Appendix C

Dale Evans / Lafayette Warehouse / Distribution Facility Project

Biological Resources Assessment and Survey Results
Town of Apple Valley, San Bernardino County, California

Prepared for

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14 September 2022

DALE EVANS/LAFAYETTE WAREHOUSE/DISTRIBUTION FACILITY PROJECT
BIOLOGICAL RESOURCES ASSESSMENT AND SURVEY RESULTS

TOWN OF APPLE VALLEY, SAN BERNARDINO COUNTY, CALIFORNIA

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14 September 2022

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1.0 INTRODUCTION

Wood Environment & Infrastructure Solutions, Inc. (Wood) was contracted by Terra Nova Planning and Research to conduct a biological resources assessment at the site of the proposed Dale Evans/Lafayette Warehouse/Distribution Facility Project (project) in Town of Apple Valley, San Bernardino County, California. This biological resources assessment report (BRAR) provides methods, results, and a discussion of the assessment. As a result of the assessment, a focused survey for desert tortoise (*Gopherus agassizii*); a jurisdictional waters delineation; and a focused survey for potential burrowing owl (*Athene cunicularia*) burrows were performed. A breeding season focused survey for burrowing owls and a blooming season focused survey for rare plants will be performed in 2023. Results of the desert tortoise survey, burrowing owl burrow survey, and jurisdictional delineation mapping are also presented here.

1.1 Project Location and Topography

The project is entirely within the Town of Apple Valley, San Bernardino County, California (Figure 1). It is located primarily on the 7.5-minute Town of Apple Valley North, Calif. United States Geological Survey (USGS) quadrangle (Figure 2). It is in Township 6 North, Range 3 West, Section 21. Project topography is level overall at elevations ranging from approximately 3010 to 3030 feet (917-924 meters).

1.2 Project and Site Description

The proposed project is a 1.2 million square foot warehouse/distribution facility. It is located in Town of Apple Valley east of Dale Evans Parkway, south of Lafayette Street, north of Burbank Avenue, and west of an existing warehouse/distribution facility on Navajo Road (Figure 3). The project site is undeveloped but served as a bombing practice site (Victorville Precision Bombing Target #1) by the Department of the Navy from 1943 to 1944 (Northgate Environmental Management, Inc. 2022). It is surrounded by similar undeveloped lands to the east and south and by existing warehouse/distribution facilities to the north and east.

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1 inch = 2 miles

0 1 2 Miles

wood.

Project Boundary

FIGURE 1

Project Vicinity
Skyview Warehouse/Distribution Facility Project
Apple Valley, San Bernardino County, CA

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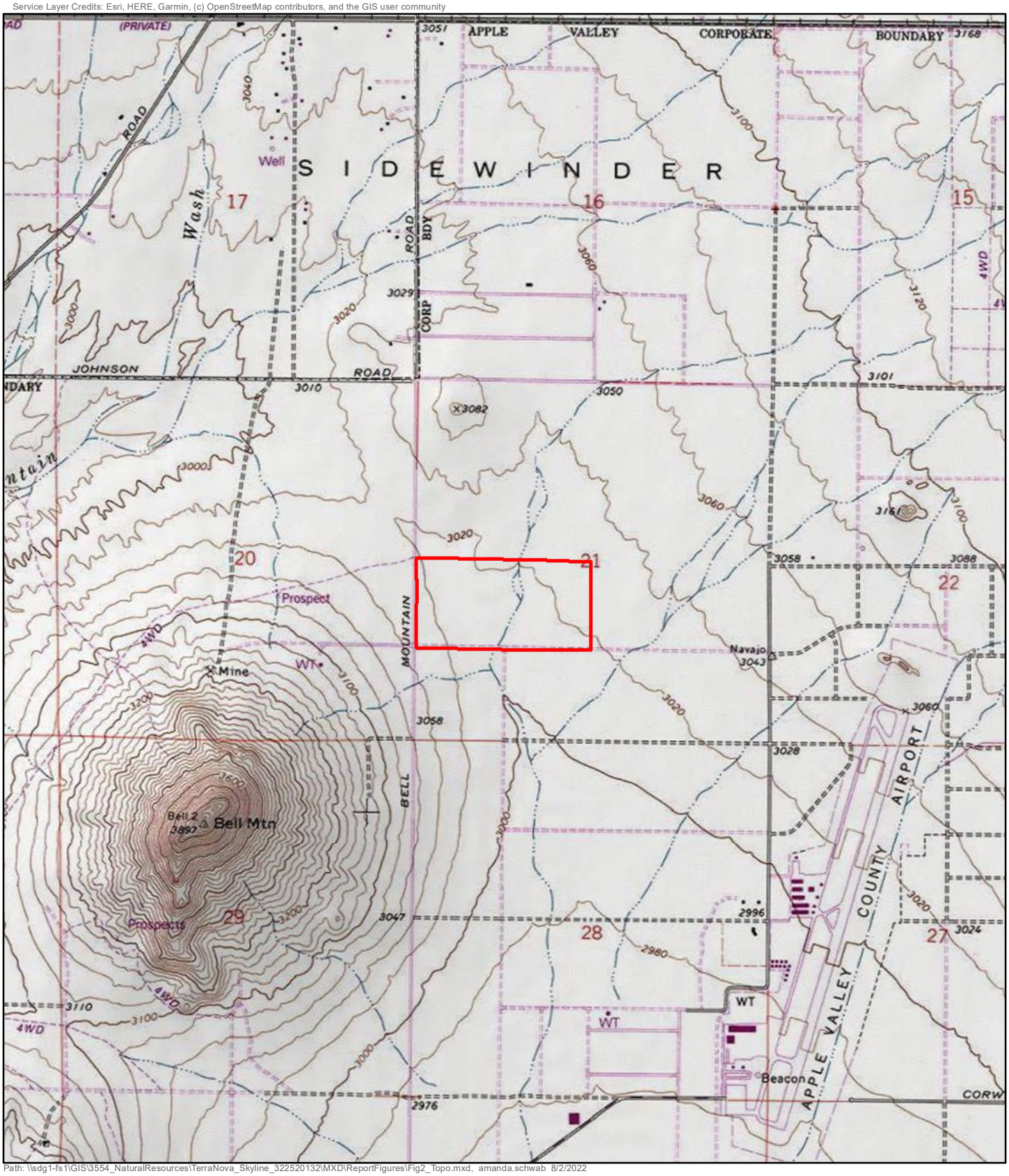
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



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1 inch = 2,000 feet
0 1,000 2,000 Feet

wood.

Project Boundary

FIGURE 2

USGS 7.5' Quad: Apple Valley North
Skyview Warehouse/Distribution Facility Project
Apple Valley, San Bernardino County, CA

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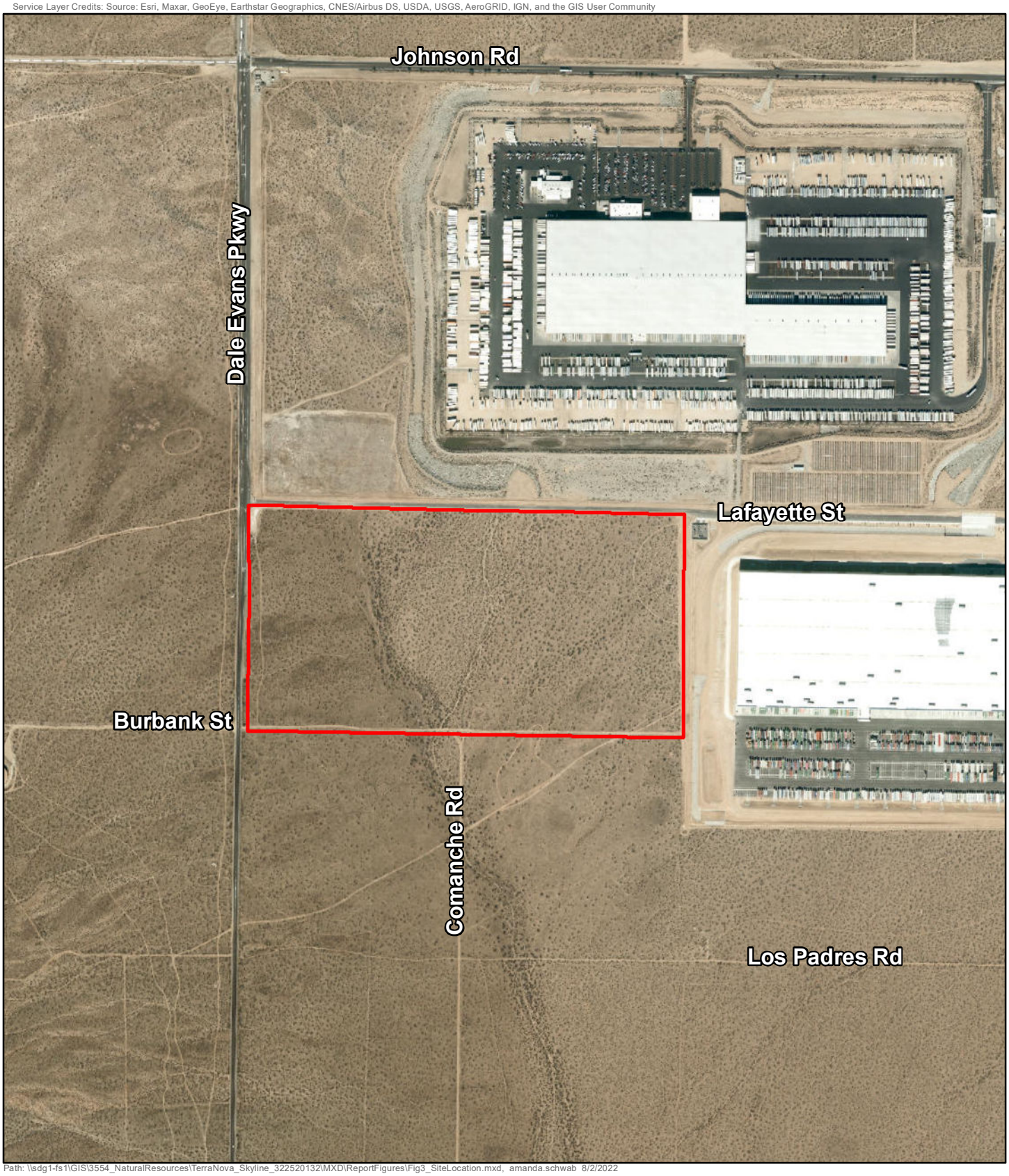

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1 inch = 800 feet
0 400 800 Feet

wood.

Project Boundary

FIGURE 3

Site Location
Skyview Warehouse/Distribution Facility Projectt
Apple Valley, San Bernardino County, CA

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2.0 REGULATORY FRAMEWORK

2.1 Federal

Endangered Species Act (ESA) – The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service are the designated federal agencies accountable for administering the ESA. The ESA defines species as "endangered" or "threatened" and provides regulatory protection at the federal level.

- Section 9 of the ESA prohibits the "take" of listed (i.e., endangered or threatened) species. The ESA definition of take is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct." Recognizing that take cannot always be avoided, Section 10(a) includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Specifically, Section 10(a) (1) (A) permits (authorized take permits) are issued for scientific purposes. Section 10(a) (1) (B) permits (incidental take permits) are issued for the incidental take of listed species that does not jeopardize the species.
- Section 7 (a) (2) requires federal agencies to evaluate the proposed project with respect to listed or proposed listed, species and their respective critical habitats (if applicable). Federal agencies must employ programs for the conservation of listed species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat."
- Section 10(a) of the ESA authorizes the issuance of incidental take permits and establishes standards for the content of habitat conservation plans. The project site is in a proposed Habitat Conservation Plan (HCP), see Section 2.3.

As defined by the ESA, "individuals, organizations, states, local governments, and other non-federal entities are affected by the designation of critical habitat only if their actions occur on federal lands, require a federal permit, license, or other authorization, or involve federal funding.

Migratory Bird Treaty Act (MBTA) – Treaties signed by the U.S., Great Britain, Mexico, Japan, and the republics of the former Soviet Union make it unlawful to pursue, capture, kill, and/or possess, or attempt to engage in any such conduct to any migratory bird, nest, egg or parts thereof listed in this document. As with the ESA, the MBTA also allows the Secretary of the Interior to grant permits for the incidental take of these protected migratory bird species. Impacts include direct disturbance to/destruction of nests, eggs, and birds as well as indirect effects such as loud construction noises (e.g., drilling, operation of heavy equipment, etc. in excess of 60 dB at the nest site) and increased site activities (e.g., moving vehicles, use of guard dogs, presence of personnel) in close proximity to active nests.

Bald and Golden Eagle Protection Act (BGEPA) - The Bald and Golden Eagle Protection Act, enacted in 1940, and amended several times since, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or golden eagles, including their parts (including feathers), nests, or eggs.

The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part (including feathers), nest, or egg thereof."

The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." Regulations further define "disturb" as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior"

National Environmental Policy Act (NEPA) – Portions of the proposed project could fall under the jurisdiction of a federal agency (i.e., U.S. Army Corps of Engineers). The NEPA establishes certain criteria that must be adhered to for any project that is "financed, assisted, conducted or approved by a federal agency. The federal lead agency is required to "determine whether the proposed action will significantly affect the quality of the human environment."

Section 404 of the Clean Water Act (CWA) – This section of the CWA, administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredged and fill material into "waters of the United States." The USACE has created a series of nationwide permits that authorize certain activities within waters of the U.S. provided that the proposed activity does not exceed the impact threshold for each of the permits, takes steps to avoid impacts to wetlands where practicable, minimize potential impacts to wetlands, and provide compensation for any remaining, unavoidable impacts through activities to restore or create wetlands. For projects that exceed the threshold for nationwide permits, individual permits under Section 404 can be issued.

2.2 State of California

Regional Water Quality Control Board – The Regional Water Quality Control Board (RWQCB) regulates activities pursuant to Section 401(a)(1) of the CWA. Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into navigable waters. Through the Porter Cologne Water Quality Control Act, the RWQCB asserts jurisdiction over Waters of the State of California (WSC) which is generally the same as WUS, but may also include isolated waterbodies. The Porter Cologne Act defines WSC as "surface water or ground water, including saline waters, within the boundaries of the state".

Sections 1600-1603 of the State Fish and Game Code – The California Fish and Game Code, pursuant to Sections 1600 through 1603, regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife resources. Under state code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel with hydro geomorphology distinct top-of-

embankment to top-of-embankment limits, that may or may not support fish or other aquatic biota. Included in this definition are watercourses with surface or subsurface flows that support, or have supported in the past, riparian vegetation. Specifically, Section 1601 governs public projects, while Section 1603 governs private discretionary actions. The California Department of Fish and Wildlife (CDFW) requires that public and private interests apply for a "Streambed Alteration Agreement" for any project that may impact a streambed or wetland. The CDFW has maintained a "no net loss" policy regarding impacts to streams and waterways and requires replacement of lost habitats of at least a 1:1 ratio.

California Endangered Species Act (CESA) – This legislation is similar to the federal ESA, however it is administered by the CDFW. The CDFW is authorized to enter into "memoranda of understanding" with individuals, public agencies, and other institutions to import, export, take, or possess state-listed species for scientific, educational, or management purposes. The CESA prohibits the take of state-listed species except as otherwise provided in state law. Unlike the federal ESA, the CESA applies the take prohibitions to species currently petitioned for state-listing status (candidate species). State lead agencies are required to consult with the CDFW to ensure that actions are not likely to jeopardize the continued existence of any state-listed species or result in the destruction or degradation of occupied habitat.

Section 2081 of the State Fish and Game Code – Under Section 2081 of the California Fish and Game Code, the CDFW authorizes individuals or public agencies to import, export, take, or possess state endangered, threatened, or candidate species in California through permits or memoranda of understanding. These acts, which are otherwise prohibited, may be authorized through permits or "memoranda of understanding" if (1) the take is incidental to otherwise lawful activities, (2) impacts of the take are minimized and fully mitigated, (3) the permit is consistent with regulations adopted in accordance with any recovery plan for the species in question, and (4) the applicant ensures suitable funding to implement the measures required by the CDFW. The CDFW shall make this determination based on the best scientific information available and shall include consideration of the species' capability to survive and reproduce.

California Environmental Quality Act (CEQA) – The basic goal of the CEQA is to retain a high-quality environment now and in the future. The specific goals are for California's public agencies to:

- Identify the significant environmental effects of their actions; and, either
- Avoid those significant environmental effects, where feasible; or
- Mitigate those significant environmental effects, where feasible.

The CEQA applies to "projects" proposed to be undertaken or requiring approval by State and/or local governmental agencies. projects are activities which have the potential to have a physical impact on the environment and may include the enactment of zoning ordinances, the issuance of conditional use permits and the approval of tentative subdivision maps. Where a project requires

approvals from more than one public agency, the CEQA requires one of these public agencies to serve as the "lead agency."

A "lead agency" must complete the environmental review process required by the CEQA. The most basic steps of the environmental review process are:

- Determine if the activity is a "project" subject to the CEQA;
- Determine if the "project" is exempt from the CEQA;
- Perform an Initial Study to identify the environmental impacts of the project and determine whether the identified impacts are "significant". Based on its findings of "significance", the lead agency prepares one of the following environmental review documents:
    - Negative Declaration if it finds no "significant" impacts;
    - Mitigated Negative Declaration if it finds "significant" impacts but revises the project to avoid or mitigate those significant impacts;
    - Environmental Impact Report (EIR) if it finds "significant" impacts.

While there is no ironclad definition of "significance", Article 5 of the CEQA Guidelines provides criteria to lead agencies in determining whether a project may have significant effects.

The purpose of an EIR is to provide state and local agencies and the public with detailed information on the potentially significant environmental effects which a proposed project is likely to have and to provide ways in which those effects may be minimized and indicate alternatives to the project.

Sections of the State Fish and Game Code pertaining to the protection of birds – Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3505.5 makes it unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey, i.e.: owls, hawks, eagles, etc.) or to take, possess, or destroy the nest or eggs of any bird-of-prey. Section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA.

The Native Plant Protection Act (NPPA) – The NPPA includes measures to preserve, protect, and enhance rare and endangered native plant species. Definitions for "rare and endangered" are different from those contained in the CESA. However, the list of species afforded protection in accordance with the NPPA includes those listed as rare and endangered under the CESA. The NPPA provides limitations on take as follows: "no person will import into this state, or take, possess, or sell within this state" any rare or endangered native plants, except in accordance with the provisions outlined in the act. If a landowner is notified by the CDFW, pursuant to section 1903.5 that a rare or endangered plant species is growing on their property, the landowner shall

notify the CDFW at least 10 days prior to the changing of land uses to allow the CDFW to salvage the plants.

Natural Community Conservation Planning (NCCP) Program – A NCCP, which is managed by the CDFW, is intended to conserve multiple species and their associated habitats, while also providing for compatible use of private lands. Through local planning, the NCCP planning process is designed to provide protection for wildlife and natural habitats before the environment becomes so fragmented or degraded by development that species listing are required under CESA. Instead of conserving small, often isolated "islands" of habitat for just one listed species, agencies, local jurisdictions, and/or other interested parties have an opportunity through the NCCP to work cooperatively to develop plans that consider broad areas of land for conservation that would provide habitat for many species. Partners enroll in the programs and, by mutual consent, areas considered to have high conservation priorities or values are set aside and protected from development. Partners may also agree to study, monitor, and develop management plans for these high value "reserve" areas. The NCCP provides an avenue for fostering economic growth by allowing approved development in areas with lower conservation value. The project site is in a proposed NCCP, see Section 2.3.

2.3 Local

2.3.1 Multiple-Species Habitat/Natural Community Conservation Plan

The Town of Apple Valley (Town) and San Bernardino County (County) are working in coordination with the Bureau of Land Management (BLM), USFWS, and CDFW to prepare a "Multi-Species Habitat Conservation Plan/Natural Community Conservation Plan" (MSHCP/NCCP). The goal is to achieve consistent and complimentary conservation planning goals between the MSHCP/NCCP and state and federal land use plans to achieve conservation benefits at a landscape level. The MSHCP/NCCP will safeguard features and areas that warrant protection; plus ensure that future development within the Town and surrounding County lands in the Town's sphere of influence is compliant with the ESA and CESA. The MSHCP/NCCP will guide the Town's and County's conservation efforts in the MSHCP/NCCP area, allowing for the preservation of open space and protection of threatened and endangered species (Town 2022a). The MSHCP/NCCP Planning Area includes 46,948 acres within the Town's incorporated limits and an additional 122,921 acres within the Town's sphere of influence for a total of 169,869 acres (Town 2022b).

Besides creating environmental benefits, an approved MSHCP/NCCP will also provide permitting advantages to the Town and County by streamlining the environmental permitting process. The process established under the MSHCP/NCCP will increase control over local land use decisions and establish a one-stop shop for environmental permitting.

Work on the proposed plan has been underway for well over a decade, and the list of proposed covered species has changed several times. For this document we are including proposed species from CDFW (2015) and Town (2017, 2021).

2.3.2 Town of Apple Valley, Code of Ordinances, Title 9 - Development Code

Chapter 9.76 of the Town's code is *Plant Protection and Management* (Municode 2022). The Town finds that it is in the public interest to promote the continued health of the Town's abundant and diverse plant resources by providing regulations and guidelines for the management of the plant resources in the Town on property or combinations of property under private or public ownership for the following purposes:

- 1. To promote and sustain the health, vigor and productivity of plant life and aesthetic values within the Town through appropriate management techniques;
- 2. To conserve the native plant life heritage for the benefit of all, including future generations;
- 3. To protect native trees and plants from indiscriminate removal, and to regulate such activity;
- 4. To provide a uniform standard for appropriate removal of native trees and plants in public and private places and streets to promote conservation of these valuable natural resources;
- 5. To protect and maintain water productivity and quality in local watersheds; and
- 6. To preserve rare plants and protect animals with limited or specialized habitats.

These following desert native plants or any part thereof except the fruit, shall not be harvested or removed except under a permit issued by the Town Manager, or designee. No existing Joshua Tree shall be disturbed, moved (transplanted or otherwise), removed or destroyed unless such disturbance, move, removal or destruction is first reviewed and approved by the Town. The code specifically protects all Joshua trees (mature and immature) and the following desert native plants with stems two inches or greater in diameter or six feet or greater in height:

- *Dalea, Spinosa* (smoketree) [sic].
- All species of the family Agavaceae* (century plants, nolinas, yuccas, cacti) including the following known to the Town: Mohave Yucca (*Yucca schidigera*), Lords candle (*Yucca whipplei*), and Barrel cactus (*Ferocactus acanthodes*) [sic] (**Note that these are the species as listed under this ordinance by the Town, but botanically, nomenclature and taxonomy is not entirely accurate*).
- All species of the genus *Prosopis* (mesquites).
- Creosote Rings [sic], ten feet or greater in diameter.

- Plants protected or regulated by the State Desert Native Plant Act (i.e., Food and Agricultural Code 80001, et. seq.) shall be required to comply with the provisions of those statutes prior to the issuance of any county development permit or land use application approval. The Town Manager, or designee, is responsible for the issuance of any required wood tags, seals or permits. The following are the native plants specifically named in state Food and Agricultural Code 80001 (California Legislative Information 2022b):
- All species of Burseraceae family (elephant tree).
- *Carnegiea gigantea* (sahuaro cactus).
- *Ferocactus acanthodes* (barrel cactus).
- *Castela emoryi* (crucifixion thorn).
- *Dudleya saxosa* (panamint dudleya) [sic].
- *Pinus longaeva* (bristlecone pine).
- *Washingtonia filifera* (fan palm).
- All species of the family Agavaceae (century plants, nolinas, yuccas).
- All species of the family Cactaceae (cacti)
- All species of the family Fouquieriaceae (ocotillo, candlewood).
- All species of the genus *Prosopis* (mesquites).
- All species of the genus *Cercidium* (palos verdes).
- *Acacia greggii* (catclaw).
- *Atriplex hymenelytra* (desert-holly).
- *Dalea spinosa* (smoke tree).
- *Olneya tesota* (desert ironwood)

3.0 METHODS

3.1 Literature Review and Records Search

A literature review and record search was conducted to identify occurrences of special status biological resources in the project vicinity. The review included:

- A report from the CDFW's California Natural Diversity Data Base (CNDDB) for a five-mile radius around the project site (CDFW 2022, Appendix A),
- The USFWS (2022a) Environmental Conservation Online System (ECOS) including critical habitat mapping and an Information for Planning and Consultation (IPaC) report (Appendix B).
- The California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2022) including records from the following California USGS 7.5-minute topographic quadrangles which are within five miles of the project: *Town of Apple Valley North, Fairview Valley, Stoddard Well, Turtle Valley, Helendale, and Victorville, Calif*. (Appendix C). Note that CDFW has changed the name of "CNPS List" or "CNPS Ranks" to "California Rare Plant Rank" (CRPR) to reduce confusion over the fact that rank assignments are the product of a collaborative effort between CNPS and CDFW and not solely a CNPS assignment (CDFW 2022c),
- Consortium of California Herbaria (2022) plant specimens,
- iNaturalist (2022) photographic species records,
- Aerial photographs, and
- Pertinent documents from the Wood library and project files (*e.g.*, other biological surveys from the general vicinity) and the collective knowledge of Wood biologists.

3.2 Biological Resources Assessment

Field reconnaissance surveys were conducted by Wood senior biologist John F. Green and Wood wildlife biologist Kevin Salgado on 26 July 2022 to evaluate the suitability of existing habitat on site to support special status biological resources. The survey was conducted from 0530 to 0840 hours and entailed walking transects across the site and around the project perimeter with special focus on drainages, as they provide slightly better conditions for plants and wildlife. Weather conditions were 79.3 to 83.8 degrees Fahrenheit, 5 to 30 percent cloud cover, wind speeds of 0-1 mph, and with no precipitation.

Representative photos were taken and are included in Appendix D. All plant and wildlife species observed or otherwise detected were recorded in field notes and a list of them is included in Appendix E. Plant species of uncertain identity were collected for later identification by University of California, Riverside Herbarium Collections Manager, Andrew Sanders.

3.3 Jurisdictional Delineation

Wood wetlands specialist Dale Hameister visited the site on 9 August 2022 to conduct a delineation of potentially jurisdictional waters onsite.

3.4 Focused Surveys

Wood senior biologist John F. Green and Wood wildlife biologist Phil Clevinger conducted a focused survey for the desert tortoise on 9 August 2022. The entire site was surveyed in 10-meter pedestrian transects in accordance with the methodology described in *Preparing for Any Action That May Occur Within the Range of The Mojave Desert Tortoise (Gopherus agassizii)* (USFWS, 2019 Field Season) (USFWS 2019). Survey forms were filled out for each transect and they are attached as Appendix F. During the desert tortoise survey, Green and Clevinger also recorded the sites of any burrows potentially usable by burrowing owls in accordance with guidelines in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). On 10 August 2022, Green and Clevinger returned to conduct 20-meter pedestrian transects of a 150-meter buffer around the project site for the detection of potential burrowing owl burrows in accordance with CDFG (2012).

Table 1. Focused Survey Data

Date (2022)	Surveyors	Time	% Cloud Cover, Wind miles per hour (mph)	Temperature °Celsius	Detections?
Project site focused desert tortoise survey and burrowing owl (BUOW) burrow survey 9 August	John Green and Phil Clevinger	0550 - 1408	85-55, 0-5	23.4-33.8	No desert tortoise or sign. No BUOW or sign. Burrows potentially usable by BUOW present.
BUOW burrow survey, 150-meter site buffer 10 August	John Green and Phil Clevinger	0550 - 0920	5, 2-3	21.7-28.3	No BUOW or sign. Burrows potentially usable by BUOW present.

4.0 RESULTS

4.1 Literature Review

The results of the literature review are presented in Tables 1 and 2, along with the results of the field reconnaissance survey conducted 26 July 2022. Species which are not known to occur at project elevations are generally not included.

Table 2. Special Status Plants Occurring or Potentially Occurring

Scientific Name	Common Name	Status[1]			Habitat (for plants includes elevational range in meters & blooming period)	Occurrence Probability[2]
		Federal	State	Other		
Plants						
Androsace elongata ssp *acuta*	California androsace	None	S3S4	CRPR 4.2	Chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, valley and foothill grassland. 150-1305 meters (m). Blooms (B): March-June.	Absent Suitable habitat not present.
Canbya candida	white pygmy-poppy	None	S3S4	CRPR 4.2, MSHCP /NCCP: 2017	Joshua tree "woodland", Mojavean desert scrub, pinyon and juniper woodland on granitic, gravelly, sandy soils. 600-1460 m. B: March-June.	Moderate Suitable habitat, but nearest records approximately four miles southwest
Cylindropuntia echinocarpa	golden cholla	None	None	Town code	Widespread, common cactus of western deserts.	**Occurs** A few individuals scattered across site
Cylindropuntia ramosissima	pencil cactus	None	None	Town code	Widespread, common cactus of western deserts.	**Occurs** Multiple individuals scattered across site
Cymopterus deserticola	desert cymopterus	None	None	CRPR 1B.2, MSHCP /NCCP: 2015, 2017	Joshua tree woodland and Mojavean desert scrub in sandy areas. 630-1500 m. B: March - May.	Moderate Habitat suitable, nearest record is over four miles to the south-southwest.
Diplacus (Mimulus) mohavensis	Mojave monkeyflower	None	None	CRPR 1B.2, MSHCP /NCCP: 2015, 2017	Joshua tree woodland and Mojavean desert scrub. Most often in washes; sometimes in gravely and sandy areas. 600-1200 m. B: April - June.	Moderate Habitat suitable, nearest record approximately four miles to the east-northeast.

Table 2. Special Status Plants Occurring or Potentially Occurring						
Scientific Name	**Common Name**	**Status[1]**			**Habitat (for plants includes elevational range in meters & blooming period)**	**Occurrence Probability[2]**
		Federal	**State**	**Other**		
Eremothera boothii ssp *boothii*	Booth's evening-primrose	None	S3	CRPR 2B.3, MSHCP /NCCP: 2015, 2017	Joshua tree "woodland", pinyon and juniper woodland. 815-2400 m. B: April-September.	Absent Site below elevational range of subspecies. Dried remains of *Eremothera boothii* detected on site, subspecies undeterminable. Town of Apple Valley region far outside of expected geographic range of ssp. *boothii* (Jepson Flora Project 2022)
Eriophyllum mohavense	Barstow woolly sunflower	None	S2	CRPR 1B.2, MSHCP /NCCP	Chenopod scrub, Mojavean desert scrub, playas. 500-960 m. B: March-May.	Moderate Habitat suitable, nearest records is approximately 4 miles northeast
Larrea tridentata	creosote bush (rings ten feet or greater in diameter)	None	None	Town code	Widespread, common shrub of western deserts.	Absent (rings) The species is onsite, but Town code specifically protects only creosote rings. Creosote bushes can produce offshoots or "clones" that grow in circular clusters (rings). We did not see any obvious rings onsite or in aerial photography.
Lycium torreyi	Torrey's box-thorn	None	S3	CRPR 4.2	Mojavean & Sonoran desert scrub in rocky, sandy places; streambanks, washes. -50-1220 m. B: (January-February) March-June (September-November).	Very Low-Absent Although there are CNPS records for *L. torreyi* in the Apple Valley North and Victorville quadrangles, CNPS also states "plants in California outside vicinity of Colorado River are likely misidentifications."
Mentzelia eremophila	solitary blazing star	None	S3S4	CRPR 4.2	Mojavean desert scrub. 700-1220m. B: March-May.	Moderate Suitable habitat, nearest occurrence is over four miles west-southwest
Opuntia basilaris	beavertail	None	None	Town code	Widespread, common cactus of western deserts.	**Occurs** A few individuals scattered across site

Table 2. Special Status Plants Occurring or Potentially Occurring						
Scientific Name	**Common Name**	**Status[1]**			**Habitat (for plants includes elevational range in meters & blooming period)**	**Occurrence Probability[2]**
		Federal	**State**	**Other**		
Pediomelum castoreum	Beaver Dam breadroot	None	S2	CRPR 1B.2, MSHCP /NCCP: 2017	Joshua tree "woodland", Mojavean desert scrub on roadsides, in sandy places, and in washes. 610-1525 m. B: April-May.	Moderate Suitable habitat. No records in immediate project area, but occurrences in all surrounding directions.
Sclerocactus polyancistrus	Mojave fish-hook cactus	None	S3	CRPR 4.2	Great Basin scrub, Joshua tree "woodland", Mojavean desert scrub usually on carbonate soils. 640-2320 m. B: April-July.	Very Low-Absent Suitable habitat, nearest occurrence approximately 2 miles west, but this small cactus was not seen during July-August site visits.
Scutellaria bolanderi ssp. austromontana	southern mountains skullcap	None	S3	CRPR 1B.2, MSHCP /NCCP: 2015, 2017	Mesic areas in chaparral, cismontane woodland, lower montane coniferous forest. 425-2000 m. June-August.	Absent Suitable habitat not present.
Symphyotrichum defoliatum	San Bernardino aster	None	S2	CRPR 1B.2, MSHCP /NCCP: 2015, 2017	Streambanks in cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, meadows and seeps, valley and foothill grassland. 2-2040 m. B: July-November.	Absent Suitable habitat not present.
Yucca brevifolia	western Joshua tree	None	SCT	CRPR None, MSHCP /NCCP: 2021, Town code	Mojavean desert scrub, Joshua tree "woodland." 750 - 2,100 m, but individuals slightly lower or higher. B: January - May, rarely as early as November (CDFW 2022c).	Absent Not found during July reconnaissance survey.

Table 3. Special Status Wildlife Occurring or Potentially Occurring						
Scientific Name	**Common Name**	**Status[1]**			**Habitat**	**Occurrence Probability[2]**
		Federal	**State**	**Other**		
Invertebrates						
Bombus crotchii	Crotch Bumblebee	None	S1S2	Not applicable (N/A)	Open grassland & scrub habitats. Occurs primarily in California, in coastal slope areas, western desert, great valley, and adjacent foothills. Nests underground and overwinters in soil or under leaf litter /debris. Visits many flowering plants. Families include, but are not limited to, Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, Boraginaceae, & Hydrophyllaceae. Genera include, but are not limited to, *Antirrhinum*, *Asclepias*, *Chaenactis*, *Clarkia*, *Dendromecon*, *Eschscholzia*, *Eriogonum*, *Lupinus*, *Medicago*, *Phacelia*, & *Salvia*. Flight period late February to late October.	Low Nectar sources scarce, but at a minimum *Eriogonum* is present and other flowering species utilized by this bumblebee are likely to occur in season.

Table 3. Special Status Wildlife Occurring or Potentially Occurring						
Scientific Name	**Common Name**	**Status[1]**			**Habitat**	**Occurrence Probability[2]**
		Federal	**State**	**Other**		
Danaus plexippus	Monarch Butterfly	**FC**	S2S3	N/A	Western winter roost sites primarily occur along the coast from northern Mendocino to Baja California, Mexico, located in wind-protected tree groves (*Eucalyptus* species, Monterey pine (*Pinus radiata*), cypress), with nectar and water sources nearby. During breeding season, adults widespread but scarce in the desert. Larvae require milkweed.	Low Seldom seen in the desert, no milkweed detected.
Fish						
Siphateles bicolor mohavensis	Mohave tui chub	FE	SE	MSHCP /NCCP: 2015, 2017	Found in the Mojave river as well as drainage and sewer systems with year-round water.	Absent No year-round water available
Reptiles						
Gopherus agassizii	desert tortoise	**FT**	**ST**, S2S3	MSHCP /NCCP: 2015, 2017, 2021	Prefers Joshua tree, desert wash & scrub, especially creosote bush (*Larrea tridentata*) habitats; but in most desert habitats. Large wildflower blooms preferred. Burrows & nests require friable soil.	Absent Not found by August focused survey, but habitat is appropriate and there are records in the area so future occupation is possible.
Birds						
Aquila chrysaetos	golden eagle	MBTA, BGEPA, BCC	S3, WL, FP, FGC	MSHCP /NCCP: 2015, 2017, 2021	Mountainous/hilly areas with cliffs and open fields required for habitat. Jackrabbits are primary food source.	Low No nesting habitat on site. Could potentially nest on rocky peaks in the general area and forage on site. Not found during July or August site visits.

Table 3. Special Status Wildlife Occurring or Potentially Occurring						
Scientific Name	**Common Name**	**Status[1]**			**Habitat**	**Occurrence Probability[2]**
		Federal	**State**	**Other**		
Athene cunicularia	burrowing owl	MBTA, BCC	SC, S3, FGC	MSHCP /NCCP: 2015, 2017, 2021	Open, dry grasslands, deserts & scrublands with low-growing vegetation. Depends on burrowing mammals.	Low Not found during July reconnaissance survey or August burrow survey, but appropriate habitat and potential burrows are present. Focused breeding season survey is required.
Buteo swainsoni	Swainson's hawk	MBTA, BCC	SE, S3, FGC	MSHCP /NCCP: 2015, 2017	Open plains, grasslands, dry grasslands. Migrates through Mojave Desert.	Low No nesting habitat on site. Could potentially nest in the general area and forage on site. May also occur during migration. Not found during July or August site visits.
Calypte costae	Costa's hummingbird	MBTA, BCC	S4, FGC	N/A	Primary habitats desert wash; edges of desert & valley foothill riparian; coastal, desert, & desert succulent scrub; palm oasis; & low elevation chaparral.	Occurs Nesting and foraging habitat present.
Falco mexicanus	prairie falcon	MBTA, BCC	SC, S3, FGC	MSHCP /NCCP: 2015, 2017	Breeding sites located on cliffs, but forages far afield.	Low No nesting habitat on site. Could potentially nest on rocky peaks in the general area and forage on site. Not found during July or August site visits.
Gymnogyps californianus	California condor	FE, MBTA	SE, FGC	N/A	Forages widely for carrion. Ledges and cliffs are used as roost and nest sites.	Absent Identified only by the IPaC report. Although capable of very long foraging flights from breeding and nesting areas, all members of the population are closely monitored. There is no nesting habitat on site and condors rarely, if ever, visit this area.

Table 3. Special Status Wildlife Occurring or Potentially Occurring						
Scientific Name	**Common Name**	**Status[1]**			**Habitat**	**Occurrence Probability[2]**
		Federal	**State**	**Other**		
Lanius ludovicianus	loggerhead shrike	MBTA, BCC	SSC, S4, FGC	MSHCP /NCCP: 2017	Found in open habitats with widely spaced vegetation.	Low Not found during site visits. Suitable nest sites, habitat present.
Spinus lawrencei	Lawrence's goldfinch	MBTA, BCC	None	N/A	Pine forests, chaparral typically but breeds in other habitats. Can be found in dry open land in migration.	Absent Identified only by the IPaC report. Project lacks breeding and typical foraging habitat.
Toxostoma redivivum	California thrasher	BCC	N/A	N/A	Chaparral & foothill habitats. Sometimes well-vegetated deserts.	Absent No suitable habitat. Identified only by the IPaC report.
Toxostoma lecontei	Le Conte's thrasher	MBTA, BCC	S3, FGC	MSHCP /NCCP: 2015, 2017	Desert: open washes, scrub; commonly nests in a dense, spiny shrub or cactus.	Low Not found on July or August site visits. Suitable habitat & nesting sites present.
Mammals						
Vulpes macrotis arsipus	desert kit fox	None	FGC	MSHCP /NCCP: 2017, 2021	Annual grasslands or open areas with scattered brush, shrubs, & scrub. Dens in open, level areas with loose-textured, soils (CDFW 2016b)	Occurs Scat detected onsite. Den detected 150 meters to west. Regulated as a fur-bearing mammal.
Xerospermophilus mohavensis	Mojave ground squirrel	None	ST	MSHCP /NCCP: 2015, 2017	Suitable habitat is sandy and gravelly soils. Burrows found at the base of shrubs.	Absent CNDDB record five miles to the west; site within historic range of species. Site, however, not in or near current known range of species (Leitner 2008).

[1]Status Codes:

Federal
FE = Federal Endangered
FT = Federal Threatened
FC = Federal Candidate
BCC = Bird of Conservation Concern
BGEPA = Bald and Golden Eagle Protection Act
MBTA = Migratory Bird Treaty Act

State
SE = State Endangered
ST = State Threatened
SCT=State Candidate
FP = Fully Protected
SC = State Species of Concern
WL = Watch List
FGC = Fish & Game Code

The California Natural Diversity Database program is a member of the NatureServe Network of natural heritage programs, and uses the same conservation status methodology as other network programs.

Elements are ranked using standard criteria and definitions. This standardization makes the ranks comparable between organisms and across political boundaries.

The three main categories that are taken into consideration when assigning an element rank are rarity, threats, and trends. Within these three categories, various factors are considered, including:

• Range extent, area of occupancy, population size, total number of occurrences, and number of good occurrences (ranked A or B). Environmental specificity can also be used if other information is lacking.
• Overall threat impact as well as intrinsic vulnerability (if threats are unknown).
• Long-term and short-term trends.

S1 = Critically Imperiled – At very high risk of extirpation in the state due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors.

S2 = Imperiled – At high risk of extirpation in the state due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.

S3 = Vulnerable – At moderate risk of extirpation in the state due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.

S4 = Apparently Secure – At a fairly low risk of extirpation in the state due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.

S5 = Secure – At very low or no risk of extirpation in the state due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.

SX = Presumed Extirpated – Species is believed to be extirpated from the state. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered

SH = Possibly Extirpated – Known from only historical records but still some hope of rediscovery. There is evidence that the species may no longer be present in the state, but not enough to state this with certainty.

SNR = Unranked – State rank not yet assessed.

CRPR
1A = Presumed extirpated in California and either rare or extinct elsewhere
1B = Rare or Endangered in California and elsewhere
2A = Presumed extirpated in California, but more common elsewhere
2B = Rare or Endangered in California, but more common elsewhere
3 = Plants for which we need more information – Review list
4 = Plants of limited distribution – Watch list

Western Bat Working Group (WBWG)
The WBWG is composed of agencies, organizations, and individuals interested in bat research, management, and conservation from 13 western states and provinces. The goals of the group are to (1) facilitate communication among interested parties and reduce risks of species decline or extinction; (2) provide a mechanism by which current information on bat ecology, distribution, and research techniques can be readily accessed; and (3) develop a forum to discuss conservation strategies, provide technical assistance, and encourage education programs. Species are ranked as **High**, **Medium**, or **Low** Priority in each of 10 regions in western North America.

MSHCP/NCCP
Species proposed for coverage under the proposed MSHCP/NCCP (CDFW 2015; Town 2017, 2021).

[2]Occurrence Probability

Occurs = Observed on the site by Wood personnel or recorded there by other qualified biologists.
High = Observed in similar habitat in region by qualified biologists, or habitat on the site is a type often utilized by the species and the site is within the known range of the species.
Moderate = Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.
Low = Site is within the known range of the species but habitat on the site is rarely used by the species.
Absent = A focused study failed to detect the species, or no suitable habitat is present.
Unknown = Distribution and habitat use has not been clearly determined.

4.2 Biological Resources Assessment and Jurisdictional Delineation

As expected from the site's history, munition debris is scattered throughout the area but is heavily concentrated on the north-east corner of the perimeter where portions of the concentric circles of the bombing target are still visible (Figure 3). Adjacent to the project area are two warehouse and distribution facilities to the north and east, respectively, while the site itself is undeveloped and otherwise surrounded by similar undeveloped land. These undeveloped lands are not pristine, but instead show signs of anthropogenic disturbance, such as mechanical disturbance of soil, vegetation removal, off road vehicle tracks, and trash dumping. Nevertheless, the undeveloped lands of the site and surrounding areas provide habitat and potential wildlife corridors.

The primary vegetation community present throughout the project area is creosote bush scrub dominated by creosote bush with no co-dominants. The natural community most closely corresponding to this in the proposed MSHCP/NCCP is "Sonora-Mojave Creosotebush-White Bursage Desert Scrub" (CDFW 2017). Vegetation communities in the project footprint are mapped on Figure 4.

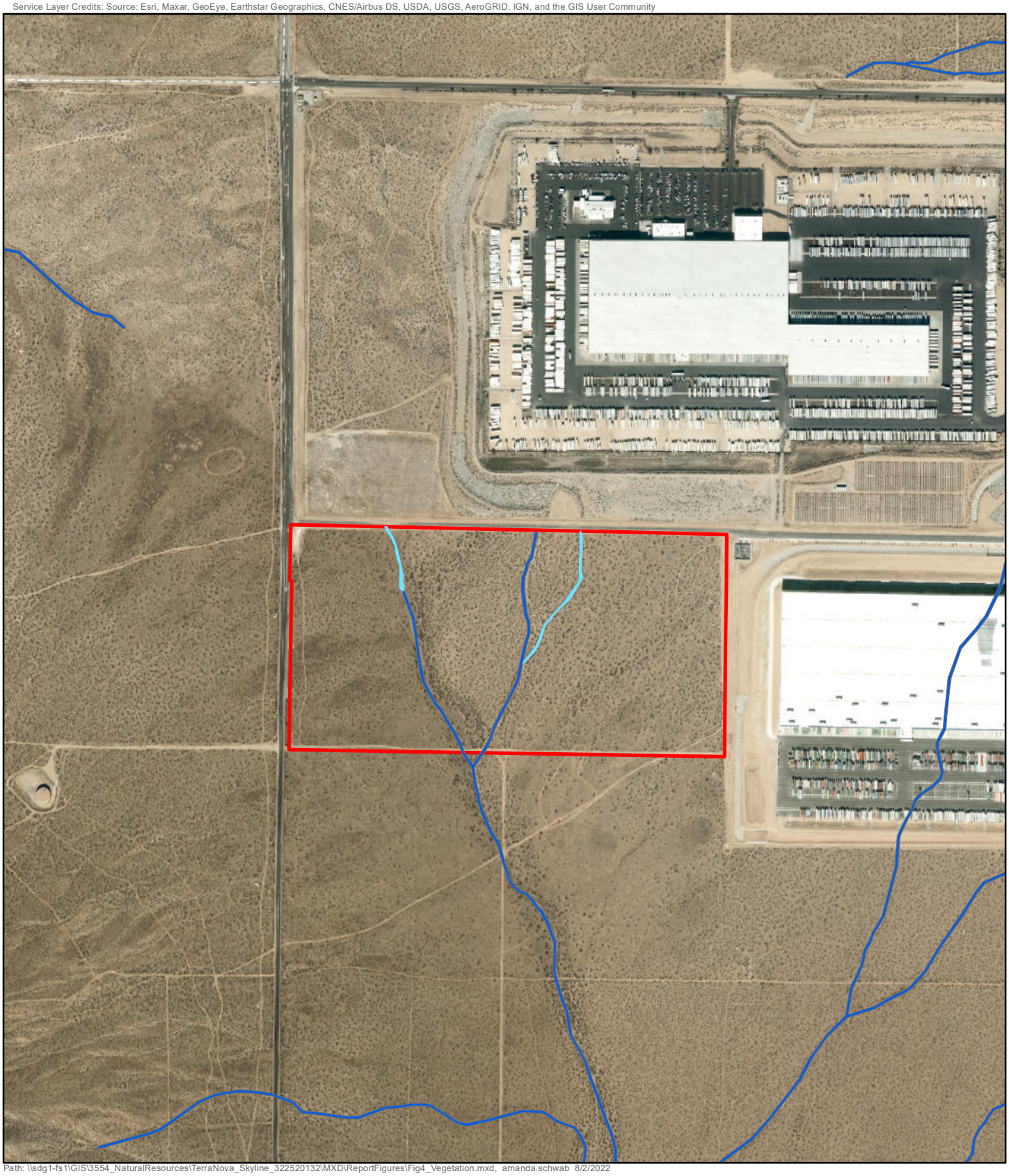
Two unnamed drainages run through the project site in a generally north to south direction. Although they have a bed and bank in the northern reaches, those features do not fully traverse the site. They lose their defined bed and bank become areas of sheet flow in the southern reaches. There was widespread evidence of sheet flow and pooled waters onsite due to recent thunderstorms, however those areas lack a defined bed and bank and were not considered jurisdictional.

Due to the presence of ordinary high-water mark, recent evidence of flows, and a defined bed and bank in the upper reaches, two onsite drainages may be considered jurisdictional by the CDFW and RWQCB. Because the drainages do not connect with any downstream traditionally navigable waters or relatively permanent waters, however, they are not considered jurisdictional by the USACE. The drainages are mapped on Figure 4.

Soil mapping for the project site (United States Department of Agriculture, Natural Resources Conservation Service 2019) showed that two soil series complexes occur on site. A small section in the northwestern corner is classified as "Mirage-Joshua Complex, 2 to 4 percent slopes" with the rest of the site mapped as "Helendale-Bryman Loamy Sands, 2 to 5 percent slopes" (Figure 5).

Mirage and Joshua series soils consist of deep to moderately deep, well drained soils that formed in mixed alluvium from granitic and mixed sources. They occur on old terraces with well-developed erosion pavement. They consist of sandy loams with an element of salinity or calcium carbonate.

Helendale and Bryman series consists of very deep to deep, well drained soils that formed in alluvium from granitoid rocks or other dominantly granitic sources. These soils are on terraces, fan piedmonts, fan remnants, alluvial fans, older alluvial fans, and terraces. They include coarse to fine mixed loams and sands with inclusions of clay and calcium carbonate.



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1 inch = 800 feet

0 400 800 Feet

Project Boundary

Potential Jurisdictional Waters Identified by the National Wetlands Inventory

Additional Potential Jurisdictional Waters Identified in the Field

wood.

FIGURE 4

Vegetation and Drainages
Skyview Project
Apple Valley, San Bernardino, CA

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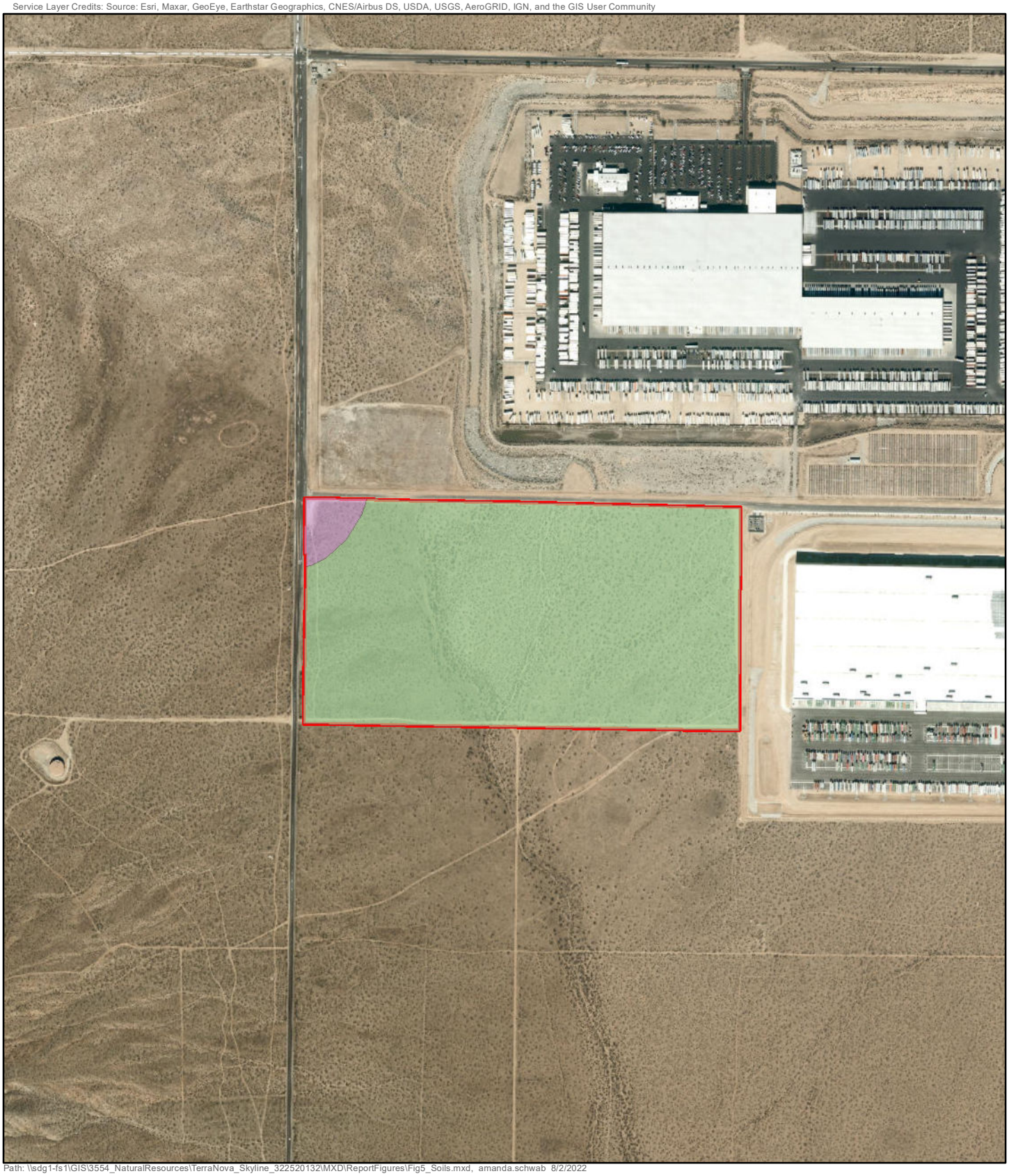
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



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1 inch = 800 feet
0 400 800 Feet

wood.

Project Boundary
Helendale-Bryman Loamy Sands, 2 to 5 percent slopes
Mirage-Joshua Complex, 2 to 4 percent slopes

FIGURE 5

Soils
Skyview Project
Apple Valley, San Bernardino, CA

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5.0 DISCUSSION

5.1 Special Status Plants

Seventeen special status plant species are known from the project area (Table 2). Five are not expected to occur either due to a lack of habitat (California androsace, Booth's evening-primrose, southern mountains skullcap, and San Bernardino aster) or because they were not detected during the reconnaissance survey (the large, distinctive western Joshua tree and creosote rings which were not seen on or around the site, including a review of aerial photography). Three species of cactus protected by Town ordinance occur onsite: golden cholla, pencil cactus, and beavertail. As shown on Table 2, habitat for the remaining eight plant species (white pygmy-poppy, desert cymopterus, Mojave monkeyflower, Barstow woolly sunflower, Torrey's box-thorn, solitary blazing star, beaver dam breadroot, and Mojave fish-hook cactus) is present onsite. These species were not found during the July or August site visits; however, this is not proof of absence. Most do not bloom in July and even those that could have may have failed to germinate and/or bloom at all this year due to current drought conditions. For those reasons, it was not possible to determine presence, absence, or population size. Until surveyed for in the appropriate season, presence, population size, and importance to the overall population cannot be determined. None of these species are federally or state listed as endangered or threatened. Impacts to these species could nevertheless be considered significant under CEQA if plants found onsite were found important to survival of the overall population. Also, white pygmy-poppy, desert cymopterus, Mojave monkeyflower, Barstow woolly sunflower, and beaver dam breadroot are proposed for coverage under the MSHCP/NCCP. In particular, the science advisory committee for the MSHCP/NCCP singled out Mojave monkeyflower and Barstow woolly sunflower as being of relatively high conservation or legal concern (Fleishman, et al 2016).

We recommend that a focused survey be performed during the appropriate season for the detection of the eight potentially occurring species (April-May). During that survey the locations of all onsite cacti will be marked. If any of the eight potentially occurring species are found, biological monitoring may be required near their populations. If unavoidable, they should be transplanted and/or have seeds/topsoil collected with guidance from the CDFW. If species proposed for coverage under the MSHCP/NCCP are detected, the Town should also be consulted.

Avoidance of cacti is preferred but few, if any, can be avoided by the project. A permit from the Town is required for the removal of any native tree or plant protected by Town code. The land use application, building permit, and/or other development permits shall be a permit for the removal of native trees or plants, if such land use application or development permit specifically reviews and approves such removals. The reviewing authority may require certification from an appropriate tree expert or desert native plant expert that such removals are appropriate, supportive of a healthy environment and are in compliance with the provisions of the code. The project proposes to transplant removed cacti for utilization in project landscaping.

5.2 Special Status Invertebrates

The literature review identified two special status insects from the project area (Table 3): the monarch butterfly (federal candidate for ESA listing, identified only by IPaC) and Crotch bumblebee (state ranked as critically imperiled to imperiled). There is a low probability that these insects could occur on site.

Monarchs are not expected to winter in the project area, but a few individual adults may forage in the warmer months. The main threat to the species would be impacts to milkweed, the larval foodplant. No milkweeds have been found on site to date. Milkweeds are not tracked as a special status species, but iNaturalist has photos of plants from 2016 and 2019 approximately three miles north of site (iNaturalist 2022) and the Consortium of California Herbaria (2022) has two milkweed records within a five-mile radius of the site.

The CNDDB reported an occurrence of Crotch bumblebee 1-2 miles north of the project site. These bees require flowering plants for nectar and potential nest sites, both of which occur on site, albeit in low abundance.

We recommend that preconstruction surveys by qualified biologists flag milkweed plants and bumblebee nests (if any) for avoidance. If unavoidable, monarch caterpillars should be moved to safe milkweeds, with appropriate authorizations. Any bumblebee nest should be avoided. If unavoidable, and determined to be occupied by Crotch bumblebees, the CDFW should be consulted for guidance.

5.3 Desert Tortoise

The literature search identified desert tortoise as being of potential occurrence (Table 3). The Mojave population segment of the desert tortoise is federally and state listed as threatened by the USFWS and CDFW. The Mojave population segment includes all tortoises occurring west and north of the Colorado River. The desert tortoise is most common in desert scrub, desert wash, and Joshua tree habitats in a variety of terrain types, including alluvial fans, valleys, rocky hillsides, and washes. They require friable soil for burrow and nest construction. Burrows are typically found at the base of shrubs, in the interspaces between shrubs, and occasionally in caliche soil bank areas or underneath boulders/rocks. They are herbivores and feed on a variety of plants including annual herbs and perennial grasses.

Tortoise activity is greatest during the spring and early summer, and to a lesser extent during the fall; however, tortoises can be active at any time of the year during appropriate weather conditions. Although tortoises hibernate during the winter and typically emerge in late February or early March, hatchlings and juveniles can be fairly active during the winter months. Adults will also emerge from their burrows to drink if water resources have been limited during the previous activity season and/or winter precipitation has provided standing water. Their activity is usually much reduced during hot summer months, but they may be active following summer rains or if temperatures are moderate (Boarman 2003).

Threats to desert tortoises include loss or degradation of habitat, vandalism, poaching, intentional killing, predation on young tortoises by the common raven (*Corvus corax*) and other predators (*e.g.* kit fox, snakes, etc.), and disease (*e.g.* Mycoplasmosis). Off-road vehicles, military training maneuvers, mining, and livestock grazing also affect tortoise habitat by collapsing burrows, eroding soils, reducing availability of food plants, eliminating shrubs which would provide shade for tortoises and support for their burrows, and ultimately results in surface disturbance that promotes conditions more conducive to invasion by exotic plant species, which provide less nutritional value to tortoises than the native species that were replaced. Human activities, including garbage dumping, landfills, roads, increased nesting opportunities, irrigation, and increased vehicle use have led to increased numbers of common ravens in California deserts. Ultimately, the increased predation on young tortoises by common ravens reduces recruitment in breeding populations (Boarman 2003).

Tortoises are most often detected by their scats and burrows. Tortoises themselves can sometimes be detected in burrows by shining a light inside the burrow. Other tortoise sign includes carcasses, or fragments thereof, courtship rings, and drinking depressions. Presence of sign is an indication that tortoises either occur, or have recently occurred, at a particular location. Sign can be detected at any time of the year and always indicates suitable habitat, if not occupied habitat.

The vegetation community occurring on the project site (creosote bush scrub) is a habitat typically utilized by desert tortoises. There is no desert tortoise critical habitat designated on the project site, and no desert tortoises or their sign were detected during the reconnaissance or focused survey. However, the CNDDB reports four occurrences within a 5-mile radius, including records within three miles or less to the north and southwest. In addition, a desert tortoise carcass was photographed approximately 1.5 miles north-northeast of the project site in June 2022 and a live desert tortoise was photographed approximately 2 miles to the northwest in June 2020 (iNaturalist 2022). Wood personnel are aware of records on Bell Mountain to the west.

The focused survey found no desert tortoises, desert tortoise burrows, or desert tortoise sign. Although desert tortoise was found to be absent, it is important to note that the project site is contiguous with potential habitat to the south and west. As a result, desert tortoises may enter the project site at any time in the future. The following mitigation and minimization measures are recommended to ensure that any potential impacts to the desert tortoise are avoided:

1) A worker's environmental awareness program (WEAP) would be implemented to educate the construction crew of potential special status species present on the project site.

2) Construction and maintenance personnel would be required to inspect for desert tortoises under vehicles prior to moving the vehicle. If a desert tortoise is found beneath a vehicle, it would not be moved until the desert tortoise had left of its own accord. All desert tortoise observations would be reported to a qualified biologist and the wildlife agencies.

3) A qualified biologist should monitor construction to ensure that tortoises do not enter the work area and that they are not disturbed if present. Isolating the site with tortoise-proof fencing could reduce or eliminate this need.

4) Any open trenches adjacent to habitat should be monitored by a qualified biologist daily. If left open overnight or at any time when not monitored, they should be fenced and/or covered to prevent entry by desert tortoises. Exit ramps should be present within open trenches.

Desert tortoises cannot be taken (harmed, harassed) under state and federal law. This report and any recommended mitigation measures do not constitute authorization for incidental take of the desert tortoise. If desert tortoise is detected on site, consultation with the USFWS and CDFW may be required. Since desert tortoise is proposed for coverage under the MSHCP/NCCP, the Town may also need to be notified if they are detected onsite.

5.4 Mammals

The literature review identified two special status / protected mammals from the project area: the Mohave ground squirrel and the desert kit fox (Table 3).

A 1977 occurrence of the state listed as threatened Mohave ground squirrel appeared on the CNDDB report approximately five miles west of the project area. This species, however, is considered to be extirpated from the project area (Leitner 2008). Therefore, we do not recommend any further action for Mohave ground squirrel.

The desert kit fox is a fur-bearing mammal regulated under the FGC but is not generally considered a special status species. The draft MSHCP/NCCP, however, treats it as a proposed covered species. Scat of this species was detected onsite indicating that it forages here, but there are no onsite dens. A den site was detected approximately 150 meters west of the project site during the burrowing owl burrow survey (Figure 3). At this time, no impacts to desert kit fox are anticipated, however should an unavoidable den be established onsite in the future, the CDFW and/or Town should be consulted on mitigation measures that they will require, if any.

5.5 Special Status Birds

As shown on Table 3, several special status bird species occur or may occur on site (golden eagle, burrowing owl, Swainson's hawk, Costa's hummingbird, prairie falcon, loggerhead shrike, Le Conte's thrasher). Most of these are also proposed for coverage under the MSHCP/NCCP (golden eagle, burrowing owl, Swainson's hawk, prairie falcon, loggerhead shrike, and Le Conte's thrasher). Those that do not have nesting habitat onsite (golden eagle, Swainson's hawk, prairie falcon) should simply be avoided if temporarily present. The remaining special status species which could potentially nest onsite (burrowing owl, Costa's hummingbird, loggerhead shrike, Le Conte's thrasher) will be protected by the recommendations in Sections 5.6 and 5.7 below.

5.6 Migratory Bird Treaty Act and State Fish and Game Code

Native bird species which may nest on or adjacent to the project site could be subject to direct or indirect impacts from the project. The bird nesting season is generally February 1 through August 31, although nesting birds are always protected. To avoid impacts to such birds, including the special status species which occur or potentially occur on site, we recommend the following: any vegetation removal or grading occurring during the nesting season would require at least one nesting bird survey to be conducted by a qualified biologist no more than three days prior to such activity. If no nests are found, construction would proceed. If active nests are found, impact avoidance measures (*e.g.*, "no work" buffers; sound and/or visual barriers) would be put in place around the nest until young have fledged. This would also apply to offsite nests which may be indirectly impacted. While there is no established protocol for indirect impacts to nests, when consulted, the CDFW often recommends avoidance buffers of about 500 feet for birds-of-prey and listed species, and 100 – 300 feet for other unlisted birds.

5.7 Burrowing Owl

The burrowing owl is uniquely vulnerable to ground disturbing activities since it both nests and roosts underground. Therefore, additional actions must be taken to protect against impacts to this species which would result in take. In addition to protection under the MBTA and FGC, the burrowing owl is also federally designated as a Bird of Conservation Concern and state designated as a Species of Concern. It occurs in open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation (Haug et al. 2011). In southern California, burrowing owls are not only found in undisturbed natural areas, but also fallow agricultural fields, margins of active agricultural areas, livestock farms, airports, and vacant lots. It is a subterranean nester, typically utilizing pre-existing burrows or burrow surrogates (*e.g.* ground squirrel burrows, kit fox burrows, drain pipes, culverts, etc.). Burrowing owl occupied burrows and areas can be recognized by sign which includes tracks, molted feathers, cast pellets, prey remains, eggshell fragments, whitewash, nest burrow decoration materials (e.g., paper, foil, plastic items, livestock or other animal manure, etc.) (CDFG 2012). The species is active both day and night and may be seen perching conspicuously on fence posts or standing at the entrance of their burrows.

Analyses of regional patterns for breeding populations of burrowing owls have detected declines both locally in their central and southern coastal breeding areas, and statewide where the species has experienced breeding range retraction. Threat factors affecting burrowing owl populations include habitat loss, degradation and modification, and eradication of ground squirrels resulting in a loss of suitable burrows required by burrowing owls for nesting, protection from predators, and shelter. Conservation for burrowing owls may include but may not be limited to protecting remaining breeding pairs or providing for population expansion, protecting, and enhancing breeding and essential habitat, and amending or augmenting land use plans to stabilize populations and other specific actions to avoid the need to list the species pursuant to the ESA or CESA (CDFG 2012).

No burrowing owls or their sign were observed on the project site during the reconnaissance survey, but suitable habitat was present throughout. Therefore, the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) requires a survey for potential burrows followed by four breeding season surveys of those areas found to have potential for burrowing owl occupation. The burrow survey can be conducted at any time, but breeding season focused surveys cannot begin sooner than 1 February.

The burrow survey detected no burrowing owls or burrowing owl sign, but burrows and burrow surrogates offering potential roost and nest sites are present (Figure 3). Breeding season surveys will need to be conducted in 2023.

If burrowing owls are found and are unavoidable, guidelines in CDFG (2012) will need to be followed and consultation with the CDFW may be required. Furthermore, where potential habitat is present, CDFG (2012) also requires less extensive preconstruction take avoidance surveys for owls whether or not found by the focused surveys in case the site has been occupied in the interim between the focused surveys and initiation of construction. These surveys are done from 14 days to 24 hours before groundbreaking. Since the burrowing owl is proposed for coverage under the MSHCP/NCCP, the Town should also be consulted if they are detected onsite.

5.8 Jurisdictional Waters

The jurisdictional delineation site visit identified two potentially jurisdictional unnamed drainages onsite. A jurisdictional delineation report with recommendations is being prepared. Permits from the CDFW, and/or RWQCB may be required.

6.0 SUMMARY

Rare plant species may occur onsite. A focused survey will be conducted in April – May 2023 to determine presence or absence and population size (if any).

Cacti protected by Town code are present onsite. The aforementioned focused plant survey will mark the location of all individuals. If permitted by the Town, the project proposes to transplant all unavoidable cacti for use as project landscaping.

Two special status insects may occur onsite. To avoid impacts to these species, follow recommendations in Section 5.2.

A focused survey determined that the desert tortoise is not present onsite at this time. To prevent potential take from future site entry by desert tortoise, follow recommendations in Section 5.3.

The desert kit fox forages onsite, but no dens are currently present onsite. To avoid impacts to this species, follow recommendations in Section 5.4.

Nesting birds, including special status species, may occur onsite. To avoid impacts to protected species, follow recommendations in Section 5.6.

Burrowing owl may occur onsite. A four-visit focused breeding season survey will be conducted in 2023 beginning no sooner than 15 February and ending no sooner than 16 June.

Potential jurisdictional waters are present. A separate jurisdictional delineation report is being prepared. It will have specific recommendations on required actions. Permits from the CDFW, and/or RWQCB may be required.

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Appendix A California Natural Diversity Database (CNDDB) RareFind 5 Report

SCIENTIFIC NAME	COMMON NAME	QUADRANGLE	FEDERAL	STATE	STATE RANK	CNPS RANK	CDFW STATUS	ECOLOGICAL
Cymopterus deserticola	desert cymopterus	Apple Valley North	None	None	S2	1B.2		IN LOOSE SANDY SOIL.
Diplacus mohavensis	Mojave monkeyflower	Apple Valley North	None	None	S2	1B.2		NOT IN A WASH OR ON WASH BANKS. ON SOUTH-FACING BAJADA IN LARREA-DOMINATED DESERT SHRUBLAND WITH COMPACTED AND ROCKY, FINE SOIL.
Diplacus mohavensis	Mojave monkeyflower	Helendale	None	None	S2	1B.2		CREOSOTE BUSH SCRUB WITH LARREA TRIDENTATA, AMBROSIA DUMOSA, YUCCA SCHIDIGERA, AND ERIOGONUM INFLATUM. EAST SLOPE OF SMALL HILL IN BLUE-GRAY CALCAREOUS SOILS. SCLEROCACTUS POLYANCISTRUS IN GENERAL VICINITY.
Athene cunicularia	burrowing owl	Apple Valley North	None	None	S3		SSC	CREOSOTE BUSH SCRUB. HILLY TERRAIN WITH STEEP HILLSIDES.
Athene cunicularia	burrowing owl	Apple Valley North	None	None	S3		SSC	HABITAT CONSISTS OF BRUSHLAND AND DIRT LOT. LOWLAND ELEVATION SUBREGION. GROUND SQUIRRELS DETECTED WITHIN 100 M OF BREEDING LOCATIONS.
Athene cunicularia	burrowing owl	Apple Valley North	None	None	S3		SSC	HABITAT CONSISTS OF IDLE OR FALLOW FIELD IN A DIRT LOT SURROUNDED BY BRUSHLAND. LOWLAND ELEVATION SUBREGION. GROUND SQUIRRELS DETECTED WITHIN 100 M OF BREEDING LOCATIONS.

Athene cunicularia	burrowing owl	Apple Valley North	None	None	S3	SSC	HABITAT CONSISTS OF BRUSHLAND. LOWLAND ELEVATION SUBREGION. GROUND SQUIRRELS DETECTED WITHIN 100 M OF BREEDING LOCATIONS.
Athene cunicularia	burrowing owl	Apple Valley North	None	None	S3	SSC	HABITAT DESCRIBED AS OPEN CREOSOTE SCRUB; FAIRLY DISTURBED.
Athene cunicularia	burrowing owl	Apple Valley North	None	None	S3	SSC	HABITAT CONSISTS OF IDLE OR FALLOW FIELD IN A DIRT LOT AND NATURAL GRASSLAND. LOWLAND ELEVATION SUBREGION. NO GROUND SQUIRRELS DETECTED WITHIN 100 M OF BREEDING LOCATIONS.
Athene cunicularia	burrowing owl	Apple Valley North	None	None	S3	SSC	HABITAT & SURROUNDING LAND USE CONSISTS OF DISTURBED SOILS, SENESCED ANNUALS, PRIVATE DRIVEWAYS & ROADS. OWLS WERE VISITED FREQUENTLY DURING THE DURATION OF THE CONSTRUCTION PROJECT.
Athene cunicularia	burrowing owl	Apple Valley North	None	None	S3	SSC	CREOSOTE FLATS SOUTH OF WALMART DISTRIBUTION CENTER. DISTURBANCE FROM DIRT ROADS NOTED.
Athene cunicularia	burrowing owl	Apple Valley North	None	None	S3	SSC	CREOSOTE FLATS SOUTH OF WALMART DISTRIBUTION CENTER. DISTURBANCE FROM DIRT ROADS NOTED.
Athene cunicularia	burrowing owl	Apple Valley North	None	None	S3	SSC	DESERT SCRUB (ALLSCALE SERIES). SPARSE ALLSCALE, SILVER SAGEBRUSH, SALTBUSH.

Athene cunicularia	burrowing owl	Apple Valley North	None	None	S3	SSC	HABITAT CONSISTS OF IDLE OR FALLOW FIELD IN A DIRT LOT WITH SPARSE GRASS PATCHES. LOWLAND ELEVATION SUBREGION. GROUND SQUIRRELS DETECTED WITHIN 100 M OF BREEDING LOCATIONS.
Bombus crotchii	Crotch bumble bee	Apple Valley North	None	None	S1S2		
Gopherus agassizii	desert tortoise	The Buttes	Threatened	Threatened	S2S3		AREA COVERS APPROX. 1700 SQ MILES, FROM 2000 TO >4000 FT ELEV W/SEVERAL VEG COMMUNITIES INCLUDED.
Gopherus agassizii	desert tortoise	Apple Valley North	Threatened	Threatened	S2S3		CREOSOTE BUSH SCRUB, DOMINATED BY L. TRIDENTATA, E. REVADENSIS, A. SPHAEROCEPHALUS, A. DUMOSA, C. NAUSEOSUS, L. COOPERII, E. LONATA, S. MEXICANA, ETC. SANDY ALLUVIAL PLAIN WITH NO NEARBY WASHES.
Gopherus agassizii	desert tortoise	Victorville	Threatened	Threatened	S2S3		HABITAT CONSISTS OF CREOSOTE BUSH SCRUB WITH SANDY SOILS. RELATIVELY FLAT AREA. DISTURBED BY ORV TRAILS AND DUMPING.
Gopherus agassizii	desert tortoise	Victorville	Threatened	Threatened	S2S3		HABITAT CONSISTS OF CREOSOTE BUSH SCRUB ON GRADUAL ROCKY, NORTH-FACING SLOPE. DISTURBED BY ORV TRAILS.
Aquila chrysaetos	golden eagle	Apple Valley North	None	None	S3	FP; WL	
Aquila chrysaetos	golden eagle	Apple Valley North	None	None	S3	FP; WL	ROCK OUTCROP.
Toxostoma lecontei	Le Conte's thrasher	Apple Valley North	None	None	S3	SSC	
Toxostoma lecontei	Le Conte's thrasher	Apple Valley North	None	None	S3	SSC	
Toxostoma lecontei	Le Conte's thrasher	Apple Valley North	None	None	S3	SSC	

Lanius ludovicianus	loggerhead shrike	Turtle Valley	None	None	S4	SSC	ROLLING SMALL HILLS OF CREOSOTE BUSH SCRUB (JOSHUA TREES, MOJAVE YUCCA). SOILS SANDY TO GRAVELLY.
Xerospermophilus mohavensis	Mohave ground squirrel	Victorville	None	Threatened	S2S3		HABITAT WAS MOJAVE CREOSOTE BUSH SCRUB. DOMINANTS: LARREA TRIDENTATA, AMBROSIA DUMOSA, HYMENOCLEA SALSOLA, AND LYCIUM ANDERSONII. MUCH SMALL ROCK AND LITTER. SOILS WERE SANDY AND FINE. 9% VEGETATION COVER. CONTINUOUS HABITAT IN 2010 AERIAL.
Falco mexicanus	prairie falcon	Helendale	None	None	S4	WL	
Falco mexicanus	prairie falcon	Apple Valley North	None	None	S4	WL	
Falco mexicanus	prairie falcon	Apple Valley North	None	None	S4	WL	
Falco mexicanus	prairie falcon	Stoddard Well	None	None	S4	WL	SURROUNDING LAND USE WAS RANCHING, RECREATION, AND RECREATIONAL VEHICLES; NEST SITE ON BLM LANDS.
Falco mexicanus	prairie falcon	Stoddard Well	None	None	S4	WL	SURROUNDING LAND USE WAS RANCHING, RECREATION, AND RECREATIONAL VEHICLES; NEST SITE ON BLM LANDS.
Buteo swainsoni	Swainson's hawk	Apple Valley North	None	Threatened	S3		NEST IN JOSHUA TREE.

Appendix B Information for Planning and Consultation (IPaC) Report

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Bernardino County, California

Local office

Carlsbad Fish And Wildlife Office

(760) 431-9440
(760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
California Condor Gymnogyps californianus There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/8193	Endangered

Reptiles

NAME	STATUS
Desert Tortoise Gopherus agassizii There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/4481	Threatened

Fishes

NAME	STATUS
Mohave Tui Chub Gila bicolor ssp. mohavensis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8466	Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

California Thrasher Toxostoma redivivum This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Costa's Hummingbird Calypte costae This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9470	Breeds Jan 15 to Jun 10
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Lawrence's Goldfinch Carduelis lawrencei This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

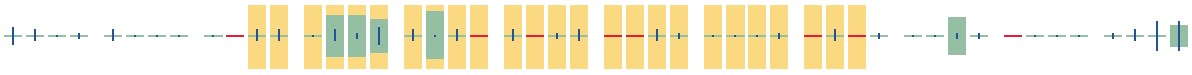
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Lawrence's Goldfinch BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be

subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

Riverine

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

SCIENTIFIC NAME	COMMON NAME	FED LIST	STATE LIST	STATE RANK	CA RARE PLANT RANK	GENERAL HABITATS	MICRO HABITATS	LOWEST ELEVATION (M)	HIGHEST ELEVATION (M)	BLOOMING PERIOD
Androsace elongata ssp. acuta	California androsace	None	None	S3S4	4.2	Chaparral, Cismontane woodland, Coastal scrub, Meadows and seeps, Pinyon and juniper woodland, Valley and foothill grassland		150	1305	Mar-Jun
Canbya candida	white pygmy-poppy	None	None	S3S4	4.2	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland	Granitic, Gravelly, Sandy	600	1460	Mar-Jun
Cymopterus deserticola	desert cymopterus	None	None	S2	1B.2	Joshua tree "woodland", Mojavean desert scrub	Sandy	630	1500	Mar-May
Diplacus mohavensis	Mojave monkeyflower	None	None	S2	1B.2	Joshua tree "woodland", Mojavean desert scrub	Gravelly (sometimes), Sandy (sometimes), Washes (often)	600	1200	Apr-Jun
Eremothera boothii ssp. boothii	Booth's evening-primrose	None	None	S3	2B.3	Joshua tree "woodland", Pinyon and juniper woodland		815	2400	Apr-Sep
Eriophyllum mohavense	Barstow woolly sunflower	None	None	S2	1B.2	Chenopod scrub, Mojavean desert scrub, Playas		500	960	Mar-May
Lycium torreyi	Torrey's box-thorn	None	None	S3	4.2	Mojavean desert scrub, Sonoran desert scrub	Rocky, Sandy, Streambanks, Washes	-50	1220	(Jan-Feb)Mar-Jun(Sep-Nov)
Mentzelia eremophila	solitary blazing star	None	None	S3S4	4.2	Mojavean desert scrub		700	1220	Mar-May
Pediomelum castoreum	Beaver Dam breadroot	None	None	S2	1B.2	Joshua tree "woodland", Mojavean desert scrub	Roadsides, Sandy, Washes	610	1525	Apr-May
Sclerocactus polyancistrus	Mojave fish-hook cactus	None	None	S3	4.2	Great Basin scrub, Joshua tree "woodland", Mojavean desert scrub	Carbonate (usually)	640	2320	Apr-Jul

Appendix D Site Photographs

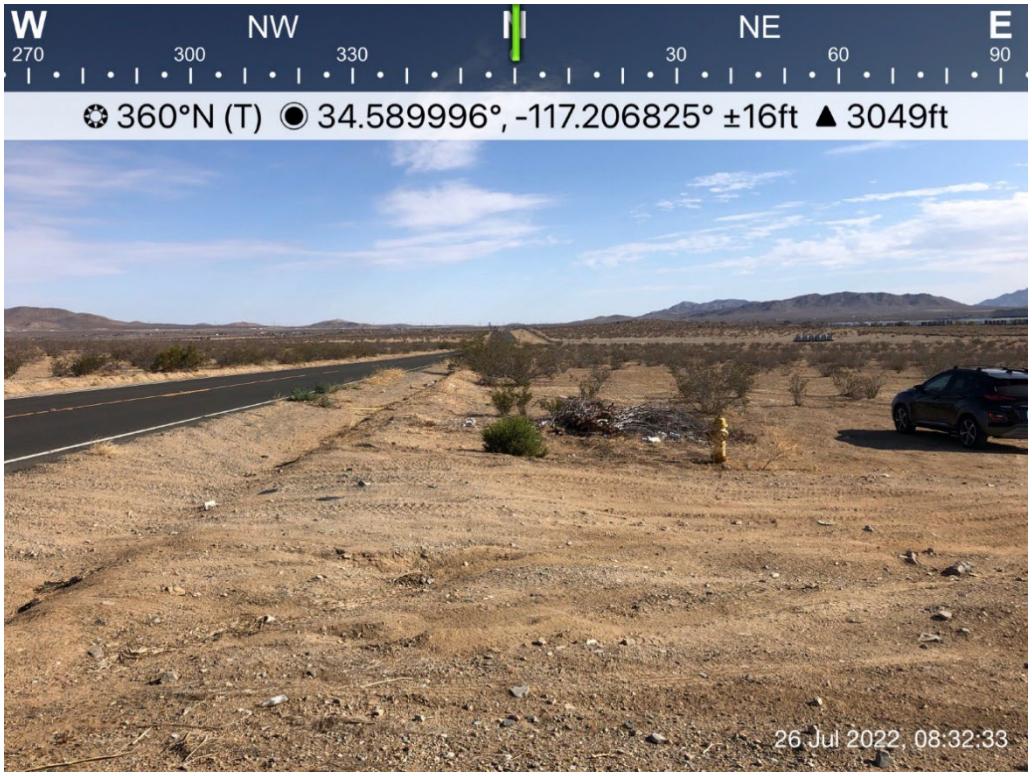


Photo 1. View from southwestern corner facing north. Dale Evans Parkway and creosote bush scrub.

Photo 2. View from northwestern corner facing east. Lafayette Street & existing distribution facility at left, on site creosote bush scrub at right.

Photo 3. View from northeastern corner facing south. Existing distribution facility at left, on site creosote bush scrub at right.

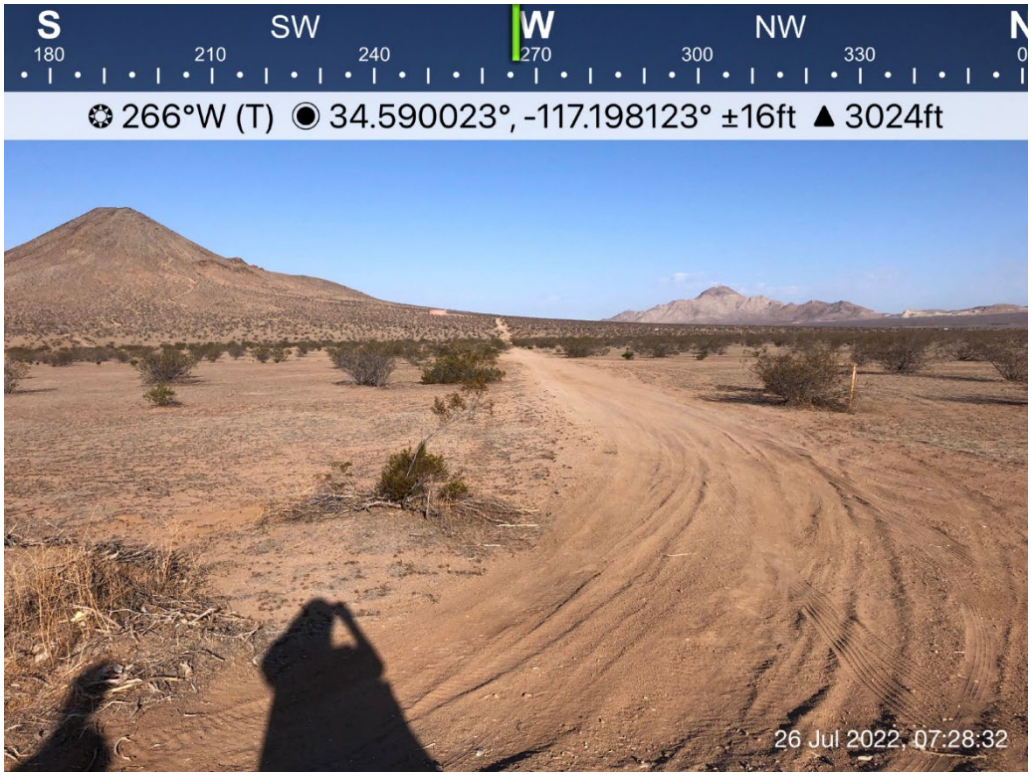


Photo 4. View from southeastern corner facing west. Burbank Avenue & creosote bush scrub.

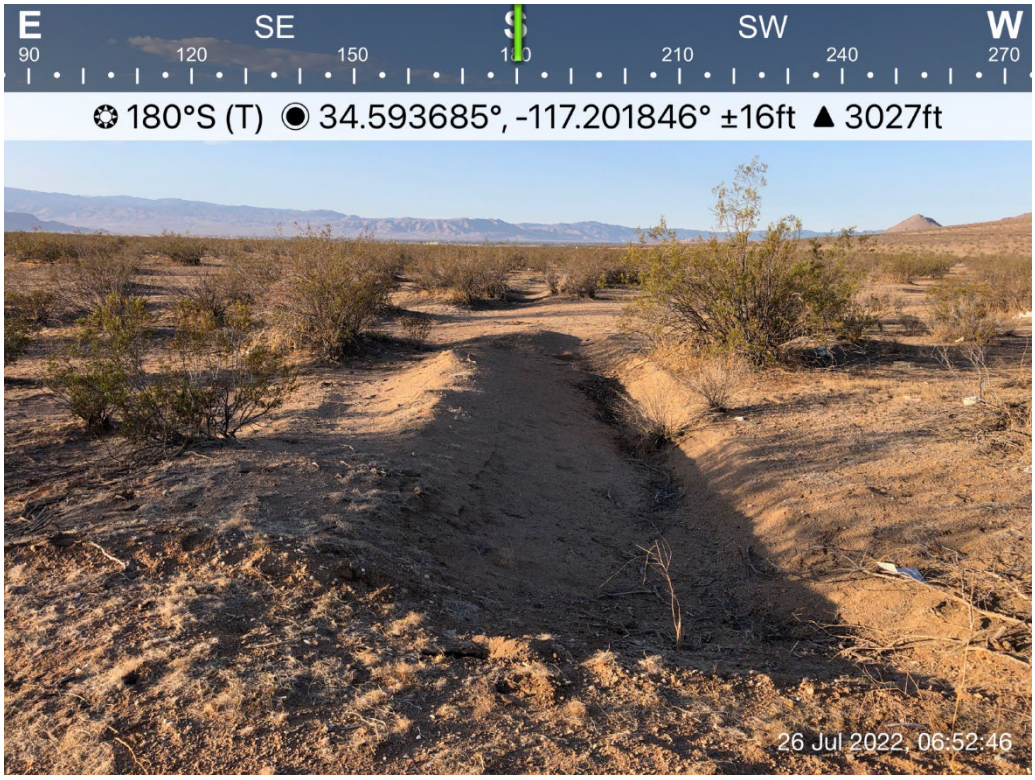


Photo 5. One of the unnamed drainages found on site.

Photo 6. Example of munitions debris found on site.

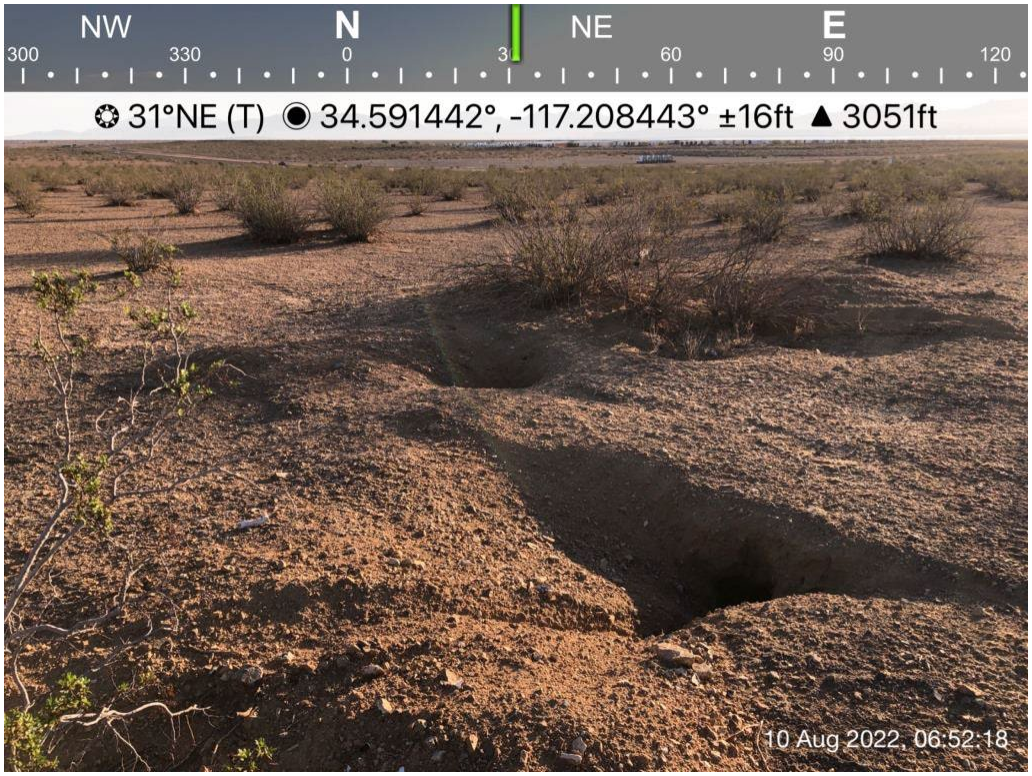


Photo 7. Offsite desert kit fox den.

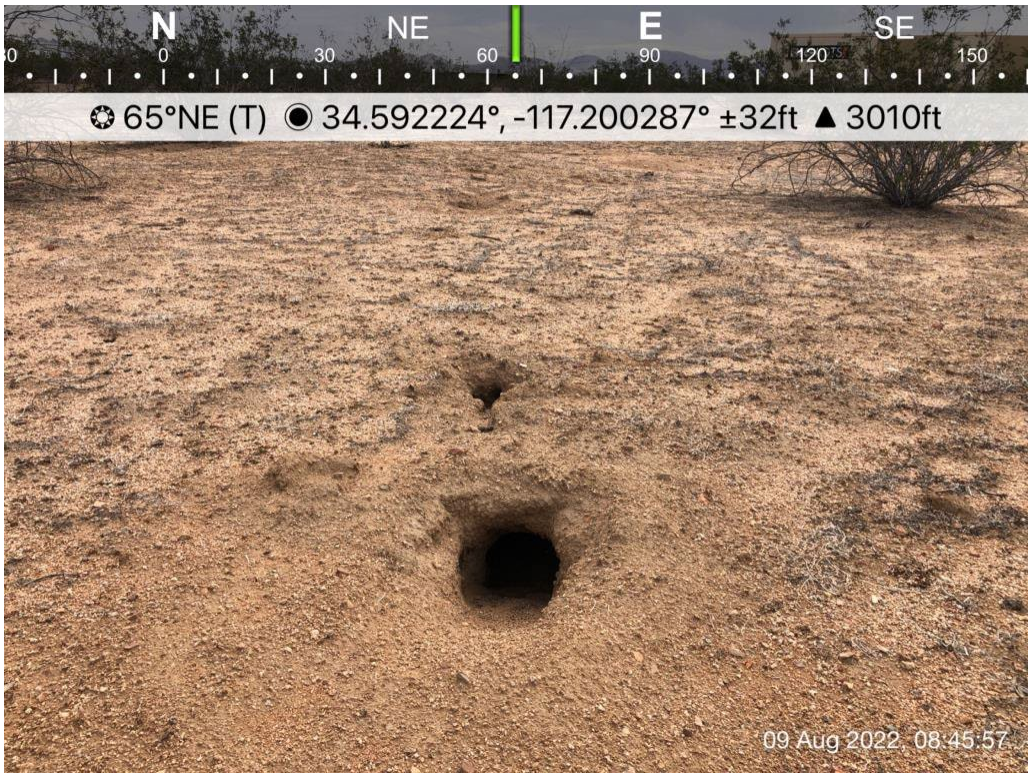


Photo 8. Potential burrowing owl burrow.

Appendix E Wildlife and Plant Species Observed During Surveys

Plant Species Observed

GYMNOSPERMS (GYMNOSPERMAE)

Ephedraceae Ephedra Family

Ephedra nevadensis Nevada ephedra

EUDICOTS (EUDICOTIDAE)

Asteraceae Sunflower Family

Ambrosia acanthicarpa annual bur-sage
Ambrosia dumosa white-bursage
Ambrosia salsola cheesebush
Artemisia tridentata big sagebrush
Baileya multiradiata desert marigold
Ericameria nauseosa rubber rabbitbrush
Stephanomeria pauciflora wire-lettuce

Boraginaceae Borage Family

*Amsinckia tessellata c*heckered fiddleneck
Johnstonella angustifolia narrow-leaved johnstonella

Brassicaceae Mustard Family

*Brassica tournefortii** Sahara mustard
*Hirschfeldia incana** shortpod mustard
Lepidium lasiocarpum ssp. *lasiocarpum* shaggyfruit pepperweed
*Sisymbrium irio** London rocket

Cactaceae Cactus Family

*Cylindropuntia echinocarpa*** golden cholla
*Cylindropuntia ramosissima*** pencil cactus
*Opuntia basilaris*** beavertail

Chenopodiaceae Goosefoot Family

Atriplex polycarpa allscale saltbush

Euphorbiaceae Spurge Family

Euphorbia albomarginata rattlesnake sandmat

Geraniaceae Geranium Family

*Erodium cicutarium** redstem filaree

Lamiaceae Mint Family

Scutellaria mexicana bladder-sage

Malvaceae Mallow Family

Sphaeralcea ambigua desert globemallow

Onagraceae Evening-Primrose Family
Eremothera boothii Booth's evening-primrose

Polemoniaceae Phlox Family
Eriastrum sp. woollystar

Polygonaceae Buckwheat Family
Eriogonum deflexum skeleton weed

Solanaceae Nightshade Family
Lycium andersonii water jacket
Lycium cooperi peach thorn

Zygophyllaceae Caltrop Family
Larrea tridentata creosote bush
*Tribulus terrestris** puncture vine

MONOCOTS (MONOCOTYLEDONAE)
Poaceae Grass Family
*Bromus rubens** red brome
Schismus sp.* Mediterranean grass

.

VERTEBRATE WILDLIFE DETECTED

CLASS REPTILIA REPTILES

Squamata (Lizards and Snakes)
unidentified snake

Teiidae Whiptail Family
Aspidoscelis tigris tiger whiptail

Phrynosomatidae Spiny Lizards Family
Uta stansburiana common side-blotched lizard
Sceloporus uniformis yellow-backed spiny lizard

CLASS AVES BIRDS

Columbidae Pigeon and Dove Family
Zenaida macroura mourning dove

Caprimulgidae Nightjar Family
Chordeiles acutipennis lesser nighthawk

Trochilidae – Hummingbird Family
*Calypte costae*** Costa's hummingbird

Tyrannidae Tyrant Flycatcher Family
Sayornis nigricans black phoebe

Corvidae Crow and Jay Family
Corvus corax common raven

Remizidae Penduline Tits and Verdins Family
Auriparus flaviceps verdin

Alaudidae Lark Family
Eremophila alpestris horned lark

Hirundinidae Swallow Family
Hirundo rustica barn swallow

Fringillidae Fringilline and Cardueline Finches and Allies Family
Haemorhous mexicanus house finch

Passerellidae New World Sparrows Family
Amphispiza bilineata black-throated sparrow
Chondestes grammacus lark sparrow

CLASS MAMMALIA MAMMALS

Leporidae Rabbits and Hares Family

Lepus californicus black-tailed jackrabbit

Sciuridae Squirrel, Chipmunk, and Marmot Family

Ammospermophilus leucurus white-tailed antelope ground squirrel

Geomyidae Pocket Gopher Family

Thomomys bottae Botta's pocket gopher - burrows

Heteromyidae Pocket Mice and Kangaroo Rats Family

Dipodomys sp. - burrows

Canidae Fox, Wolf and Relatives Family

Vulpes macrotis kit fox - scat

Canis latrans coyote - scat

KEY

* = non-native species
** = special-status species
cf. = compares favorably with
sp. = plant identified to genus only

These lists report only plants and animals observed on the site by this study. Other species may have been overlooked or undetectable due to their growing season (plants) or their activity patterns and/or subterranean habitats (animals). Plant species of uncertain identity were collected for later identification by University of California, Riverside Herbarium Collections Manager Andrew Sanders. Plant nomenclature and systematics follows the Jepson Flora Project (2022) and/or United States Department of Agriculture, Natural Resources Conservation Service (2022). Nomenclature and taxonomy for fauna follows California Bird Records Committee (2022) for avifauna and California Department of Fish and Wildlife (2016a) for herpetofauna and mammals.

Appendix F Desert Tortoise Survey Forms

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 400 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 0550 (am)/pm

GPS End-point: (West) or east end (easting, northing, elevation in meters) End time: 0613 (am)/pm

Start Temp: 24.7 °C End Temp: 23.4 °C Transects numbered in 10s, 10-400

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 500 acres Transect #: 390 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 0550 (am)/pm

GPS End-point: (west) or east end (easting, northing, elevation in meters) End time: 0613 (am)/pm

Start Temp: 24.7° °C End Temp: 23.4 °C Transects numbered in 10s, 10-400

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

No wind

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 380 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 0615 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 0637 am/pm

Start Temp: 23.4 °C End Temp: 23.4 °C Transects numbered in 10s, 10-400

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans / Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 800 acres Transect #: 370 Transect length: 795 m

GPS Start-point: (west) or east end (easting, northing, elevation in meters) Start time: 0615 (am)/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 0637 am/pm

Start Temp: 23.4 °C End Temp: _____ °C Transects numbered in 10s, 10-400

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Version: October 8, 2019

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS, map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 360 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 0640 am/pm

GPS End-point: (west) or east end (easting, northing, elevation in meters) End time: 0705 am/pm

Start Temp: 23.4 °C End Temp: 25.2 °C Transects numbered in 10s, 10-400

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 600 acres Transect #: 350 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 0639 (am)/pm

GPS End-point: (west) or east end (easting, northing, elevation in meters) End time: 0705 (am)/pm

Start Temp: ____ °C End Temp: 25.2 °C Transects numbered in 10s, 10-400

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 340 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 0708 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 0730 am/pm

Start Temp: 25.2 °C End Temp: 25.2 °C Transects numbered in 10s, 10-490

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 330 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 0708 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 0730 am/pm

Start Temp: 25.2 °C End Temp: _____ °C Transects numbered in 10s, 10-400

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans / Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 320 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 0736 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 0749 am/pm

Start Temp: _____ °C End Temp: _____ °C Transects numbered in lots, 10-490

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 310 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 0736 (am)/pm

GPS End-point: (west) or east end (easting, northing, elevation in meters) End time: 0749 (am)/pm

Start Temp: _____ °C End Temp: _____ °C Transerts numbered in 10s, 10-400

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage ~~or Sampling~~ Area size to be surveyed: 640 acres Transect #: 300 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in ~~meters~~) Start time: 0751 am/pm

GPS End-point: west or (east) end (easting, northing, elevation in ~~meters~~) End time: 0805 am/pm

Start Temp: _____ °C End Temp: 24.4 °C Transects numbered in 10s, 10-400

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 290 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 0751 (am)/pm

GPS End-point: west or (east) end (easting, northing, elevation in meters) End time: 0805 (am)/pm

Start Temp: _____ °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 280 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 0813 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 0829 am/pm

Start Temp: 24.4 °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans / Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect # 270 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 0813 (am)/pm

GPS End-point: (west) or east end (easting, northing, elevation in meters) End time: 0829 (am)/pm

Start Temp: 24.4 °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: ~~100% coverage or Sampling~~ Area size to be surveyed: 640 acres Transect #: 260 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 0833 am/pm

GPS End-point: west or (east) end (easting, northing, elevation in meters) End time: 0850 am/pm

Start Temp: _____ °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 250 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 0833 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1850 am/pm

Start Temp: _____ °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 240 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 0857 am/pm

GPS End-point: (west) or east end (easting, northing, elevation in meters) End time: 0913 am/pm

Start Temp: 27.7 °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 230 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 0857 (am)/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 0913 (am)/pm

Start Temp: 27.7 °C End Temp: _____ °C Transerts numbered in 10s, 10-490

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 220 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 09/4 am/pm

GPS End-point: west or (east) end (easting, northing, elevation in meters) End time: 0929 (am)/pm

Start Temp: _____ °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect # 219 Transect length: 795 m

GPS Start-point: West or east end (easting, northing, elevation in meters) Start time: 0914 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: _____ am/pm

Start Temp: _____ °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 200 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 0932 (am)/pm

GPS End-point: ~~west~~ or east end (easting, northing, elevation in meters) End time: 0947 (am)/pm

Start Temp: 28.3 °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area ~~size~~ to be surveyed: 640 acres Transect #: 190 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 0932 (am/pm)

GPS End-point: (west) or east end (easting, northing, elevation in meters) End time: 0947 (am/pm)

Start Temp: 29.3 °C End Temp: _____ °C Transerts numbered in 10s, 10-400

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 80 Transect length: 795 m

GPS Start-point: (west) or east end (easting, northing, elevation in meters) Start time: 948 am/pm

GPS End-point: west or (east) end (easting, northing, elevation in meters) End time: 1003 am/pm

Start Temp: 29.7 °C End Temp: 29.4 °C Transects numbered in 10s, 10-490

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 170 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 0948 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1003 am/pm

Start Temp: [illegible] °C End Temp: 29.4 °C Transects numbered in 10s, 10-490

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 160 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 1009 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1024 am/pm

Start Temp: 29.4 °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans / Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 150 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 1009 (am)/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1024 am/pm

Start Temp: _____ °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 140 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 1027 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1042 am/pm

Start Temp: _____ °C End Temp: 31.0 °C Transects numbered in 10s, 10-400

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 130 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 1027 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1042 am/pm

Start Temp: 31.7 °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans / Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 120 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 1220 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1234 am/pm

Start Temp: 32 °C End Temp: _____ °C Transects numbered in 10s, 10-400

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 110 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 1220 am/(pm)

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1234 am/(pm)

Start Temp: 32 °C End Temp: _____ °C Transects numbered in 10s, 10-400

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 100 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 1236 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1254 am/pm

Start Temp: _____ °C End Temp: 32.7 °C Transects numbered in 10s, 10-490

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: ~~100% coverage or Sampling~~ Area size to be surveyed: 600 acres Transect #: 90 Transect length: 795 m

GPS Start-point: (west) or east end (easting, northing, elevation in meters) Start time: 1236 am (pm)

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1254 am (pm)

Start Temp: [illegible] °C End Temp: 32.7 °C Transects numbered in 10s, 10-400

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 80 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 1259 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1315 am/pm

Start Temp: 32.7 °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 800 acres Transect #: 70 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 1259 am/(pm)

GPS End-point: (west) or east end (easting, northing, elevation in meters) End time: 1315 am/(pm)

Start Temp: _____ °C End Temp: _____ °C Transects numbered in 10s, 10-490

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage ~~or Sampling~~ Area size to be surveyed: 800 acres Transect #: 60 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 1316 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1334 am/pm

Start Temp: 32.7 °C End Temp: 32.7 °C Transects numbered in 10s, 10-400

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 800 acres Transect #: 50 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 1316 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1334 am/pm

Start Temp: _____ °C End Temp: 32.7 °C Transects numbered in 10s, 10-400

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 40 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 1339 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1353 am/pm

Start Temp: 32.7 °C End Temp: _____ °C Transects numbered in 10s, 10-400

Live Tortoises

Detection number	GPS location Easting	Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 30 Transect length: 795 m

GPS Start-point: west or (east) end (easting, northing, elevation in meters) Start time: 1339 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1353 am/pm

Start Temp: _____ °C End Temp: _____ °C Transects numbered in 10s, 10-400

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 26 Transect length: 795 m

GPS Start-point: West or east end (easting, northing, elevation in meters) Start time: 1355 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1408 am/pm

Start Temp: _____ °C End Temp: 33.8 °C Transects numbered in 10s, 10-490

Live Tortoises

Detection number	GPS location Easting	GPS location Northing	Time	Tortoise location (*in burrow*: all of tortoise beneath plane of burrow opening, or *not in burrow*)	Approx MCL ≥180 mm? (*Yes, No or Unknown*)	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting	GPS location Northing	Type of sign (*burrows, scats, carcass, etc*)	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

Date of survey: 9 Aug 2022 (day, month, year) Survey biologist(s): J. Green, P. Clevinger (name, email, and phone number)

Site description: Dale Evans/Lafayette (project name and size; general location)

County: San Bernardino Quad: Apple Valley N. Location: In GIS data (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: 640 acres Transect #: 10 Transect length: 795 m

GPS Start-point: west or east end (easting, northing, elevation in meters) Start time: 1355 am/pm

GPS End-point: west or east end (easting, northing, elevation in meters) End time: 1408 am/pm

Start Temp: 33.0 °C End Temp: 33.8 °C Transects numbered in 10s, 10-400

Live Tortoises

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

Tortoise Sign (burrows, scats, carcasses, etc)

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