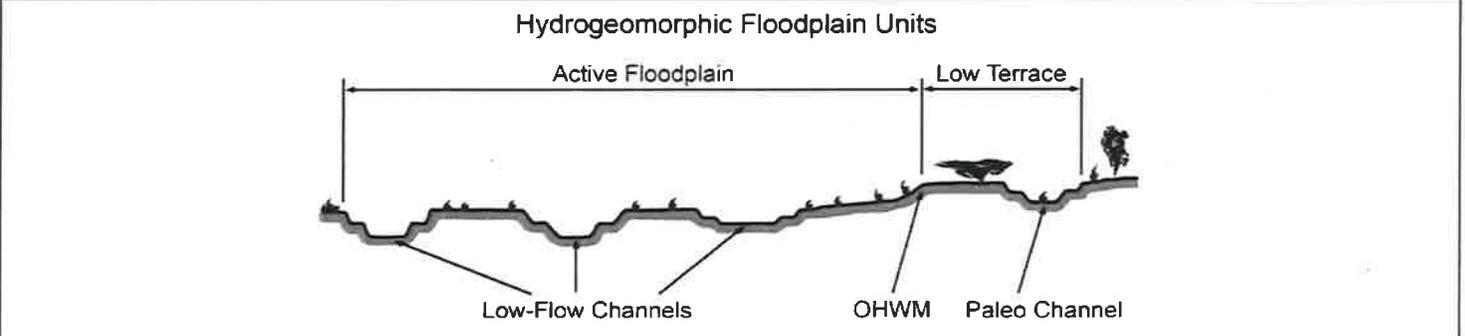
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?	Location Details: SE corner of study area. North of Mojave Drive. Projection: EPSG 3857 Datum: WGS 1984 Coordinates: 34.528715, -117.380080
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Potential anthropogenic influences on the channel system: Altered hydrology due to close proximity to Mojave Drive. Box culvert underneath Mojave Drive flows into drainage. Some trash in drainage.

Brief site description: Flows northeasterly, immediately north of Mojave Drive a major thoroughfare. Surrounding vegetation comprised of creosote bush scrub and a bank lined with rabbitbrush and burro bush.

Checklist of resources (if available):

<input checked="" type="checkbox"/> Aerial photography Dates: 1952 - April 2023 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
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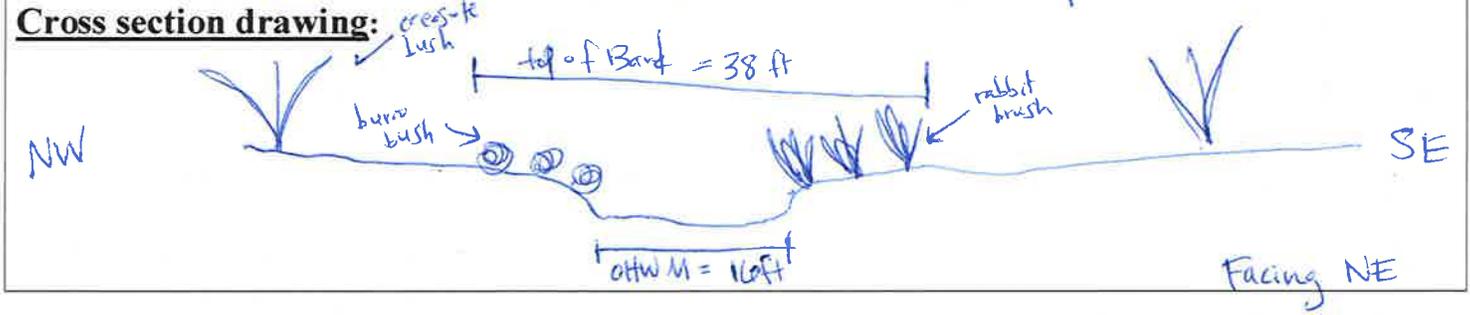


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
 - a) Record the floodplain unit and GPS position.
 - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
 - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:

<input checked="" type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input checked="" type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:

Project ID: 1543(p) Cross section ID: Transect #4 Date: 29 Sept 2023 Time: —



OHWM

GPS point: NW-03

Indicators:

<input checked="" type="checkbox"/> Change in average sediment texture	<input checked="" type="checkbox"/> Break in bank slope
<input type="checkbox"/> Change in vegetation species	<input checked="" type="checkbox"/> Other: <u>wracking, drainage patterns</u>
<input checked="" type="checkbox"/> Change in vegetation cover	<input checked="" type="checkbox"/> Other: <u>sediment deposition</u>

Comments:

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: NW-03

Characteristics of the floodplain unit:

Average sediment texture: sand, gravel

Total veg cover: 1 % Tree: 0 % Shrub: 0 % Herb: 1 %

Community successional stage:

<input type="checkbox"/> NA	<input type="checkbox"/> Mid (herbaceous, shrubs, saplings)
<input checked="" type="checkbox"/> Early (herbaceous & seedlings)	<input type="checkbox"/> Late (herbaceous, shrubs, mature trees)

Indicators:

<input type="checkbox"/> Mudcracks	<input type="checkbox"/> Soil development
<input type="checkbox"/> Ripples	<input type="checkbox"/> Surface relief
<input checked="" type="checkbox"/> Drift and/or debris	<input checked="" type="checkbox"/> Other: <u>drainage patterns</u>
<input checked="" type="checkbox"/> Presence of bed and bank	<input checked="" type="checkbox"/> Other: <u>wracking</u>
<input type="checkbox"/> Benches	<input checked="" type="checkbox"/> Other: <u>sediment deposition</u>

Comments:

Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Project: Mojave Industrial Park	Date: 29 Sept 2023	Time: _____
Project Number: 15436	Town: Victorville	State: CA
Stream: NWN-03, un-named stream	Photo begin file#: _____	Photo end file#: _____
Investigator(s): Tracy Park		

Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site?	Location Details: SE corner of Study Area South of Mojave Drive
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?	Projection: EPSG 3857 Datum: WGS 1984
Coordinates:	

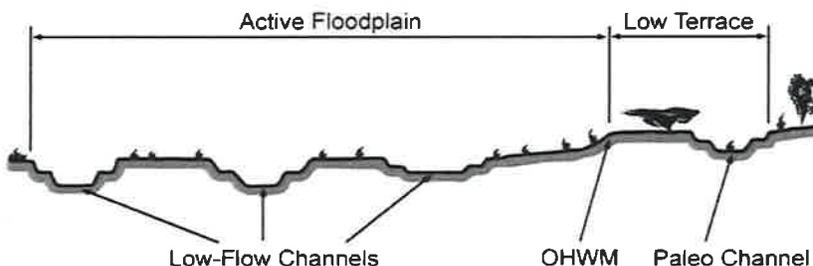
Potential anthropogenic influences on the channel system: Altered hydrology due to close proximity to Mojave Drive.

Brief site description: Flows east and northeasterly into culvert underneath Mojave Drive. Disturbed and Developed to North. creosote bush scrub to south.

Checklist of resources (if available):

<input checked="" type="checkbox"/> Aerial photography Dates: 1952 - April 2023	<input type="checkbox"/> Stream gage data Gage number: Period of record:
<input checked="" type="checkbox"/> Topographic maps	<input type="checkbox"/> History of recent effective discharges
<input type="checkbox"/> Geologic maps	<input type="checkbox"/> Results of flood frequency analysis
<input checked="" type="checkbox"/> Vegetation maps	<input type="checkbox"/> Most recent shift-adjusted rating
<input checked="" type="checkbox"/> Soils maps	<input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event
<input type="checkbox"/> Rainfall/precipitation maps	
<input type="checkbox"/> Existing delineation(s) for site	
<input checked="" type="checkbox"/> Global positioning system (GPS)	
<input type="checkbox"/> Other studies	

Hydrogeomorphic Floodplain Units



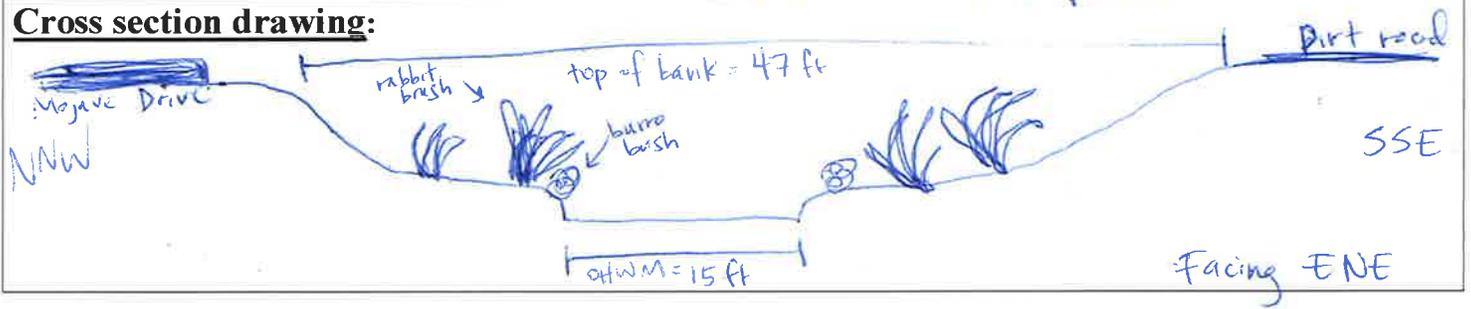
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
 - a) Record the floodplain unit and GPS position.
 - b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
 - c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHW M and record the indicators. Record the OHW M position via:

<input checked="" type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS
<input checked="" type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:

Project ID: 15436 Cross section ID: Transect #5 Date: 29 Sept 2023 Time: _____

Cross section drawing:



OHWM

GPS point: NNW-03

Indicators:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input type="checkbox"/> Change in vegetation species | <input checked="" type="checkbox"/> Other: <u>wracking drainage patterns</u> |
| <input checked="" type="checkbox"/> Change in vegetation cover | <input checked="" type="checkbox"/> Other: <u>sediment deposition</u> |

Comments:

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: NNW-03

Characteristics of the floodplain unit:

Average sediment texture: sand, gravel
Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- | | |
|---|--|
| <input checked="" type="checkbox"/> NA | <input type="checkbox"/> Mid (herbaceous, shrubs, saplings) |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Mudcracks | <input type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples | <input type="checkbox"/> Surface relief |
| <input checked="" type="checkbox"/> Drift and/or debris | <input checked="" type="checkbox"/> Other: <u>drainage patterns</u> |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input checked="" type="checkbox"/> Other: <u>wracking</u> |
| <input type="checkbox"/> Benches | <input checked="" type="checkbox"/> Other: <u>sediment deposition</u> |

Comments:

Appendix D

Review Area Photos



Photo 1. View of NWW-01 at Transect 1. Facing southwest.



Photo 2. View of NWW-01 at Transect 2. Facing northeast.



Photo 3. View of NWW-02 at Transect 3. Facing south-southeast.



Photo 4. View of NWW-03 at Transect 4. Facing northeast.



Photo 5. View of NWW-03 at Transect 5. Facing northeast.



Photo 6. View of box culvert along the southeastern portion of the project site, which conveys flows underneath Mojave Drive along NWW- 03. Facing northeast.



Photo 7. View of pipe culverts along the southwestern portion of the project site, which convey flows underneath Mojave Drive along NWW- 01. Facing southwest.

Appendix D

Site Photos



Photo 1. Facing south-southwest from the northeast corner of the subject parcels toward creosote bush scrub.



Photo 2. Facing south-southeast from the northwest corner of the subject parcels toward creosote bush scrub.



Photo 3. Facing north-northeast from the southwest corner of the subject parcels toward creosote bush scrub.



Photo 4. Facing north-northwest from the southeast corner of the subject parcels toward creosote bush scrub.



Photo 5. Facing north from the southern boundary of the subject parcels toward creosote bush scrub.



Photo 6. Facing west from the eastern extent of the off-site utility improvement areas along Cactus Road/Tawney Ridge Lane, east of the on-site portion of the site.



Photo 7. Facing east from the eastern portion of the off-site road improvement areas along Cactus Road/Tawney Ridge Lane, west of the on-site portion of the site.



Photo 8. Facing east from the western extent of the off-site road improvement areas along Cactus Road/Tawney Ridge Lane.



Photo 9. Facing west from the eastern extent of the off-site utility improvement areas along Mojave Drive.



Photo 10. Facing east from the western extent of the off-site utility improvement areas along Mojave Drive.



Photo 11. Facing west in the eastern portion of the subject parcels toward an example of trash dumping present throughout the project site.



Photo 12. Facing southeast in the northwestern portion of the subject parcels toward an example of trash dumping present throughout the project site.

Appendix E

Plant Compendium

Plant Species

VASCULAR SPECIES

EUDICOTS

AMARANTHACEAE—AMARANTH FAMILY

- * *Amaranthus albus*—prostrate pigweed (FACU)
- Amaranthus palmeri*—carelessweed (FACU)

APIACEAE—CARROT FAMILY

- Lomatium mohavense*—Mojave desertparsley (NL)

ASTERACEAE—SUNFLOWER FAMILY

- Ambrosia acanthicarpa*—flatspine bur ragweed (NL)
- Ambrosia dumosa*—white bursage (NL)
- Ambrosia salsola* var. *salsola*—cheesebush (NL)
- Baileya multiradiata*—desert marigold (NL)
- Calycoseris parryi*—yellow tackstem (NL)
- Chaenactis fremontii*—pincushion flower (NL)
- Chrysothamnus viscidiflorus*—yellow rabbitbrush (NL)
- Ericameria nauseosa*—rubber rabbitbrush (NL)
- Eriophyllum wallacei*—woolly easterbonnets (NL)
- Lasthenia gracilis*—needle goldfields (NL)
- Logfia depressa*—dwarf cottonrose (NL)
- Malacothrix coulteri*—snake's head (NL)
- Malacothrix glabrata*—smooth desertdandelion (NL)
- Pectis papposa*—manybristle chinchweed (NL)
- Tetradymia stenolepis*—Mojave cottonthorn (NL)

BORAGINACEAE—BORAGE FAMILY

- Amsinckia menziesii*—Menzies' fiddleneck (NL)
- Amsinckia tessellata*—bristly fiddleneck (NL)
- Cryptantha pterocarya*—wingnut cryptantha (NL)
- Greeneocharis circumscissa*—cushion cryptantha (NL)
- Pectocarya platycarpa*—broadfruit combseed (NL)

BRASSICACEAE—MUSTARD FAMILY

- Caulanthus lasiophyllus*—California mustard (NL)
- Descurainia pinnata*—western tansymustard (NL)
- * *Descurainia sophia*—herb sophia (NL)

- * *Hirschfeldia incana*—shortpod mustard (NL)
- Lepidium flavum*—yellow pepper-grass (UPL)
- Lepidium lasiocarpum*—shaggyfruit pepperweed (NL)
- * *Sisymbrium altissimum*—tall tumbledustard (FACU)
- * *Sisymbrium irio*—London rocket (NL)
- * *Sisymbrium orientale*—Indian hedgemustard (NL)

CACTACEAE—CACTUS FAMILY

Cylindropuntia echinocarpa—silver cholla (NL)

CHENOPODIACEAE—GOOSEFOOT FAMILY

Krascheninnikovia lanata—winterfatland (NL)

- * *Salsola tragus*—prickly Russian thistle (FACU)

CUCURBITACEAE—GOURD FAMILY

Cucurbita palmata—coyote gourd (NL)

EUPHORBIACEAE—SPURGE FAMILY

Croton setiger—dove weed (NL)

Euphorbia albomarginata—whitemargin sandmat (NL)

FABACEAE—LEGUME FAMILY

Acmispon brachycarpus—foothill deervetch (NL)

Astragalus didymocarpus—dwarf white milkvetch (NL)

Astragalus lentiginosus—freckled milkvetch (UPL)

Psoralea argemone—Mojave indigobush (FACU)

GERANIACEAE—GERANIUM FAMILY

- * *Erodium cicutarium*—redstem stork's bill (NL)

HYDROPHYLLACEAE—WATERLEAF FAMILY

Phacelia cicutaria var. *hispida*—caterpillar phacelia (NL)

Phacelia distans—distant phacelia (NL)

LAMIACEAE—MINT FAMILY

Salvia carduacea—thistle sage (NL)

Scutellaria mexicana—Mexican bladdersage (FACW)

LOASACEAE—LOASA FAMILY

Mentzelia albicaulis—whitestem blazingstar (NL)

MALVACEAE—MALLOW FAMILY

Eremalche exilis—white mallow (NL)

MONTIACEAE—MONTIA FAMILY

Calyptridium monandrum—common pussypaws (NL)

ONAGRACEAE—EVENING PRIMROSE FAMILY

Camissonia campestris—Mojave suncup (NL)

Camissoniopsis bistorta—southern suncup (NL)

Eremothera boothii ssp. *desertorum*—desert suncup (NL)

Tetrapteron palmeri—Palmer evening primrose (NL)

POLEMONIACEAE—PHLOX FAMILY

Gilia minor—little gilia (NL)

Linanthus parryae—sandblossoms (NL)

POLYGONACEAE—BUCKWHEAT FAMILY

Chorizanthe rigida—rigid spineflower (NL)

Chorizanthe watsonii—fivetooth spineflower (NL)

Eriogonum fasciculatum—California buckwheat (NL)

SOLANACEAE—NIGHTSHADE FAMILY

Lycium cooperi—peach thorn (NL)

ZYGOPHYLLACEAE—CALTROP FAMILY

Larrea tridentata—creosote bush (NL)

* *Tribulus terrestris*—puncturevine (NL)

GYMNOSPERMS AND GNETOPHYTES

EPHEDRACEAE—EPHEDRA FAMILY

Ephedra nevadensis—Nevada joint fir (NL)

Ephedra viridis—Mormon tea (NL)

MONOCOTS

AGAVACEAE—AGAVE FAMILY

Yucca brevifolia—Joshua tree (NL)

LILIACEAE—LILY FAMILY

Calochortus kennedyi var. *kennedyi*—desert mariposa lily (NL)

POACEAE—GRASS FAMILY

* *Bromus madritensis*—compact brome (UPL)

* *Bromus rubens*—red brome (UPL)

* *Hordeum murinum*—mouse barley (FACU)

- * *Schismus arabicus*—Arabian schismus (NL)
- * *Schismus barbatus*—common Mediterranean grass (NL)
- Stipa hymenoides*—Indian rice grass (UPL)

THEMIDACEAE—BRODIAEA FAMILY

Dipterostemon capitatus—bluedicks (FACU)

- * signifies introduced (non-native) species

Arid West Wetland Indicator Status

NL = Not Listed

UPL = Upland

FACU = Facultative Upland

FAC = Facultative

FACW = Facultative Wetland

Appendix F

Special-Status Plant Species Not Expected to Occur
within the Biological Study Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Diplacus mohavensis</i>	Mojave monkeyflower	None/None/1B.2	Joshua tree woodland, Mojavean desert scrub; sandy or gravelly, often in washes/annual herb/ Apr-June/1,965-3,935	Not expected to occur. This species was not detected during the April 2023 focused survey conducted within its blooming period.
<i>Eremothera boothii</i> ssp. <i>boothii</i>	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. This species was not detected during the April 2023 focused survey conducted within its blooming period. In addition, the species is restricted to river wash habitat (such as the Mojave River) according to local occurrence records, which is absent from the BSA (Jepson Flora Project 2023; CCH 2023).
<i>Loeflingia squarrosa</i> var. <i>artemisiarum</i>	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. This species was not detected during the April 2023 focused survey conducted within its blooming period.
<i>Opuntia basilaris</i> var. <i>brachyclada</i>	short-joint beavertail	None/None/1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland/perennial stem succulent/Apr-June(Aug)/ 1,390-5,905	Not expected to occur. This species was not detected during the April 2023 focused survey.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Pediomelum castoreum</i>	Beaver Dam breadroot	None/None/1B.2	Joshua tree woodland, Mojavean desert scrub; sandy, washes and roadcuts/perennial herb/Apr–May/ 2,000–5,000	Not expected to occur. This species was not detected during the April 2023 focused survey conducted within its blooming period.
<i>Saltugilia latimeri</i>	Latimer’s woodland-gilia	None/None/1B.2	Chaparral, Mojavean desert scrub, pinyon and juniper woodland; rocky or sandy, often granitic, sometimes washes/annual herb/Mar–June/ 1,310–6,230	Not expected to occur. Although Mojavean desert scrub is present, there are no granitic soils present to support this species. Furthermore, this species was not detected during the April 2023 focused survey conducted within its blooming period.
<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	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. No suitable vegetation is present to support this species.
<i>Symphotrichum defoliatum</i>	San Bernardino aster	None/None/1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic); near ditches, streams, springs/ perennial rhizomatous herb/ July–Nov/5–6,690	Not expected to occur. No suitable vegetation is present to support this species.

Notes: CRPR = California Rare Plant Rank; BSA = biological survey area.

Status Designations

State

SC: State listed candidate species

CRPR (California Rare Plant Rank):

- 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
- 1B: Plants rare, threatened, or endangered in California and elsewhere
- 2B: Plants rare, threatened, or endangered in California, but more common elsewhere

Threat Rank:

- 0.1: seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- 0.2: moderately threatened in California (20%–80% of occurrences threatened/moderate degree and immediacy of threat)
- 0.3: not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

References

- CCH (Consortium of California Herbaria). 2023. CCH2: Specimen Data from the Consortium of California Herbaria. Accessed September 2023. <https://cch2.org/portal/index.php>.
- CDFW (California Department of Fish and Wildlife). 2023. RareFind 5, Version 5.3.0. California Natural Diversity Database. Sacramento, California: CDFW, Biogeographic Data Branch. Accessed September 2023. <https://map.dfg.ca.gov/rarefind/view/RareFind.aspx>.
- CNPS (California Native Plant Society). 2023. Rare Plant Inventory (online edition, v9.5). California Native Plant Society, Rare Plant Program. Accessed September 2023. <https://rareplants.cnps.org/Search/Advanced>.
- Jepson Flora Project. 2023. Jepson eFlora. Berkeley, California: University of California. Accessed September 2023. <https://ucjeps.berkeley.edu/eflora/>.

Appendix G

Wildlife Compendium

Wildlife Species

Birds

ICTERIDAE—BLACKBIRDS

Icterus cucullatus—hooded oriole

Sturnella neglecta—western meadowlark

FALCONIDAE—CARACARAS & FALCONS

Falco sparverius—American kestrel

FRINGILLIDAE—FRINGILLINE & CARDUELINE FINCHES & ALLIES

Haemorhous mexicanus—house finch

Spinus lawrencei—Lawrence's goldfinch

TYRANNIDAE—TYRANT FLYCATCHERS

Myiarchus cinerascens—ash-throated flycatcher

Sayornis saya—Say's phoebe

Tyrannus verticalis—western kingbird

ACCIPITRIDAE—HAWKS, KITES, EAGLES, & ALLIES

Buteo jamaicensis—red-tailed hawk

CORVIDAE—CROWS & JAYS

Corvus brachyrhynchos—American crow

Corvus corax—common raven

ALAUDIDAE—LARKS

Eremophila alpestris—horned lark

MIMIDAE—MOCKINGBIRDS & THRASHERS

Mimus polyglottos—northern mockingbird

CATHARTIDAE—NEW WORLD VULTURES

Cathartes aura—turkey vulture

PASSERIDAE—OLD WORLD SPARROWS

* *Passer domesticus*—house sparrow

STRIGIDAE—TYPICAL OWLS

Athene cunicularia—burrowing owl

COLUMBIDAE—PIGEONS & DOVES

Zenaida macroura—mourning dove

- * *Columba livia*—rock pigeon (rock dove)

CHARADRIIDAE—LAPWINGS & PLOVERS

Charadrius vociferus—killdeer

LANIIDAE—SHRIKES

Lanius ludovicianus—loggerhead shrike

STURNIDAE—STARLINGS

- * *Sturnus vulgaris*—European starling

HIRUNDINIDAE—SWALLOWS

Hirundo rustica—barn swallow

Petrochelidon pyrrhonota—cliff swallow

REMIZIDAE—PENDULINE TITS & VERDINS

Auriparus flaviceps—verdin

PARULIDAE—WOOD-WARBLERS

Setophaga coronata—yellow-rumped warbler

TROGLODYTIDAE—WRENS

Campylorhynchus brunneicapillus—cactus wren

PASSERELLIDAE—NEW WORLD SPARROWS

Amphispiza bilineata—black-throated sparrow

Artemisiospiza belli—Bell's sparrow

Passerculus sandwichensis—savannah sparrow

Spizella passerina—chipping sparrow

Zonotrichia leucophrys—white-crowned sparrow

Mammals

CANIDAE—WOLVES & FOXES

Vulpes macrotis arsipus—desert kit fox

Canis latrans—coyote

- * *Canis familiaris*—domestic dog

LEPORIDAE—HARES & RABBITS

Lepus californicus—black-tailed jackrabbit

Sylvilagus audubonii—desert cottontail

HETEROMYIDAE—POCKET MICE & KANGAROO RATS

Dipodomys sp.—kangaroo rat

SCIURIDAE—SQUIRRELS

Ammospermophilus leucurus—white-tailed antelope squirrel

Reptiles

PHRYNOSOMATIDAE – IGUANID LIZARDS

Callisaurus draconoides – zebra-tailed lizard

Sceloporus occidentalis—western fence lizard

Uta stansburiana – common side-blotched lizard

TEIIDAE – WHIPTAIL LIZARDS

Aspidoscelis tigris tigris – Great Basin whiptail

CROTAPHYTIDAE – COLLARED LIZARDS

Gambelia wislizenii – long-nosed leopard lizard

VIPERIDAE – VIPERS

Crotalus scutulatus – Mohave rattlesnake

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Appendix H

Special-Status Wildlife Species with
Low Potential or Not Expected to Occur
within the Biological Study Area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Amphibians				
<i>Anaxyrus californicus</i>	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. No suitable aquatic habitat or stream-adjacent upland habitat is present within the BSA to support this species.
<i>Rana draytonii</i>	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. No suitable aquatic habitat or stream-adjacent upland habitat is present within the BSA to support this species.
Reptiles				
<i>Emys marmorata</i>	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. No suitable aquatic habitat or stream-adjacent upland habitat is present within the BSA to support this species.
<i>Phrynosoma blainvillii</i>	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 areas, pine-cypress, juniper, and annual grassland habitats	Not expected to occur. The BSA located outside of the geographic range for this species.
Birds				
<i>Agelaius tricolor</i> (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. No suitable vegetation or freshwater habitat is present within the BSA to support this species.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Aquila chrysaetos</i> (nesting and wintering)	golden eagle	BCC/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Not expected to occur. While the BSA does provide open desert habitat, it lacks the hilly topography preferred by the species for wintering. The BSA also lacks large trees and cliffs required for this species to nest.
<i>Asio otus</i> (nesting)	long-eared owl	None/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 does not contain any live oak thickets or other dense stands of trees to support nesting for this species.
<i>Buteo swainsoni</i> (nesting)	Swainson's hawk	BCC/ST	Nests in open woodland and savanna, riparian areas, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Not expected to occur. No suitable vegetation or riparian habitat is present in the BSA to support nesting for this species.
<i>Charadrius montanus</i> (wintering)	mountain plover	BCC/SSC	Winters in shortgrass prairies, plowed fields, open sagebrush	Not expected to occur. No suitable tilled field or low-growing grassland habitat is present in the BSA to support overwintering for this species.
<i>Coccyzus americanus occidentalis</i> (nesting)	western yellow-billed cuckoo	FT, BCC/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. No suitable riparian habitat or woodland vegetation is present in the BSA to support nesting for this species.
<i>Empidonax traillii extimus</i> (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. No suitable vegetation is present in the BSA to support this species.
<i>Icteria virens</i> (nesting)	yellow-breasted chat	None/SSC	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Not expected to occur. No suitable vegetation or riparian habitat is present in the BSA to support this species.
<i>Piranga rubra</i> (nesting)	summer tanager	None/SSC	Nests and forages in mature desert riparian habitats dominated by cottonwoods and willows	Not expected to occur. The BSA does not contain mature desert riparian habitats dominated by cottonwoods or willows that is required by this species.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Setophaga petechia</i> (nesting)	yellow warbler	BCC/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Not expected to occur. No suitable vegetation or riparian habitat is present to support this species
<i>Vireo bellii pusillus</i> (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 suitable dense riparian thickets to support nesting for this species.
<i>Vireo vicinior</i> (nesting)	gray vireo	BCC/SSC	Nests and forages in pinyon-juniper woodland, oak, and chamise and redshank chaparral	Not expected to occur. The BSA lacks pinyon-juniper woodlands, oaks, chamise, and redshank chaparral, used by this species for nesting.
Fishes				
<i>Siphateles bicolor mohavensis</i>	Mohave tui chub	FE/FP, SE	Lacustrine ponds or pools; 4 feet minimum water depth; freshwater flow; mineralized and alkaline environment; habitat for aquatic invertebrate prey and egg attachment substrate; widgeon-grass (<i>Ruppia maritima</i>) preferred for egg attachment and thermal refuge in summer months	Not expected to occur. The BSA does not have perennial aquatic habitat that could support this species.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Invertebrates				
<i>Danaus plexippus plexippus</i> pop. 1	monarch - California overwintering population	FC/None	Wind-protected tree groves with nectar sources and nearby water sources	Not expected to occur. Suitable overwintering habitat for the species is not present in the study area.
Mammals				
<i>Antrozous pallidus</i>	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 study area lacks rocky outcrops, man-made structures, or trees suitable for this species to use as roosting habitat. This species could occasionally forage in vegetation within the study area.
<i>Chaetodipus fallax pallidus</i>	pallid San Diego pocket mouse	None/SSC	Desert wash, desert scrub, desert succulent scrub, and pinyon-juniper woodland	Low potential to occur. This species is often found in coastal sage scrub but can also be found in desert areas. However, the species was not observed during protocol small mammal surveys, and the CNDDDB occurrence records within 5 miles of the BSA are from over 100 years ago (CDFW 2023).
<i>Corynorhinus townsendii</i>	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 roost or forage. The study area lacks suitable roosting or foraging habitat.
<i>Eumops perotis californicus</i>	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 roost, low potential to forage. The study area lacks rocky canyons, cliffs, trees, and tunnels suitable for this species to use as roosting habitat. This species could occasionally forage in vegetation within the study area.
<i>Microtus californicus mohavensis</i>	Mojave river vole	None/SSC	Wet, weedy, herbaceous areas along the Mojave River	Not expected to occur. No suitable wet herbaceous vegetation present in the BSA to support this species.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Spermophilus (Xerospermophilus) mohavensis</i>	Mohave ground squirrel	None/ST	Desert scrub habitats, including those dominated by creosote bush and burrobush, desert sink scrub, and desert saltbush scrub	Absent. Mohave ground squirrel was not observed during the 2023 focused protocol surveys within the BSA. The BSA contains suitable creosote bush habitat capable of supporting this species, and small mammal burrow complexes were observed during the biological reconnaissance; however, the site is in close proximity to major roads and a highway.

Notes: BSA = biological study area; CNDDDB = California Natural Diversity Database.

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

FC: Federal candidate for listing

FE: Federally listed as endangered

FT: Federally listed as threatened

State

FP: California Fully Protected species

SE: State listed as endangered

SSC: California Species of Special Concern

ST: State listed as threatened

SCT: State candidate for listing as threatened

WL: California Watch List species

References

CDFW. 2023. RareFind 5, Version 5.3.0. California Natural Diversity Database. Sacramento, California: CDFW, Biogeographic Data Branch. Accessed October 2023. <https://wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>.

Richardson, L.L. Bumble Bees of North America Occurrence Records Database [unpublished database]. Database provided via email from L.L. Richardson to Anna Cassady (Biologist, Dudek). May 3, 2023.

Appendix I

Burrowing Owl Relocation Plan

Burrowing Owl Relocation Plan

Mojave Industrial Park Project

FEBRUARY 2024

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
2012 Staff Report	California Department of Fish and Wildlife’s 2012 Staff Report on Burrowing Owl Mitigation
BTR	biological resources technical report
CDFW	California Department of Fish and Wildlife
MM	mitigation measure

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1 Purpose and Objectives

The following burrowing owl relocation plan describes the burrowing owl (*Athene cunicularia*) monitoring and reporting requirements during construction of the Mojave Industrial Park Project (project) as recommended in the biological resources technical report (BTR) prepared for the project by Dudek (2024). This plan was prepared in accordance with Mitigation Measure (MM) BIO-10 (Pre-Construction Burrowing Owl Survey and Avoidance) included in the BTR. The full text of MM-BIO-10 is provided in Section 1.1 for ease of reference.

This burrowing owl relocation 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:

1. Methods to confirm a burrow is active
2. Measures that could be used to avoid and minimize impacts
3. Methods to be used to determine vacancy and excavation timing
4. Methods for burrow excavation
5. Removal of other potential owl burrow surrogates or refugia
6. Reporting methods of the excavation and closure of burrows
7. Monitoring to evaluate success
8. Reporting methods of 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 from the BTR (Dudek 2024). The full text of MM-BIO-10 is provided below.

MM-BIO-10 Pre-Construction Burrowing Owl Survey 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 re-surveyed. 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 (2012 Staff Report) or current version.

If burrowing owls are detected, the Burrowing Owl Relocation Plan (Appendix I) shall be implemented in consultation with CDFW. As required by the Burrowing Owl Relocation Plan, disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers will be established around occupied burrows as determined by a qualified biologist. No project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that occupied burrows have been vacated or the nesting season has completed.

Outside of the nesting season, passive owl relocation techniques approved by CDFW shall be implemented. Owls shall be excluded from burrows in the immediate project area and within a buffer zone if there is a threat to the surface or subterranean burrow structure by installing one-way doors in burrow entrances. These doors will be placed at least 48 hours prior to ground-disturbing activities. The project area shall be monitored daily for 1 week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat will be provided following the guidance in the CDFW 2012 Staff Report or current version.

Where possible, burrows will be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any wildlife inside the burrow.

Mitigation for direct impacts to 76.47 acres of occupied breeding habitat shall be fulfilled through conservation of suitable burrowing owl habitat through the purchase of credits at a minimum of 1:1 in-kind habitat replacement of equal or better functions and values to those impacted by the project, for a total of 76.47 acres.

2 Background

2.1 Project Overview

The approximately 98.5-acre project, including the 81.1-acre project site and the 17.4-acre off-site improvements, is located in the western extent of the City of Victorville, which is located in the Victor Valley/High Desert region in western San Bernardino County (Figure 1, Project Location; Figure 2, Burrowing Owl Locations). The project is located immediately north of Mojave Drive, approximately 1-mile east of U.S. Highway 395.

The project would include the construction of three industrial/warehouse buildings and associated improvements including passenger vehicle parking spaces, trailer parking spaces, tractor-trailer loading docks, and other associated site improvements such as landscaping, sidewalks, and internal driveways. The project site is bound to the south by Mojave Drive, to the north by vacant land and Cactus Road/Tawney Ridge Lane (unpaved), to the west by vacant land and Onyx Road (unpaved), and to the east by vacant land and Topaz Road (unpaved). Surrounding land uses include vacant land, U.S. Highway 395, single-family residences, and the Melva Davis Academy of Excellence.

Additionally, the project will make utility and road improvements along Onyx Road, Mojave Drive, Cactus Road/Tawney Ridge Lane, and Topaz Road, including frontage landscaping and pedestrian improvements.

2.2 2023 Survey Results

Biological resource surveys of the project site and off-site areas were conducted between September 2022 and September 2023. During these surveys, one burrowing owl and several suitable burrows (i.e., burrows at least 4 inches in diameter) were observed within the project site (Figure 2, Burrowing Owl Locations). One burrowing owl individual was observed flying over project site on July 18, 2023, after being flushed from its off-site burrow location, approximately 150-feet east of the project (Figure 2). Including the flushed individual, a total of two adults and four juveniles were detected at the occupied burrow location. Although the burrowing owls were not nesting within the project, they are likely to use the project to forage due to their close proximity and the presence of suitable foraging habitat. The project contains suitable nesting or overwintering habitat for the species due to presence of open scrub vegetation and burrows of suitable size. Therefore, burrowing owl could use the site as overwintering habitat or for breeding in subsequent years and could occupy the project site or off-site areas 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 CDFW 2012 Staff Report would be necessary to re-evaluate the locations of potential burrowing owl burrows located within the project limits so that impacts to owls or active owl nests can be avoided or minimized. Consistent with MM-BIO-10, a pre-construction survey for burrowing owl shall be conducted in areas supporting potentially suitable habitat no more than 14 days prior to the start of construction activities, and a second survey shall be completed within 24 hours of the start of site preparation or grading activities.

2.3 Mitigation for Occupied Habitat

The project would result in the loss of 76.47 acres of occupied habitat for burrowing owl. Mitigation for direct impacts to occupied habitat will be fulfilled through the purchase of credits at a CDFW-approved mitigation bank or other conservation mechanism approved by the City of Victorville and CDFW at a minimum of 1:1 in-kind habitat replacement of equal or better functions and values to those impacted by the project, for a total of 76.47 acres.

2.4 Qualified Biologist

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

1. Familiarity with the species and its local ecology.
2. Experience conducting habitat assessments and non-breeding and breeding season surveys, or experience with these surveys conducted under the direction of an experienced surveyor.
3. Familiarity with the appropriate state and federal statuses related to burrowing owls, scientific research, and conservation.
4. 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 shall not be disturbed during the nesting season. Occupied burrows shall 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.

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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 the surveys for all impact areas as well as within a 150-meter (approximately 500-foot) buffer no more than 14 days prior to the start of the 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 and will consist of walking parallel transects 7–20 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 (whitewash, feathers, pellets, etc.). 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 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 a 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 CDFW.

The active burrows will be monitored to ensure that the buffer distance is effective. Effective buffers minimize direct impacts by providing space between the bird 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 the birds' 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-10, no project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall 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 non-breeding season or a 250-foot buffer during the breeding season due to environmental, topographic, or construction constraints, etc., the buffer may be reduced by screening burrows as a means of minimizing 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 need to 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 should be stacked three bales high and 50 feet wide. During the non-breeding season, hay bales should be stacked two bales high and 50 feet wide. All hay bales used on the project site will be certified as weed free. Perches near the burrow should remain within the sheltered area of the bales, and the bales should not be closer than 2 or 3 feet from the occupied burrow and should 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 impacts to burrowing owl are minimized and the birds 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 owl 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 make changes to the shelters and buffers in accordance with these guidelines to increase protection of the burrowing owl 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 site conditions that should be included are 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 in place will be described in the monthly reports (Section 5.2, Reporting Requirements).

3.4 Excavation of Inactive Burrows

Excavation of burrows confirmed inactive based on wildlife camera monitoring will help deter burrowing owls from occupying the construction areas. Pre-construction surveys (described in Section 3.1) 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 lack of burrowing 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 its 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 sync with the owls' natural dispersal cycle (i.e., early in the non-breeding season, when owls are less site-faithful) (Le Gouar et al. 2012; Hennessy et al. 2020).

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 in 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, they will be checked with an endoscope 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 located 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 be required to 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 between 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 burrow 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 City of Victorville 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 City of Victorville and CDFW. The reports will summarize the construction activities with the potential to impact burrowing owls that occurred, 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

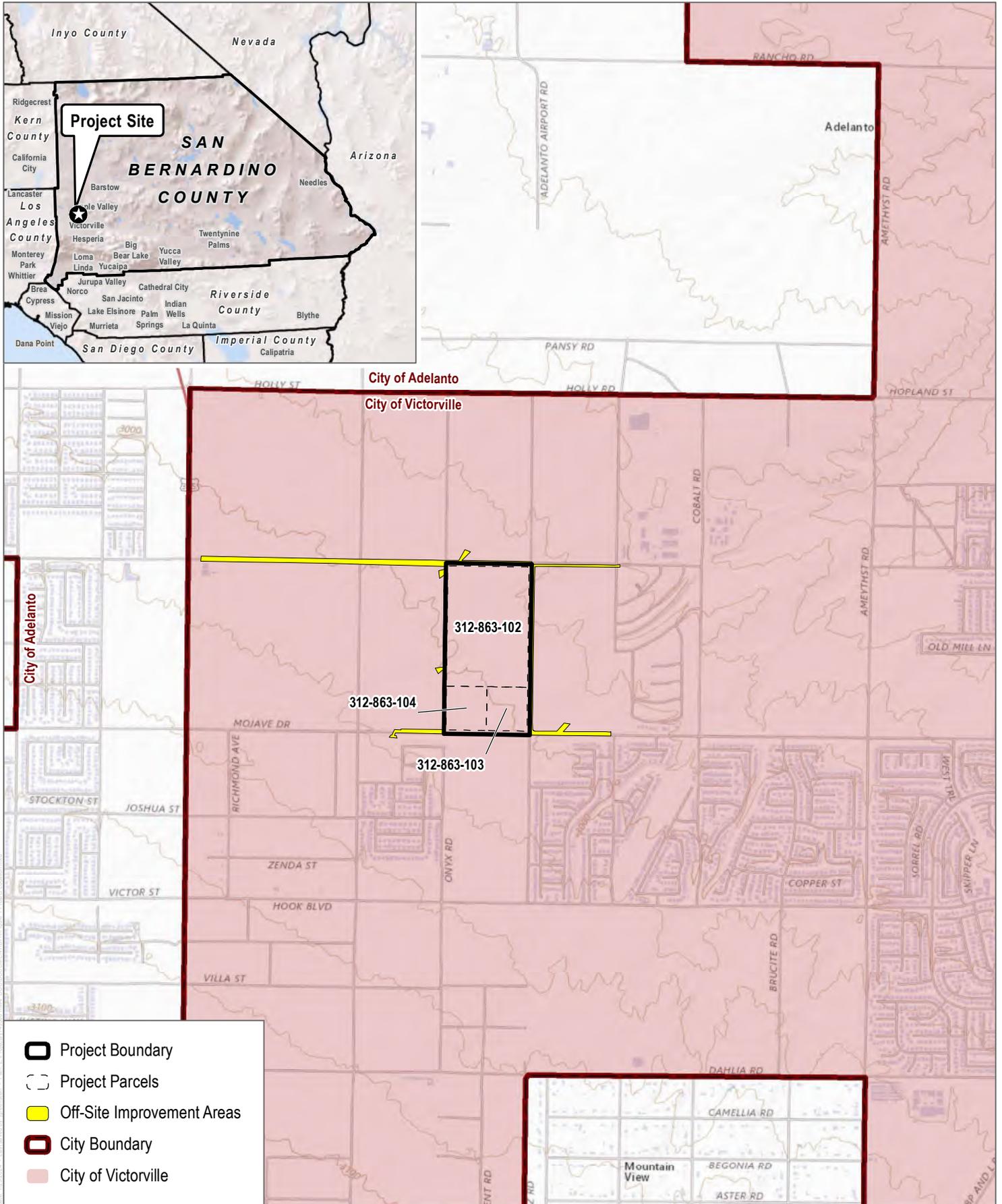
A final compliance report will be submitted to the City of Victorville and CDFW summarizing the effectiveness of the mitigation measures and the level of burrowing owl take associated with the project.

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6 References

- CDFG (California Department of Fish and Game). 2012. *Staff Report on Burrowing Owl Mitigation*. State of California, Natural Resources Agency. https://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/JVR/AdminRecord/IBR/RTCReferences/3a%20CDFG%202012_Staff%20Reports%20on%20Burrowing%20Owl%20Mitigation.pdf.
- Dudek. 2024. *Biological Resources Technical Report for the Mojave Industrial Park Project*. Encinitas, California: Dudek. January 2024.
- Hennessy, S., C. Wisinski, N. Ronan, C. Gregory, R. Swaisgood, and L. Nordstrom. 2020. *Assessing California's Relocation Guidelines for Burrowing Owls Impacted by Renewable Energy Development*. California Energy Commission. Publication Number: CEC-500-2020-051. August 2020.
- Le Gouar, P., J.B. Mihoub, and F. Sarrazin. 2012. "Dispersal and Habitat Selection: Behavioural and Spatial Constraints for Animal Translocations." In *Reintroduction Biology: Integrating Science and Management*, edited by J.G. Ewen, D.P. Armstrong, K.A. Parker, and P.J. Seddon, 138–164. West Sussex, UK: Wiley-Blackwell.

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SOURCE: Maxar 2020; County of San Bernardino 2023

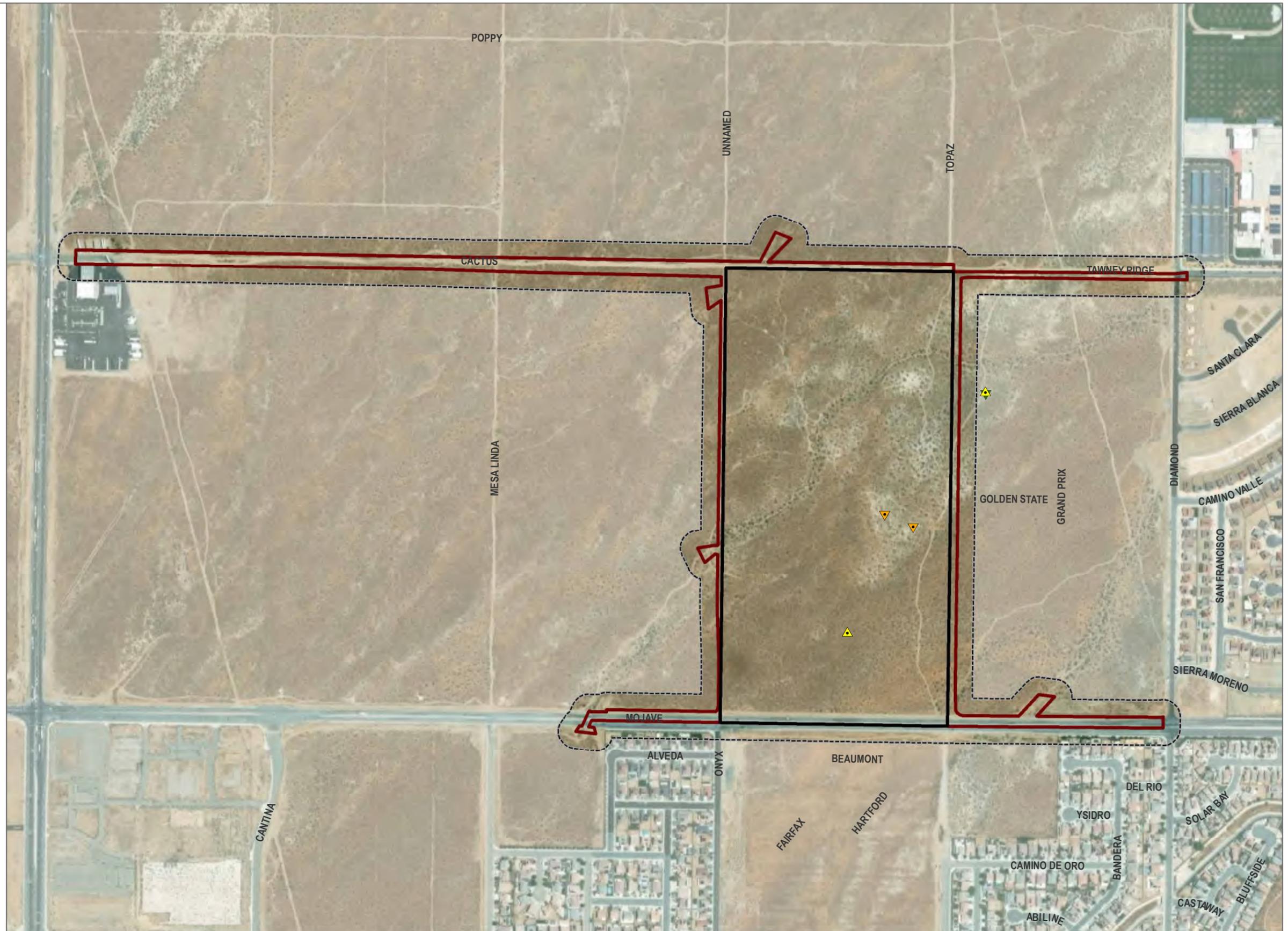
FIGURE 1

Project Location

Mojave Industrial Park Project

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-  Project Site
-  Off-Site Improvement Areas
-  Biological Study Area (100' Buffer)
-  Burrowing owl (*Athene cunicularia*) direct observation
-  Occupied burrowing owl burrow
-  Suitable burrowing owl burrow



SOURCE: Maxar 2020; Open Street Map 2023



FIGURE 2
Burrowing Owl Locations
 Mojave Industrial Park Project

Appendix J

Desert Tortoise Survey Forms

Date of survey: 12 April 2023 Survey biologist(s): Ryan Stanley and Chelsea Bowers-Doerning
(day, month, year) (name, email, and phone number)

Site description: Mojave Industrial Park Project, 97.42 acres; western extent of Victorville, California
(project name and size; general location)

County: San Bernardino County Quad: Adelanto, CA Location: Easting: 464763m, Northing: 3821205m; Zone 11N
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 149.12 acres Transect #: 16 Transect length: 0.5-mile

GPS Start-point: Easting: 465365m, Northing: 3821626m; Zone 11N; Elevation: 904m Start time: 10:00 am
(easting, northing, elevation in meters)

GPS End-point: Easting: 464338m, Northing: 3820842m; Zone 11N; Elevation: 920m End time: 2:35 pm
(easting, northing, elevation in meters)

Start Temp: 15.56 °C End Temp: 21.11 °C

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

No live tortoises or tortoise sign were observed during the survey.

The survey area included the Mojave Industrial Park Project Site (81.1 acres) and off-site improvement areas (16.32 acres). The entire project area and a 100-foot buffer was surveyed on foot using 10m transects.

Date of survey: 13 April 2023 Survey biologist(s): Tracy Park, tpark@dudek.com, 442-284-3435; Ryan Stanley; Chelsea Bowers-Doerning
(day, month, year) (name, email, and phone number)

Site description: Mojave Industrial Park Project, 97.42 acres; western extent of Victorville, California
(project name and size; general location)

County: San Bernardino County Quad: Adelanto, CA Location: Easting: 464763m, Northing: 3821205m; Zone 11N
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Dr. Sampling Area size to be surveyed: 149.12 acres Transect #: 42 Transect length: 0.5-mile

GPS Start-point: Easting: 464652m, Northing: 3821638m; Zone 11N; Elevation: 912m Start time: 09:15 am
(easting, northing, elevation in meters)

GPS End-point: Easting: 464888m, Northing: 3821639m; Zone 11N; Elevation: 911m End time: 4:07 pm
(easting, northing, elevation in meters)

Start Temp: 13.89 °C End Temp: 18.89 °C

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

No live tortoises or tortoise sign were observed during the survey.

The survey area included the Mojave Industrial Park Project Site (81.1 acres) and off-site improvement areas (16.32 acres). The entire project area and a 100-foot buffer was surveyed on foot using 10m transects.

Date of survey: 18 April 2023 Survey biologist(s): Tracy Park, tpark@dudek.com, 442-284-3435
(day, month, year) (name, email, and phone number)

Site description: Mojave Industrial Park Project, 97.42 acres; western extent of Victorville, California
(project name and size; general location)

County: San Bernardino County Quad: Adelanto, CA Location: Easting: 464763m, Northing: 3821205m; Zone 11N
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Dr. Sampling Area size to be surveyed: 149.12 acres Transect #: 9 Transect length: 0.5-mile

GPS Start-point: Easting: 464888m, Northing: 3821639m; Zone 11N; Elevation: 911m Start time: 10:03 am
(easting, northing, elevation in meters)

GPS End-point: Easting: 464993m, Northing: 3821630m; Zone 11N; Elevation: 910m End time: 3:24 pm
(easting, northing, elevation in meters)

Start Temp: 12.22 °C End Temp: 17.22 °C

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

No live tortoises or tortoise sign were observed during the survey.

The survey area included the Mojave Industrial Park Project Site (81.1 acres) and off-site improvement areas (16.32 acres). The entire project area and a 100-foot buffer was surveyed on foot using 10m transects.

Appendix K

Desert Kit Fox Relocation Plan

Desert Kit Fox Relocation and Mitigation Plan

Mojave Industrial Park

Project

FEBRUARY 2024

Prepared for:

COVINGTON DEVELOPMENT PARTNERS

14180 Dallas Parkway, Suite 730

Dallas, Texas 75254

Contact: Brandon Gallup

Prepared by:

DUDEK

605 Third Street

Encinitas, California 92024

Contact: Brock Ortega



Brock Ortega
Principal

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
CDFW	California Department of Fish and Wildlife
MM	mitigation measure
plan	Desert Kit Fox Relocation Plan
project	Mojave Industrial Park Project
USFWS	U.S. Fish and Wildlife Service

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1 Introduction

The Mojave Industrial Park Project (project) involves the construction of three industrial/warehouse buildings totaling 1,351,400 square feet of industrial/warehouse space and associated improvements within the 81.1-acre project site and 17.4 acres of off-site improvements. The project site is located in the western portion of the City of Victorville, which is located in the Victor Valley/High Desert region in western San Bernardino County (Figure 1, Project Location). Most of the project site is dominated by creosote bush scrub and provides suitable habitat for desert kit fox (*Vulpes macrotis arsipus*).

1.1 Potential Impacts to Desert Kit Foxes

While not state or federally listed, nor a California Department of Fish and Wildlife (CDFW) Species of Special Concern, the desert kit fox is protected from take by Title 14 of the California Code of Regulations Section 460. Furthermore, there is heightened concern (since 2014) for desert kit fox and the possible effects from development in the desert because of the discovery of canine distemper virus in foxes on and near a several solar project sites in the Colorado Desert region—specifically, the Genesis Solar Energy Project, Colorado River Substation, and Desert Sunlight Project in the eastern Colorado Desert (Clifford and Rudd 2013).

Without protection measures, desert kit foxes on the project site could be injured or killed during construction activities due to the number of personnel, vehicles and equipment, and processes associated with construction, vegetation mowing, and grading. Denning and foraging habitat will be eliminated on the project site as a result of construction; therefore, any foxes within the project site will need to be relocated off the project site. As a result, direct impacts to foxes and indirect impacts to their local populations may occur, including, but not limited to, disrupted social hierarchies, increased fighting, decreased survival, dispersal of displaced foxes to undesirable areas, and increased disease incidence and/or transmission. No permanent fencing will occur along the project site perimeter that would exclude foxes from area use; however, suitable habitat for foxes would be removed following construction activities.

1.2 Purpose and Objectives

During the course of focused surveys, specifically Mohave ground squirrel (*Xerospermophilus mohavensis*) surveys, at least one desert kit fox was observed within the project site during camera trapping studies. This Desert Kit Fox Relocation Plan (plan) outlines the proposed methods for implementing the relocation of this desert kit fox and any additional individuals inhabiting the project site.

While the Mitigation Measure (MM) BIO-14 (Pre-Construction Desert Kit Fox Survey and Avoidance) from the project biological resources technical report does not specifically require that a plan be written, it does require consultation with CDFW, and thus a plan would help facilitate this requirement. The primary purpose of this plan is to document the implementation methods for exclusion of foxes. For ease of reference, MM-BIO-14 is provided in Section 1.3.

1.3 Mitigation Measure BIO-10

MM-BIO-10 Pre-Construction Desert Kit Fox Survey and Avoidance. A pre-construction survey for desert kit fox shall be conducted within 10 days before initiation of site preparation or grading activities to determine the presence/absence of desert kit fox.

If desert kit fox is detected, the desert kit fox relocation and mitigation plan shall be implemented. As required by the desert kit fox relocation and mitigation plan, if an active non-natal desert kit fox den is detected, a 200-foot no disturbance buffer will be established around the active den, unless otherwise authorized by the CDFW. Where required buffering will not be feasible, passive relocation, as outlined in the desert kit fox relocation and mitigation plan, is allowed with concurrence from the City of Victorville and CDFW. If an active natal desert kit fox den is detected, an initial 200-foot no disturbance buffer will be established around the natal den, and this buffer will be maintained until the den can be verified to not host pups. Construction activities will not be permitted in this area until the den has been vacated. Once the den is vacated, and if in danger by construction, it can be collapsed, if deemed necessary by a qualified biologist.

A report to evaluate the success of the relocation efforts and any subsequent re-occupation, if applicable, will be provided (including a comprehensive summary, tables, maps, etc.) at the end of the construction period. Data will be readily available to the CDFW upon request. If an injured, sick, or dead desert kit fox is detected on any area associated with the project, the designated CDFW personnel at both the Ontario office and the Wildlife [Health] Lab will be notified as described within the desert kit fox relocation and mitigation plan.

2 Background

2.1 2023 Survey Results

2.1.1 Desert Kit Fox Dens

During the Spring and Summer of 2023, Dudek biologists conducted focused protocol surveys for burrowing owl and desert tortoise within the project site. Biologists surveyed the site by walking approximately 10-meter-wide (33-foot-wide) transects for 100% coverage of the project site and the off-site improvement areas. The intent of the surveys was to record the presence of burrowing owl or desert tortoise individuals and suitably-sized and -shaped burrows. During these surveys, Dudek biologists incidentally mapped potentially suitable desert kit fox dens approximately 230 feet north of the project site (Figure 2, Desert Kit Fox Den Locations). No active desert kit fox den complexes or signs were observed. However, desert kit fox have a moderate to high potential to use these burrows and surrounding vicinity as habitat prior to construction based on confirmed sightings within the project.

2.1.2 Desert Kit Fox Observations

Dipodomys Ecological Consulting biologists conducted Mohave ground squirrel protocol surveys within the project site between April 21 and July 8, 2023. These surveys included running five camera trap stations. The camera traps documented at least one desert kit fox within the project site.

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3 Pre-Construction Surveys and Biological Compliance Monitoring

In accordance with MM-BIO-14 from the biological resources technical report, pre-construction surveys will be conducted within 10 days before initiation of site preparation or grading activities to determine if desert kit foxes are in the project site or within 200 feet of the project site where legal access has been granted. This allows for the documentation of active den use within the project site. The pre-construction survey shall be conducted by a qualified biologist and consist of walking through habitat prior to grading to search for sensitive biological resources. The biologist shall note any suitably sized dens with fresh desert kit fox sign or presence of desert kit fox. Copies of the desert kit fox survey results will be submitted to CDFW.

If an active non-natal desert kit fox den is detected within the project site or 200-foot survey buffer area during the biological compliance monitoring, a 200-foot buffer will be established around the active den, unless otherwise authorized by CDFW. Where required buffering will not be feasible, passive relocation is allowed with concurrence from the City of Victorville and CDFW.

If an active natal desert kit fox den is detected within the project site or 200-foot survey buffer area during the pre-construction surveys, an initial 200-foot no-disturbance buffer will be established around the natal den, and this buffer will be maintained until the den can be verified to not host pups. Construction activities will not be permitted in this area until the den has been vacated. Once the den is vacated, and if in danger by construction, it can be collapsed, if deemed necessary by the project lead and/or project biologist.

3.1 Desert Kit Fox Protection Measures

The following protection measures will be implemented for protection of desert kit foxes at the project site:

- The project biologist and/or project lead will be familiar with the approved plan and all methods therein. Both will be the project contacts with CDFW and remain apprised of all issues and conversations relative to desert kit fox associated with the site. All biological monitors assigned to work on this species will be familiar with this plan and approved methods. The project owner will have ultimate responsibility for implementation of the plan.
- Data and results of surveys will be readily available to the agencies, with summary reports provided as outlined in Section 5, Reporting and Notifications.
- The Worker Environmental Awareness Program will include information for all construction workers, and especially nighttime workers, that will (1) educate them sufficiently about desert kit fox biology and nocturnal activity for them to understand why they are requested to follow certain procedures, (2) provide measures for avoiding impacts to desert kit fox, and (3) provide procedures for reporting if they see a live, injured, or dead desert kit fox.
- A speed limit of 15 mph will be observed on the project site for the protection of wildlife and maintenance of air quality.

- All pipes greater than 4 inches in diameter within the project site must be capped and/or covered every evening or when not in use to prevent desert kit foxes or other animals from accessing the pipes or must be inspected by a biological monitor prior to their being moved.
- All steep-walled holes or trenches more than 2 feet deep will be covered at the close of each workday or provided with one or more escape ramps, at maximum 50-foot intervals, constructed of earth fill or wooden planks.
- To preclude any transmission of canine distemper virus and other diseases by project personnel, the CDFW veterinarian's guidance will be incorporated and implemented, including:
 - No pets will be allowed on the site prior to or during site mobilization and construction.
 - Any hazing activities that include the use of chemical or other repellents that could contain disease-bearing substances must be cleared through CDFW prior to use. Animal-based repellents (e.g., coyote urine, bobcat urine) may be used only after testing and approval by CDFW.
 - If canine distemper virus is found at any point during the project, all handling of desert kit foxes and monitoring of dens will observe clean techniques, including, at a minimum, disinfecting or covering shoes after visiting any den, disinfecting equipment that has come into contact with any desert kit fox, and wearing single-use disposable gloves.
- Notification, disease testing, and necropsies will be performed as described in Section 5 for any sick or diseased desert kit fox or for any desert kit fox mortality.

4 Passive Desert Kit Fox Relocation Techniques

Relocation, for the purposes of this plan, will refer to the exclusion of desert kit foxes from the project site to locations off the project site, some or most of which are likely to be already within the individuals' core or extended use areas. Relocation will include both passive and active methods to remove desert kit foxes from the project site during construction. Table 1 provides a detailed set of measures based on the occupancy and condition of desert kit fox dens. Desert kit fox dens with litters or adults raising pups will be avoided until young have left the den. A minimum no-disturbance buffer of 200 feet will be maintained around all active natal dens where young are being reared. This buffer may be reduced through coordination between the project biologist and CDFW. Any active desert kit fox den is considered to be a natal den between February and July, unless shown otherwise by camera monitoring.

4.1 Passive Relocation Methods

Passive relocation is a program of hazing and den collapse to discourage desert kit foxes from continuing to use those dens and prevent re-use of the project site. Note that it is preferable to encourage an animal to leave its den, rather than blocking it out of the den after it has left the den for the evening, as recommended by the USFWS "Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance" (2011). Desert kit foxes may succumb to exposure during the day or predation during the night if they are blocked out of a den to which they have returned, expecting refuge. Even if a desert kit fox is known to use dens off the project site, just because a desert kit fox leaves for the night does not mean that it will use off-site dens and not try to return to the project site. By contrast, discouraging use of a den provides a desert kit fox with the opportunity to seek use of another safe den. Hazing techniques will include progressively blocking the den with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance) and artificial, non-injurious materials (e.g., filled sandbags, blocks), and/or partially excavating some of the inactive tunnels in a multi-tunneled den. Other techniques that CDFW must approve prior to their use may include approved urine or chemical compounds, non-injurious noise, human activity, recordings of dogs or coyotes, or other techniques. Knowing where desert kit foxes live and the dens that they use, as determined by previous surveys and observations, will help ensure the feasibility of progressive den blocking and continued desert kit fox safety.

Persistent and continued hazing hopefully will result in encouraging most desert kit foxes to move to a den site that is off the project site. However, while den closure may discourage a desert kit fox from using a particular den, it does not prevent the desert kit fox from simply using a different den on the project site, digging a new den, or excavating a former, now-collapsed den (this has been observed at other solar projects). However, an alternative relocation method for desert kit foxes near the project site boundary could include wrapping temporary chain-link fencing around the project site and around the den, forming a "peninsula" of unfenced habitat that will funnel desert kit foxes off the project site, rather than to another location within the project site. This funnel would be wide enough to permit desert kit foxes to escape a coyote. For dens with pups, the width would be 200 feet from the burrow on all sides. Once desert kit foxes have moved off site, the gap would be closed, and the funnel of fencing removed.

Previously, Dudek biologists utilized chain-link fencing by covering an entire den in conjunction with installing commonly available pet doors at each entrance. This was found to be most effective at prohibiting the excavation of new entrances, leading to eventual den abandonment. Animals were allowed to access the dens for a short period before biologists activated the pet door's one-way function, prohibiting ingress but allowing egress. This is a preferred method and can be employed for large dens or those with multiple entrances, in addition to the techniques described above.

Regardless of the technique used, passive relocation will be timed such that, to the extent feasible, grading and clearing will occur in other portions of the project site first. Leaving a naturally vegetated but relatively narrow path to better off-site areas can be successful. The purpose of this is to make the rest of the site less attractive to exiting desert kit foxes as compared to the adjacent natural habitat. Hopefully, desert kit foxes will choose to leave the site and not establish new dens within the project construction area.

Three nights of inactivity, as proved by camera and track evidence, is sufficient to determine that the passive techniques have been successful. It is imperative that the entire den is excavated, as desert kit fox will find and dig out partially excavated den networks.

4.2 Desert Kit Fox Return to the Project Site

If a desert kit fox attempts to reestablish residency within the project site, it will be passively relocated using techniques described in Table 1. In the event a desert kit fox is spotted within 200 feet of active construction, a monitor will be present to ensure the desert kit fox remains safe. If the monitor determines that the nearby construction is negatively impacting the desert kit fox, construction will be halted until the monitor determines it is safe to continue. Once the desert kit fox moves to a location more than 200 feet away from active construction, construction activities can resume as normal.

Table 1. Desert Kit Fox Den Classifications and Protection Measures

Den Type	Definition	Time Period	Action Required
<p>Potentially and definitely active dens (non-natal): includes all dens on the project site and dens that cannot be avoided during construction</p>	<p>Den of sufficient size and shape/curvature that is active; current or older desert kit fox sign may or may not be present</p>	<p>Any season – Note that between February and July, it must be proven that they are not natal dens (see below)</p>	<ol style="list-style-type: none"> 1. Monitor for up to 3 consecutive nights using a tracking medium (such as diatomaceous earth or fire clay) and/or infrared camera stations at the entrance. <ol style="list-style-type: none"> 1a. During the observation period, the biologist shall determine the need to install a buffer and its appropriate size (if any). 2. If no tracks entering the den are observed in the tracking medium or no photos of the target species entering the den are captured after 3 nights, the den will be excavated completely and backfilled by hand. May be excavated during pre-construction survey period. 3. If tracks are observed, the den will be protected by an appropriate buffer as determined by the biologist; the den will be progressively blocked with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance) and artificial, non-injurious materials (e.g., filled sandbags, blocks) for the next 3 to 5 nights to discourage the desert kit fox from continued use. In addition to progressively blocking the den, the biologist may employ chain-link fence to cover the den with one-way pet doors at each entrance. Other hazing techniques (e.g., approved urine or chemical compounds, noise, recordings of dogs or coyotes) may be used. After verification that the den is unoccupied, it will be excavated and backfilled by hand to ensure that no desert kit foxes are trapped in the den. If the den is verified to be inactive, then it may be collapsed during whelping/pup-rearing season (February through July) only after consulting with CDFW. 4. If the den remains occupied, the passive hazing and monitoring will be repeated until it is verified the occupant has left the den. Alternatively, the den may be partially excavated when it is temporarily vacant, leaving sufficient depth to provide protection for the desert kit fox but discouraging it from den use.
<p>Active natal or pup-rearing dens: includes all dens on the project site and all dens within the survey area for construction that</p>	<p>Active natal den – A den with pups</p>	<p>During whelping season (February through July)</p>	<ol style="list-style-type: none"> 1. If an active natal den (a den with pups) is detected on the site, the biologist shall determine the appropriate course of action to minimize the potential for animal harm or mortality. The course of action would depend on the age of the pups, location of the den on the site (e.g., is the den in a central area or in a perimeter location), and the pending construction activities proposed near the den. An initial minimum 200-foot no-disturbance buffer will be maintained

Table 1. Desert Kit Fox Den Classifications and Protection Measures

Den Type	Definition	Time Period	Action Required
<p>have been confirmed to be active</p>			<p>around all active natal or pup-rearing dens. Active natal/pup-rearing dens will not be excavated.</p> <p>1a. If the den is active during the whelping season, even if pups are not seen, a 200-foot no-disturbance buffer will be maintained until the den can be verified to not host pups.</p> <p>1b. CDFW will be notified of intent to close a den during the pupping season and closures will be in coordination with CDFW.</p> <p>2. Vehicular access through the buffer area will be permitted at the discretion of the biologist. Other construction activities will not be allowed unless coordinated with CDFW. Each request to enter a buffer is to be made on a case-by-case basis; work is to be performed during daylight hours; and construction personnel will be given an extensive tailgate training by a member of the biological monitoring staff, to include desert kit fox behaviors, den status, and animal stress. The biological monitor has authority to stop work; biological monitors must be present to monitor the den while any work is being performed in the buffer; all work will be stopped or paused upon the biological monitor's instruction if desert kit foxes are observed exhibiting stress or other signs of impacts; and any work activity within a den buffer will be documented and reported in the monthly compliance report.</p> <p>3. The den will be monitored by non-invasive techniques (e.g., wildlife camera, night-vision binoculars, telemetry if an adult is collared) until the den is vacated.</p> <p>4. If the situation is unusual and/or not addressed by the approved plan, then the biologist or project lead, in consultation with the biologist, will consult with CDFW to determine the appropriate course of action to minimize the potential for animal harm or mortality.</p>

Note: CDFW = California Department of Fish and Wildlife

5 Reporting and Notifications

- A report to evaluate the success of the relocation efforts and any subsequent re-occupation of the project site will be provided (including a comprehensive summary, tables, maps, etc.) at the end of the construction period. Data will be readily available to CDFW upon request.
- If an injured, sick, or dead desert kit fox is detected on any area associated with the project, the designated CDFW personnel at both the Ontario CDFW office and the CDFW Wildlife Health Lab will be notified as identified in the following.

- **Injured Animals.** If a desert kit fox is injured because of any project-related activities, the project lead, project biologist, or approved biological monitor will notify CDFW personnel within 8 hours regarding the capture and transport of the animal to the CDFW-approved wildlife rehabilitation and/or veterinarian clinic. Within 24 hours, a follow-up written notification of the incident will be sent to CDFW containing, at a minimum, the date, time, location, and circumstances of the incident. The project biologist or approved biological monitor will maintain communication with the rehabilitation clinic and/or veterinarian to monitor the animal's progress or demise and will report to CDFW weekly, or sooner if the animal recovers, dies, or is euthanized.

CDFW will determine the final disposition of the injured animal, whether it requires euthanasia or if it recovers.

All costs for professional care of the injured animal will be paid by the project owner.

- **Sick Animals.** If a sick desert kit fox is observed, the project lead, project biologist, or approved biological monitor will notify CDFW personnel within 8 hours regarding the capture and transport of the animal to the CDFW-approved veterinarian clinic. A follow-up written notification containing a description of the animal's condition, location found, and other relevant data will be sent to CDFW within 24 hours.

If the animal dies, it will be transferred to the CDFW Wildlife Health Laboratory for a necropsy, if they so choose, to determine the cause of death. The project owner will pay to have the animal transported. A written notification of the incident will be sent to CDFW and contain, at a minimum, the date, time, location, and circumstances of the incident.

CDFW will determine the final disposition of the animal if it recovers.

All costs for professional care, including transportation of the dead animal, will be paid by the project owner.

- **Fatalities.** If a desert kit fox is killed because of any project-related activities during construction, operation, and closure, or is found dead on the project site, the project lead, project biologist, or approved biological monitor will immediately refrigerate the carcass and notify CDFW personnel within 8 hours of the discovery to receive further instructions on the handling of the animal. Handling and storage of a dead animal will follow the most recently issued guidelines for handling a desert kit fox carcass (currently the CDFW Wildlife Health Laboratory; CDFW 2023). Written information will be sent by the project biologist or approved biological monitor with the carcass that includes a description of the animal's condition, location found, and other relevant data. A necropsy will be performed by the CDFW Wildlife Health Laboratory if they so choose, to determine the cause of death or other health-related factors, even in the case of vehicle collision. The project owner will pay to have the animal transported.
- Prior to beginning any work related to this plan, CDFW will provide the project owner with the names and contact information of an approved local wildlife veterinarian and wildlife rehabilitation facility. CDFW will also provide names and contact information for relevant personnel from CDFW and the CDFW Wildlife Health Laboratory facility.

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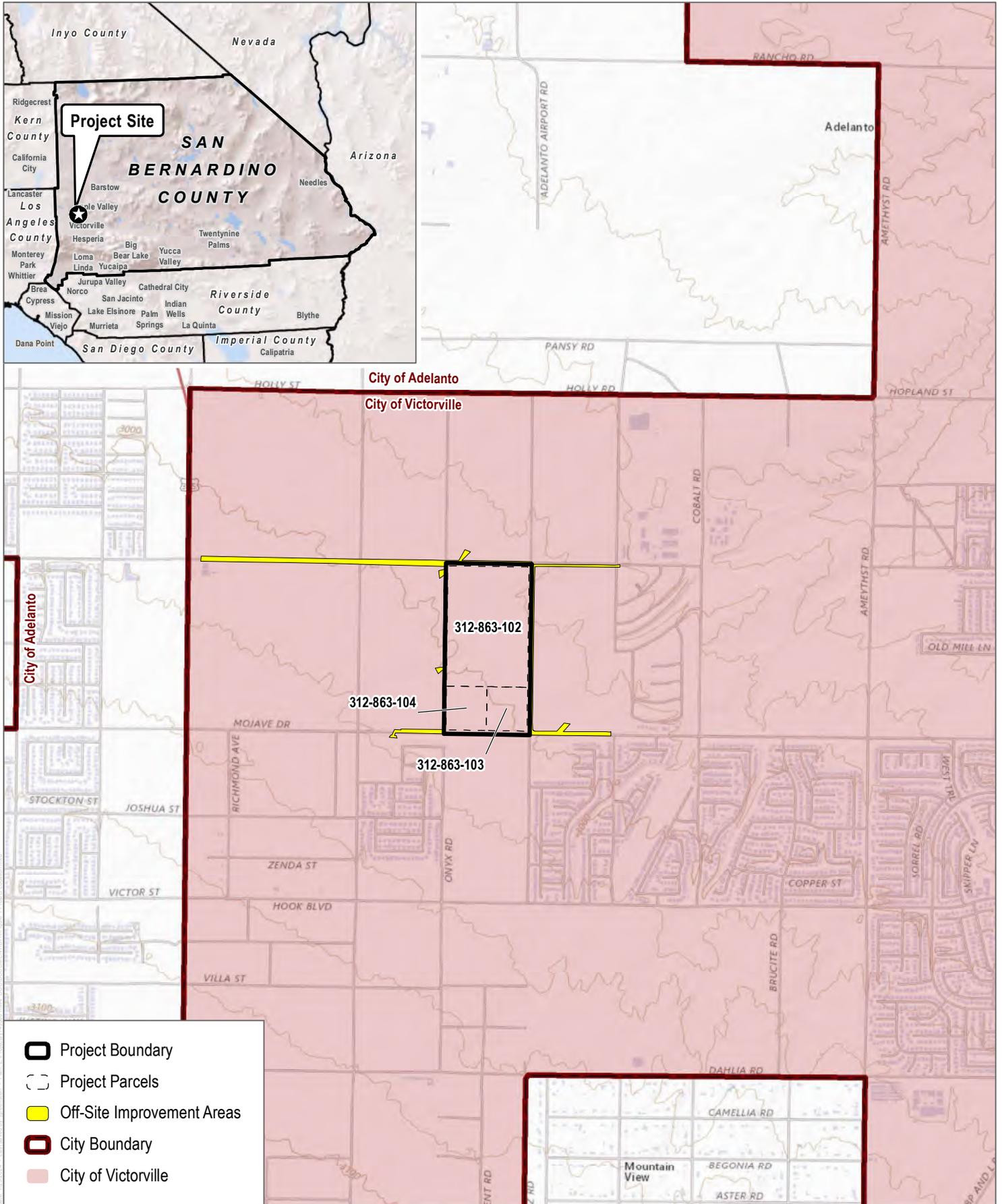
6 References

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SOURCE: Maxar 2020; County of San Bernardino 2023

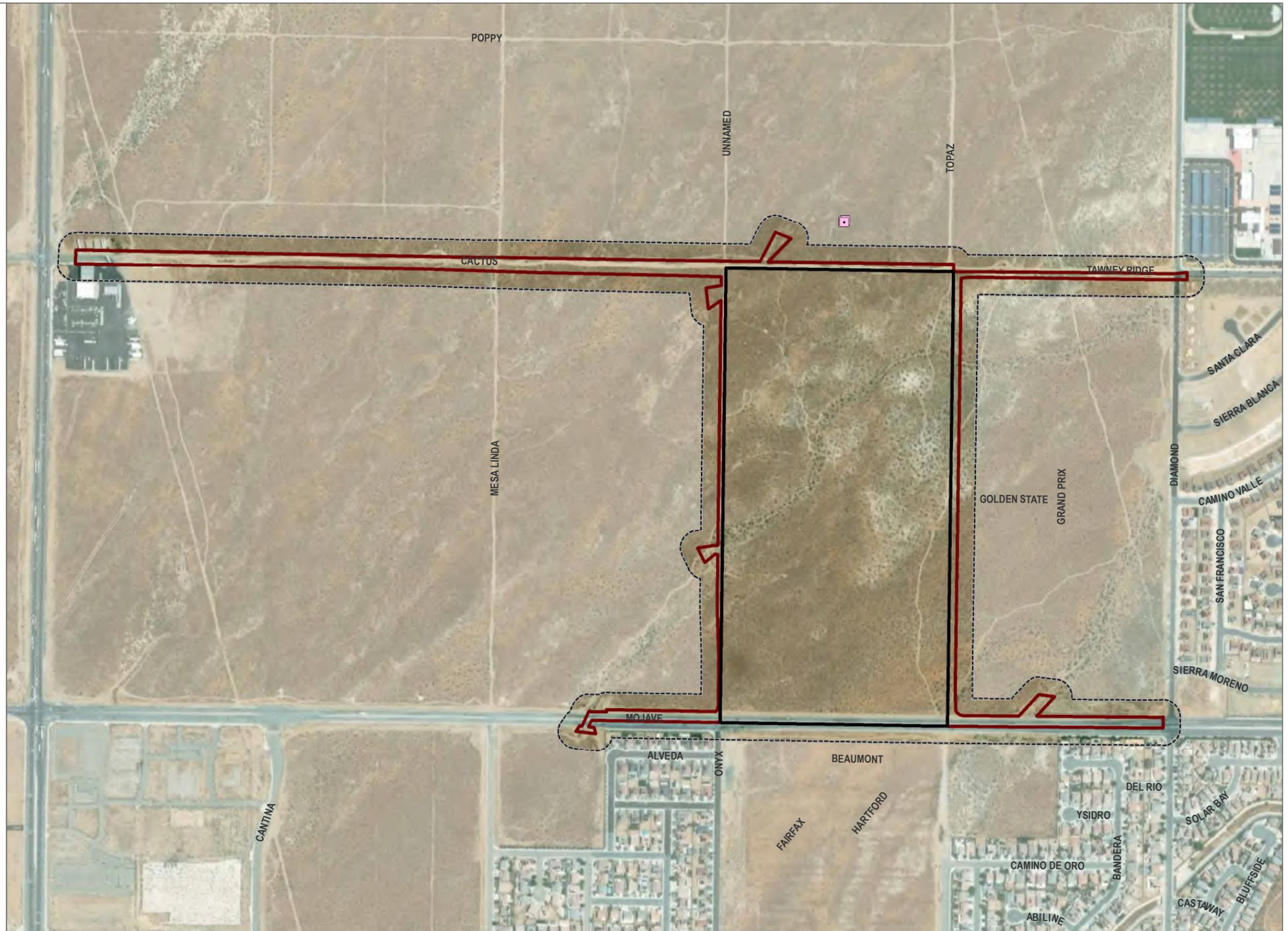
FIGURE 1

Project Location

Mojave Industrial Park Project

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-  Project Site
-  Off-Site Improvement Areas
-  Biological Study Area (100' Buffer)
-  Suitable desert kit fox burrows



SOURCE: Maxar 2020; Open Street Map 2023



FIGURE 2
Desert Kit Fox Den Locations
 Mojave Industrial Park Project

