

Biological Technical Report for the North Star 2 Project

Imperial County, California

Prepared for:

ZGlobal, Inc.
604 Sutter Street, Suite 250
Folsom, California 95630

Submitted by:

 **ECORP Consulting, Inc.**
ENVIRONMENTAL CONSULTANTS
2525 Warren Drive
Rocklin, California 95677

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Definition
ACE	Areas of Conservation Emphasis
ACEC	Areas of Critical Environmental Concern
APN	Assessor Parcel Number
BESS	Battery Electric Storage System
BLM	United States Bureau of Land Management
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CNPSEI	CNPS Electronic Inventory
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DRECP	Desert Renewable Energy Conservation Plan
END	Endangered
ESA	Endangered Species Act
GPS	Global Positioning System
HCP	Habitat Conservation Plan
IID	Imperial Irrigation District
MBTA	Migratory Bird Treaty Act
MW	Megawatt
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
Project	North Star 2 Project
RWQCB	Regional Water Quality Control Board (Colorado River Basin)
SAA	Streambed Alteration Agreement
SR-78	State Route-78
SSAR	Society for the Study of Amphibians and Reptiles
SSC	Species of Special Concern
THR	Threatened
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 INTRODUCTION

The North Star 2 Project (Project) is a 130-megawatt (MW) (AC) solar field, consisting of 289,800 tracker modules, 9,660 strings and associated collector and inverter facilities, and a 175-MW Battery Electric Storage System (BESS). The Project Site, including the solar field and generation interconnect line (gen-tie line), is located on approximately 651.26 acres of undeveloped land in Imperial County, California (Figure 1). ECORP Consulting, Inc. conducted a literature review, vegetation mapping, and a biological resource assessment of the Survey Area, which includes the Project Site plus a 500-foot buffer, to document the existing biological conditions and resources, to assess the habitat for its potential to support sensitive plant and wildlife species, as required under the California Environmental Quality Act (CEQA), and to determine whether Project-related impacts may occur to sensitive biological resources.

1.1 Purpose of the Report

This report was prepared to describe biological resources in the Survey Area and to support Project review under CEQA. Assessment of potential occurrences of special-status plants and wildlife is based on habitat, geographic and elevational range, and data collected from field surveys conducted by ECORP in 2022.

1.2 Terms

The following terms will be used throughout this document and are defined as follows:

- *Project Site*: the approximately 651.26 acres subject to the general assessment during the biological survey; includes the solar field and the gen-tie line (estimated to be approximately 90 feet wide).
- *Gen-tie line*: the approximately 1.25 miles of gen-tie line (estimated to be approximately 90 feet wide) along State Route-78 (SR-78).
- *Survey Area*: includes the Project Site and a 500-foot buffer around the Project Site; these areas are potentially subject to temporary impacts.

1.3 Project Location and Description

The Proposed Project includes a solar field with a BESS located on approximately 614 acres of vacant desert land on two parcels in Imperial County, California. The Project Site includes Assessor Parcel Numbers (APN) 039-140-013 (460 acres) and 039-140-014 (154 acres) and an offsite 1.25-mile gen-tie line (estimated to be approximately 90 feet wide). The proposed gen-tie route would connect to transmission lines across Ben Hulse Highway. The Survey Area is approximately 13 miles east of the Community of Brawley, Imperial County, California (Figure 2). A complete summary of geographic information for the Survey Area is provided in Table 1.



Location: N:\2022\2022-103 NorthStar 2\MAPS\Location_Vicinity\NorthStar2_LnV.aprx - NS2_Vicinity (trotellini) - 11/11/2022

Map Date: 11/11/2022
 Sources: Layer Credits: Community Esri, Garmin, FAO, NOAA, USGS, EPA, California State Parks, Esri, HERE, Garmin, SafeGraph, FAO, METANASA, USGS, Bureau of Land Management, EPA, NPS
 World Hillshade: Esri, USGS
 World #Hillshade: Esri, CGIAR, USGS

Figure 1. Project Vicinity



Map Contents

- Project Area - 651.26 Acres
- Gen-tie Line

Location: N:\2022\2022-103 North Star 2\MAPS\Location_Vicinity\Northstar2_Ln\Maprx - NS2_Location (trotellini) - 12/1/2022

Map Date: 12/1/2022

Service Layer Credits: NAIP Imagery, Source: Esri, USDA FSA
 Dark Gray Base: California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA
 USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA
 Hybrid Reference Layer: California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc,
 METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA
 World Imagery (Firefly), Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Figure 2. Project Location

Table 1. U.S. Geological Survey (USGS) Quadrangle Information				
USGS 7.5-Minute Quad Map Name	Township	Range	Section(s)	Approximate Center of Survey Area
Holtville NE	13 S	17 E	30, 31	32.977464°, -115.271969°
		16 E	25, 34, 35, and 36	

Topography is variable throughout the Project Site, with elevations ranging between 8 and 73 feet above mean sea level. The solar field portion of the Project is surrounded by Bureau of Land Management (BLM) land and the gen-tie line is located on BLM land. The Project Site is bound by SR-78 to the south. Adjacent land use includes agricultural land to the west and undeveloped land to the north, east, and south. A majority of the Project Site is located east of the East Highline Canal; however, the gen-tie line crosses the East Highline Canal and terminates on the west side of the Canal.

ECORP conducted the biological reconnaissance survey to identify potential constraints and to ensure compliance with state and federal regulations regarding listed, protected, and sensitive species. The regulations are detailed below.

2.0 REGULATORY CONSIDERATIONS

2.1 Federal Regulations

2.1.1 Endangered Species Act

The federal Endangered Species Act (ESA) protects plants and wildlife that are listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service. Section 9 of the ESA prohibits the taking of endangered wildlife, where taking is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct” (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 U.S. Code 1538). Under Section 7 of the ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of the ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan (HCP) is developed.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the U.S. and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations

or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13 General Permit Procedures and 50 CFR Part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

2.1.3 Clean Water Act

The U.S. Army Corps of Engineers (USACE) regulates discharge of dredged or fill material into Waters of the U.S. under Section 404 of the federal Clean Water Act (CWA). *Discharges of fill material* is defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes, and subaqueous utility lines [33 Code of Federal Regulations (CFR) Section 328.2(f)]. In addition, Section 401 of the CWA (33 U.S. Code [USC] 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. Section 401 Certification, "gives states and authorized tribes the authority to grant or waive certification of proposed federal licenses or permits that may discharge into waters of the US" (33 USC 1251).

The U.S. Environmental Protection Agency (USEPA) and the Department of the Army published a proposed rule to revise the definition of "Waters of the United States" in August 2021. The proposed rule was open for public comment until February 7, 2022. A final rule has not yet been published. In the rule, which follows previous USACE/USEPA CWA regulations (33 CFR 328.3[a]), the term *Waters of the U.S.* is defined as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) Which are used or could be used for industrial purpose by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the U.S. under the definition;
5. Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;

6. The territorial seas;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in 1-6 above.

2.2 State and Local Regulations

2.2.1 California Endangered Species Act

The California ESA generally parallels the main provisions of the ESA but, unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called *candidates* by the State). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The California ESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with California Department of Fish and Wildlife (CDFW) to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

2.2.2 Fully Protected Species

The State of California first began to designate species as *fully protected* prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under federal and/or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code Section 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any State agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

2.2.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code Sections 1900-1913) was created with the intent to “preserve, protect and enhance rare and endangered plants in this State.” The NPPA is administered by CDFW. The Fish and Wildlife Commission has the authority to designate native plants as *endangered* or *rare* and to protect endangered and rare plants from take. The California ESA of 1984 (California Fish and Game Code Sections 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

2.2.4 Porter Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act requires “any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the State to file a report of discharge” with the Regional Water Quality Control Board (RWQCB) through State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) (California Code

of Regulations [CCR], Title 23, and 3855) (State Water Resources Control Board 2021). *Waters of the State* is defined as any surface water or groundwater, including saline waters, within the boundaries of the state (California Water Code Section 13050[e]). Pollution is defined as an alteration of the quality of the Waters of the State by waste to a degree that unreasonably affects its beneficial uses (California Water Code Section 13050) and includes filling in Waters of the State. Note that CCR, Title 23, Section 3855 applies only to individual water quality certifications, but the new Procedures extend the application of Section 3855 to individual waste discharge requirements for discharges of dredged or fill material to Waters of the State and waivers thereof.

A permit for impacts to Waters of the State would likely be required under the CWA and/or Porter-Cologne Water Quality Control Act. The RWQCB considers whether project activities could impact the quality of waters of the State to determine if a project should be regulated pursuant to the Porter-Cologne Water Quality Control Act.

2.2.5 California Fish and Game Code

2.2.5.1 Streambed Alteration Agreement

Section 1602 of the California Fish and Game Code requires that a Notification of Lake or Streambed Alteration be submitted to CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” The CDFW reviews the proposed actions and, if necessary, submits to the Applicant a proposal for measures to protect affected fish and wildlife resources. The Streambed Alteration Agreement (SAA) is the final proposal mutually agreed upon by CDFW and the Applicant. Often, projects that require an SAA also require a permit from the USACE under Section 404 of the CWA. The conditions of the Section 404 permit and the SAA may overlap in these instances.

2.2.5.2 Migratory Birds

The CDFW enforces the protection of nongame native birds in Sections 3503, 3503.5, and 3800 of the California Fish and Game Code. Section 3513 of the California Fish and Game Code prohibits the possession or take of birds listed under the MBTA. These sections mandate the protection of California nongame native birds’ nests and also make it unlawful to take these birds. All raptor species are protected from *take* pursuant to California Fish and Game Code Section 3503.5 and are also protected at the federal level by the MBTA of 1918 (USFWS 1918).

2.2.6 Desert Renewable Energy Conservation Plan Use Plan

The Desert Renewable Energy Conservation Plan (DRECP) is designed to provide effective protection and conservation of desert ecosystems while allowing for the appropriate development of renewable energy projects. The DRECP Area contains both federal and non-federal California desert land. Some of these lands are designated as California Desert Conservation Areas. The federal portion of the plan area was released by the BLM as a Land Use Plan Amendment. The DRECP Land Use Plan Amendment supports the conservation goals of the DRECP and organizes land into ecoregions and subregions with specific

management goals, objectives, allowable uses, and management actions for biological and cultural resources. The BLM designates Areas of Critical Environmental Concern (ACEC) where special management attention is needed to protect important historical, cultural, and scenic values, or fish and wildlife or other natural resources. The BLM also designates Renewable Energy Development Focus Areas, which are on BLM-administered lands within which solar, wind, and geothermal renewable energy development and associated activities are allowable uses and that have been determined to be of low or lower resource conflict. The intent is to incentivize and streamline such development in these areas. The Project is located in a DRECP Area with a conservation designation of California Desert National Conserved Lands and falls within the Lake Cahuilla Shoreline ACEC.

2.2.7 Conservation and Open Space Element

Imperial County created the Conservation and Open Space Element plan to provide details and measures for management and preservation of biological resources as well as various other resources (i.e. cultural, soils, minerals). This plan focuses on protecting scarce resources and preventing wasteful exploitation, neglect, and destruction of California's natural resources. The plan outlines areas with sensitive habitat and sensitive species, also labelled "Resource Areas." Open space easements and protection of riparian habitat, rock outcrops, California fan palm oases, and wildlife corridors are also discussed in the plan. As it currently stands, the open space element follows CEQA guidelines with special focus on its scarce resources.

2.2.8 Imperial Irrigation District Water Conservation and Transfer Project and Draft Habitat Conservation Plan Draft Environmental Impact Report/Environmental Impact Statement

The Imperial Irrigation District (IID) HCP covers approximately 500,000 acres in Imperial County, as well as a small portion of Riverside County. The Planning Area includes the rights-of-way along the All-American Canal from the Imperial Dam on the Colorado River to its terminus near Calexico, and the IID service area from the U.S.-Mexico border to the Salton Sea (including the rights-of-way along its canals).

This area provides habitat for 96 species-status species, including the California Species of Special Concern loggerhead shrike (*Lanius ludovicianus*) and the federal Species of Concern long-eared owl (*Asio otus*). Entities in the IID HCP include the IID, the CDFW, and the U.S. Fish and Wildlife Service. The final HCP was published as of February 1, 2006.

2.2.9 Flat-tailed Horned Lizard Range-wide Management Strategy

The *Flat-tailed Horned Lizard Range-Wide Management Strategy* is a document created by the Flat-tailed Horned Lizard Working Group that provides guidance to help conserve and manage flat-tailed horned lizard (*Phrynosoma mcallii*) habitat throughout its range. The Range-Wide Management Strategy contains five management areas that limit ground disturbing activities. For areas that are within flat-tailed horned lizard range but not within a management area, the Range-Wide Management Strategy provides mitigation and compensation measures to help maintain sufficient habitat and a viable population of flat-tailed horned lizards (Foreman 1997).

2.2.10 California Environmental Quality Act Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the Project would:

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

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA because although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of an important resource on a population-wide or region-wide basis.

3.0 METHODS

3.1 Literature Review

Prior to conducting the biological reconnaissance survey, ECORP biologists performed a literature review using the CDFW's California Natural Diversity Data Base (CNDDDB; CDFW 2022a), the California Native Plant Society's (CNPS') Electronic Inventory (CNPSEI; CNPS 2022), and the USFWS Species Occurrence Data (USFWS 2022a) to determine the special-status plant and wildlife species that have been documented in

the vicinity of the Project Site. ECORP searched CNDDDB, CNPSEI, and USFWS records within the Project Site boundaries as depicted on the U.S. Geological Survey (USGS) 7.5-minute "Holtville NE, California" topographic quadrangle, and the surrounding eight topographic quadrangles: Holtville East, Holtville West, Amos, Glamis NW, Wiest, Acolita, Glamis SW, and Alamorio. The CNDDDB, CNPSEI, and USFWS Species Occurrence data all contain records of reported occurrences of federal- or state-listed endangered, threatened, proposed endangered or threatened species, California Species of Special Concern (SSC), or other special-status species or habitat that may occur within or in the vicinity of the proposed Project Site. Additional information was gathered from the following sources and includes, but is not limited to:

- U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2022);
- Special Animals List (CDFW 2022b);
- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2022c);
- USFWS designated critical habitat (USFWS 2022b).
- The Jepson Manual: Vascular Plants of California (Baldwin et al. 2012);
- The Manual of California Vegetation, 2nd Edition (Sawyer et al. 2009);
- Pertinent maps, scientific literature, websites, and regional flora and fauna field guides; and
- various online websites (e.g., CalFlora 2022).

In addition to the database searches, ECORP biologists also reviewed nearby records on iNaturalist, a citizen science network that displays location, notes, and activity of plant and wildlife observations. iNaturalist is a collaboration between the California Academy of Sciences and the National Geographic Society (iNaturalist 2022). Although iNaturalist is not a peer reviewed resource, observations can be considered "*Research Grade*" after multiple members agree on a species identification.

Furthermore, ECORP Biologists were provided with a copy of a general biological survey report prepared by RECON in January 2022. The RECON report was reviewed prior to the field surveys to gather more information about the Project Site such as locations of previously recorded special-status species and vegetation communities. The biological survey performed by RECON only included the solar field portion of the Project Site and did not include the gen-tie line or a buffer surrounding the Project Site.

3.1.1 Special Status Species

ECORP generated a list of special-status plant and wildlife species that have potential to occur within the vicinity of the Project Site using this information and field observations. For the purposes of this assessment, special-status species are defined as plants or animals that:

- have been designated as either rare, threatened, or endangered by CDFW, CNPS, or the USFWS, or are protected under either the federal or California ESAs;

- are candidate species being considered or proposed for listing under these same acts;
- are fully protected by the California Fish and Game Code, Sections 3511, 4700, 5050, or 5515;
- are of expressed concern to resource and regulatory agencies or local jurisdictions;
- are identified as sensitive, unique or rare, by the USFWS, CDFW, U.S. Forest Service, and/or the BLM; or
- any plants that meet the definition of rare or endangered under CEQA Section 15380(b) and (d).

Species that may meet the definition of rare or endangered include the following:

- Species considered by CNPS and CDFW to be “rare, threatened or endangered in California” (California Rare Plant Rank [CRPR] 1A, 1B and 2; CNPS 2022). A majority of the CRPR 3 and CRPR 4 plant species generally do not qualify for protection under the California ESA and NPPA.
- Species that may warrant consideration on the basis of local significance or recent biological information.
- Some species included on the CNDDDB Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2022c).

The literature review provided a baseline from which to inventory the biological resources potentially occurring within the Project Site, as well as the surrounding area. Although the inventory list of special status wildlife species was not exhaustive of all species that might be of concern for the property, it provided a wide range of species representative of the wildland habitats in the area. Species occurrence and distribution information is often based on documented occurrences where opportunistic surveys have taken place; therefore, a lack of records does not necessarily indicate that a given species is absent from the Project Site.

3.1.2 Sensitive Plant Communities

Sensitive plant communities (sensitive habitats) as defined below, are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. Sensitive habitats are often threatened with local extirpation and are therefore considered as valuable biological resources. Plant communities are considered *sensitive* by the CNPS and CDFW if they meet any of the following criteria listed below:

- The habitat is recognized and considered sensitive by CDFW, USFWS, and/or special interest groups such as CNPS.
- The habitat is under the jurisdiction of the USACE pursuant to Section 404 of the CWA.
- The habitat is under the jurisdiction of the CDFW pursuant to Sections 1600 through 1612 of the Fish and Game Code.
- The habitat is known or believed to be of high priority for inventory in the CNDDDB.

- The habitat is considered regionally rare.
- The habitat has undergone a large-scale reduction due to increased encroachment and development.
- The habitat supports special status plant and/or wildlife species (defined below).
- The habitat functions as an important corridor for wildlife movement.

The most current version of CDFW's List of California Sensitive Natural Communities indicates which natural communities are sensitive given the current state of the California classification (CDFW 2022b).

3.2 Field Survey

3.2.1 Biological Reconnaissance Survey

ECORP biologists conducted a biological reconnaissance survey by walking throughout the Survey Area to identify the vegetation communities and wildlife habitats. The biologists documented plant and wildlife species present within the Survey Area and assessed the location and condition of the Project Site for the potential to provide habitat for special-status plant and wildlife species. ECORP biologists recorded data on a Global Positioning System (GPS) unit, field notebooks, and/or maps. The biologists took photographs during the survey to provide visual representation of general site conditions and the various vegetation communities within the Survey Area. The biologists also examined the Survey Area to assess its potential to facilitate wildlife movement or function as a movement corridor for wildlife moving throughout the region and mapped the vegetation communities present within the Survey Area.

ECORP biologists recorded plant and wildlife species, including any special-status species observed during the survey. Plant nomenclature follows that of *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012). Wildlife nomenclature follows Society for the Study of Amphibians and Reptiles (SSAR 2017), *Check-list of North American Birds* (Chesser et al. 2019), and the *Revised Checklist of North American Mammals North of Mexico* (Bradley et al. 2014).

3.2.1.1 Vegetation Mapping

Information gathered from the literature review and biological reconnaissance survey were used to assist the biologists with accurate mapping of the vegetation communities. A botanist utilized aerial imagery as well as performed ground truthing in the field during the biological reconnaissance survey to map vegetation communities. Vegetation classifications were in accordance with *A Manual of California Vegetation* (Sawyer et al. 2009). Vegetation communities that did not fit within the Sawyer classification system were described following Holland (1986) or Oberbauer et al. (2008). Areas of the site that had already been graded, developed, and/or disturbed were mapped as such. Acreages of each vegetation community were calculated using Geographic Information System data collected during the surveys.

3.2.2 Jurisdictional Aquatic Resources Delineation

An aquatic resources delineation was conducted by Hernandez Environmental Services. The results are presented under separate cover.

3.3 Potential for Occurrence Determinations

Using information from the literature review and observations in the field, ECORP generated a list of special-status plant and wildlife species that have potential to occur within the Survey Area. For the purposes of this assessment, special-status species are defined in Section 3.1.1. Special-status species reported for the region in the literature review or for which suitable habitat occurs in the Survey Area were assessed for their potential to occur within the Survey Area based on the following guidelines:

- **Present:** The species was observed on site during a site visit or focused survey.
- **High:** Habitat (including soils and elevation factors) for the species occurs within the Survey Area and a known occurrence has recently been recorded (within the last 20 years) within five miles of the area.
- **Moderate:** Habitat (including soils and elevation factors) for the species occurs within the Survey Area and a documented observation occurs within the database search, but not within five miles of the area; a historic documented observation (more than 20 years old) was recorded within five miles of the Survey Area; or a recently documented observation occurs within five miles of the area and marginal or limited amounts of habitat occurs in the Survey Area.
- **Low:** Limited or marginal habitat for the species occurs within the Survey Area and a recently documented observation occurs within the database search, but not within five miles of the area; a historic documented observation (more than 20 years old) was recorded within five miles of the Survey Area; or suitable habitat strongly associated with the species occurs on site, but no records or only historic records were found within the database search.
- **Presumed Absent:** Species was not observed during a site visit or focused surveys conducted in accordance with protocol guidelines at an appropriate time for identification; habitat (including soils and elevation factors) does not exist on site; or the known geographic range of the species does not include the Survey Area.
- **Note:** Location information on some special-status species may be of questionable accuracy or unavailable. Therefore, for survey purposes, the environmental factors associated with a species' occurrence requirements may be considered sufficient reason to give a species a positive potential for occurrence. In addition, just because a record of a species does not exist in the databases does not mean it does not occur. In many cases, records may not be present in the databases because an area has not been surveyed for that particular species.

Plant and wildlife species with a watch list status were eliminated from the analysis because these rankings are considered a review list.

4.0 RESULTS

The following sections summarize the results of the literature review and field surveys, including site characteristics, vegetation communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors).

4.1 Literature Review

4.1.1 Special-Status Plants and Wildlife

ECORP biologists conducted the CNDDDB, CNPSEI, and USFWS Species Occurrence data searches on August 12 and 18, and October 17, 2022. Due to the expiration date on the literature review conducted in August 2022, the CNDDDB and CNPSEI searches were conducted again on November 30, 2022. The database searches identified 10 special-status plant species and 23 special-status wildlife species that could occur on or near the Project Site. The biologists generated a list from the results of the literature review and evaluated the Survey Area for suitable habitat that could support any of the special-status plant or wildlife species on the list.

4.1.2 U.S. Fish and Wildlife Service Designated Critical Habitat

The Project Site is not located within any USFWS-designated critical habitat. The closest USFWS-designated critical habitat is for Peirson's milk-vetch (*Astragalus magdalena* var. *peirsonii*) located approximately 5.5 miles northeast of the Project Site, near the Glamis Dunes.

4.2 Biological Reconnaissance Survey

The biological reconnaissance survey for the Survey Area was conducted on October 25 and 26, 2022 by ECORP biologists Carley Adams and Alden Lovaas. The results of the biological reconnaissance survey, including site characteristics, plants and plant communities, wildlife, special-status species, and special-status habitats (including any potential wildlife corridors) are summarized below. Table 2 shows the weather conditions during the surveys.

Date	Time		Temperature (°F)		Cloud Cover (%)		Wind Speed (mph)	
	Start	End	Start	End	Start	End	Start	End
10/25/2022	1000	1450	73.2	81.2	0	0	1-3	1-4
10/26/2022	0735	1220	58.8	78.8	10	5	0-2	1-7

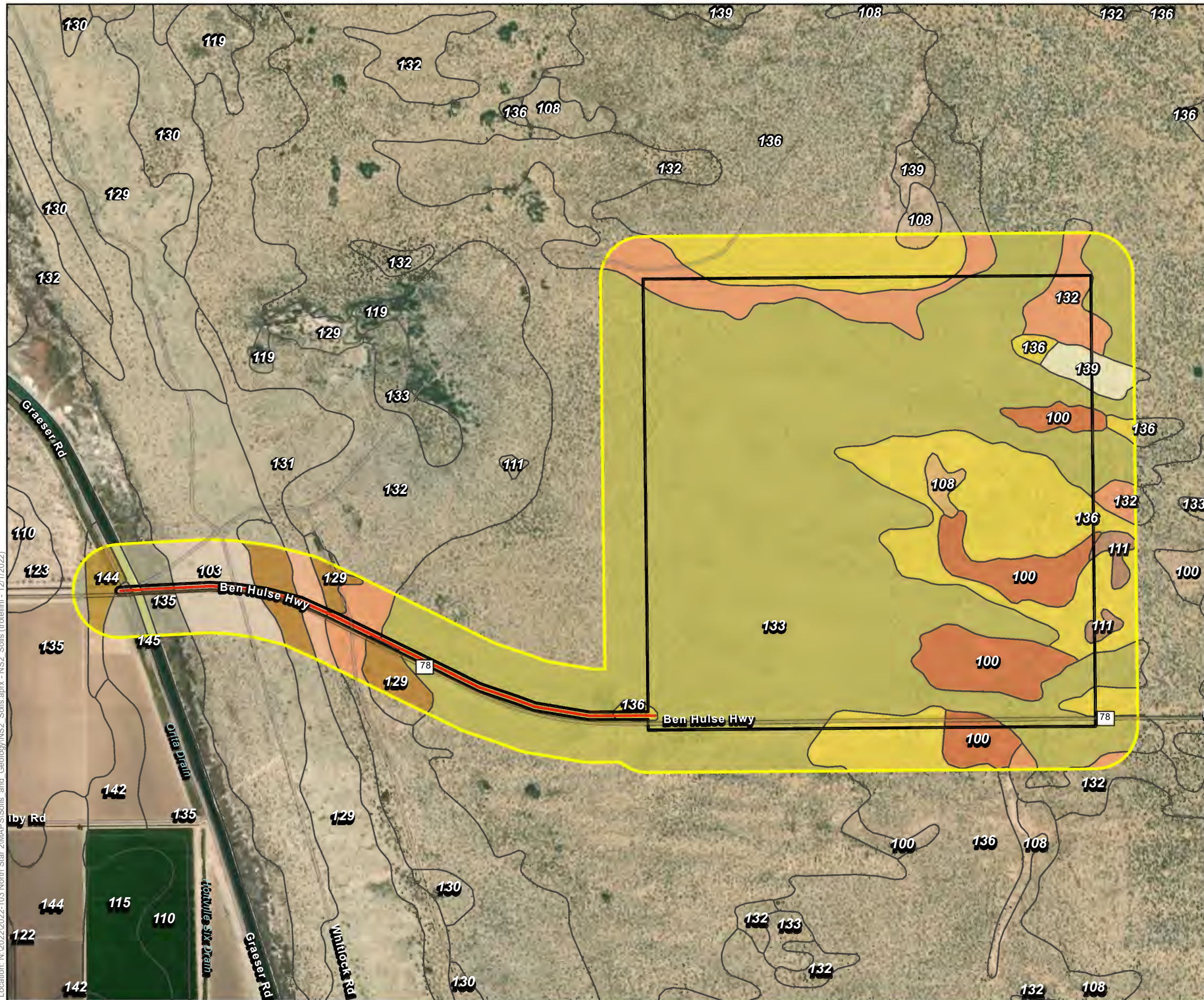
4.2.1 Property Characteristics

The Survey Area consists of undeveloped land within desert scrub habitat. The entire solar field and a substantial portion of the gen-tie was comprised of creosote bush scrub; however, as the gen-tie line

approaches the East Highline Canal, there is variation in the vegetation community, consisting of creosote bush-white bursage scrub, arrow weed thickets, tamarisk thickets, and urban/developed land. The Project Site is bound by SR-78 to the south but is otherwise surrounded by undeveloped land. The solar field portion of the Project Site is completely surrounded by undeveloped BLM land and the gen-tie line is located on BLM land. Adjacent land use includes agricultural land to the west, and undeveloped land to the north, east, and south. A majority of the Project Site is located east of the East Highline Canal; however, the gen-tie line crosses the East Highline Canal and terminates on the west side of the Canal. Representative site photographs are included in Appendix A.

ECORP conducted a soils analysis search using NRCS soil survey data (NRCS 2022). Eleven soil series occur within the Survey Area (Figure 3). In addition, pits and water occur within the Survey Area. The survey revealed the following soil types:

- 100 – Antho loamy fine sand
- 103 – Carsitas gravelly sand, 0 to 5 percent slopes
- 108 – Holtville loam
- 111 – Holtville-Imperial silty clay loams
- 129 – Pits
- 131 – Rositas sand, 2 to 5 percent slopes
- 132 – Rositas fine sand, 0 to 2 percent slopes
- 133 – Rositas fine sand, 2 to 9 percent slopes
- 135 – Rositas fine sand, wet, 0 to 2 percent slopes
- 136 – Rositas loamy fine sand, 0 to 2 percent slopes
- 139 – Superstition loamy fine sand
- 144 – Vint and Indio very fine sandy loams, wet
- 145 – Water



Map Contents

- Project Area - 651.26 Acres
- 500-ft Buffer
- Gen-tie Line

Series Designation - Series Description

- 100 - Antho loamy fine sand
- 103 - Carsitas gravelly sand, 0 to 5 percent slopes
- 108 - Holtville loam
- 111 - Holtville-Imperial silty clay loams
- 129 - Pits
- 131 - Rositas sand, 2 to 5 percent slopes
- 132 - Rositas fine sand, 0 to 2 percent slopes
- 133 - Rositas fine sand, 2 to 9 percent slopes
- 135 - Rositas fine sand, wet, 0 to 2 percent slopes
- 136 - Rositas loamy fine sand, 0 to 2 percent slopes
- 139 - Superstition loamy fine sand
- 144 - Vint and Indio very fine sandy loams, wet
- 145 - Water

Service Layer Credits: World Navigation Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, NPS
 Community: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, NPS
 Hybrid Reference Layer: Esri Community Maps Contributors, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA
 World Imagery: Maxar



Location: N:\2022\2022-103 North Star 2\MAPS\Soils and Geology\NS2_Soils.aprx - NS2_Soils (tracelini - 12/1/2022)

Map Date: 12/1/2022

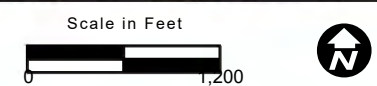


Figure 3. Natural Resources Conservation Service Soil Types

4.2.2 Vegetation Communities/Land Use

The majority of the Survey Area consists of creosote bush scrub. The location of each vegetation community in the Project Site and Survey Area are described in detail below and presented on Figure 4. Acreages of each habitat and vegetation community in the Project Site (excluding the buffer area) are shown in Table 3. Representative photographs of the habitats within the Survey Area are included in Appendix A and a full list of plant species observed on or immediately adjacent to the Survey Area is included in Appendix B.

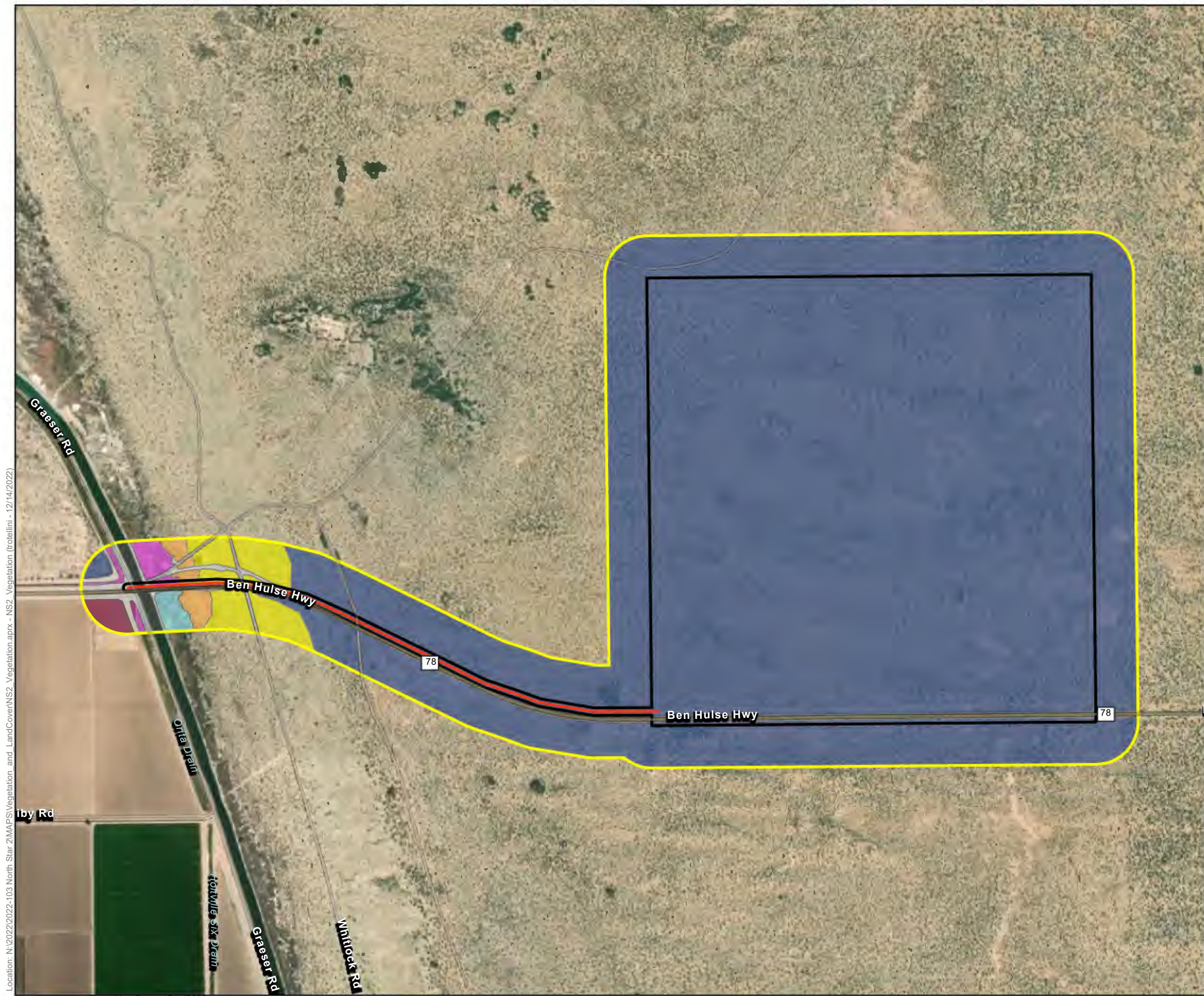
Vegetation Communities and Land Covers	Acres in Project Site
Creosote Bush Scrub	639.30
Creosote Bush - White Bursage Scrub	1.47
Bush Seepweed Scrub	0.22
Tamarisk Thickets	0.36
Arrow Weed Thickets	0.00
Agriculture	0.00
Disturbed	0.82
Urban/Developed	9.09
Project Site Total	651.26

4.2.2.1 Creosote Bush Scrub (*Larrea tridentata* Shrubland Alliance)

Creosote bush scrub is the most characteristic vegetation of the California desert and is found on alluvial fans, bajadas, upland slopes, and washes. In creosote bush scrub communities, creosote bush (*Larrea tridentata*) is dominant or co-dominant in the shrub layer with an open to intermittent shrub canopy and an herbaceous layer of seasonal annuals and perennial grasses (Sawyer et al. 2009). This community has a State Rarity Rank of S5, meaning it is demonstrably secure and abundant statewide. The creosote bush scrub that occurs within the Project Site and buffer is dominated by creosote bush with associated species including white bursage (*Ambrosia dumosa*), fourwing saltbush (*Atriplex canescens*), longleaf ephedra (*Ephedra trifurca*), Colorado desert buckwheat (*Eriogonum deserticola*), and dyebush (*Psoralea emoryi*). Approximately 639.30 acres of creosote bush scrub was mapped within the Project Site and approximately 346.32 acres was mapped within the buffer.

4.2.2.2 Creosote Bush – White Bursage Scrub (*Larrea tridentata* – *Ambrosia dumosa* Shrubland Alliance)

Creosote bush – white bursage scrub is a common vegetation community in the California desert and is found on alluvial fans, bajadas, upland slopes, washes, valleys, and basins. In creosote bush – white bursage scrub communities, creosote bush and white bursage are co-dominant in the shrub canopy with an open to intermittent two-tiered shrub canopy and a sparse to intermittent herbaceous layer of seasonal annuals (Sawyer et al. 2009).



Map Contents

- Project Area - 651.26 Acres
- 500-ft Buffer
- Gen-tie Line

Vegetation Communities and Land Cover Types

- Agriculture
- Arrow Weed Thickets
- Bush Seepweed Scrub
- Creosote Bush - White Bursage Scrub
- Creosote Bush Scrub
- Disturbed
- Tamarisk Thickets
- Urban/Developed

Service Layer Credits: World Navigation Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, NPS
 Community: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, NPS
 Hybrid Reference Layer: Esri Community Maps Contributors, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA
 World Imagery: Maxar



Location: N:\2022\2022-103 North Star 2\MAPS\Vegetation_and_LandCover\NS2_Vegetation.aprx - NS2_Vegetation (trollini) - 12/14/2022

Map Date: 12/1/2022

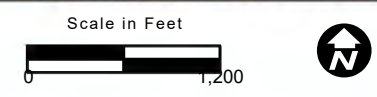


Figure 4. Vegetation Communities and Land Cover Types

This community has a State Rarity Rank of S5, meaning it is demonstrably secure and abundant statewide. The creosote bush – white bursage scrub that occurs within the Project Site and buffer is dominated by creosote bush and white bursage with associated species including cheesebush (*Ambrosia salsola*), longleaf ephedra, and rush milkweed (*Asclepias subulata*). Approximately 1.47 acres of creosote bush – white bursage scrub was mapped within the Project Site and approximately 23.22 acres was mapped within the buffer.

4.2.2.3 Bush Seepweed Scrub (*Suaeda moquinii* Shrubland Alliance)

Bush seepweed scrub is a vegetation community that is known to occur in the Mojave, Colorado, and Sonoran Deserts in California and is typically found in saline or alkaline soils in valley bottoms, playas, bajadas, and adjacent to alluvial fans. In bush seepweed scrub communities, alkali goldenbush (*Isocoma acradenia*) or bush seepweed (*Suaeda moquinii*) is dominant or co-dominant in the shrub canopy with an open to continuous shrub canopy and a sparse to intermittent herbaceous layer (Sawyer et al. 2009). This community has a State Rarity Rank of S3, meaning it is vulnerable statewide and it is considered a CDFW California Sensitive Natural Community. The bush seepweed scrub that occurs within the Project Site and buffer is dominated by alkali goldenbush with associated species including white bursage, fourwing saltbush, and annual grasses. Approximately 0.22 acre of bush seepweed scrub was mapped within the Project Site and approximately 5.58 acres was mapped within the buffer.

4.2.2.4 Tamarisk Thickets (*Tamarix* spp. Shrubland Semi-Natural Alliance)

Tamarisk thickets is a vegetation community that is known to occur along waterways and in palm oases in the Mojave, Colorado, and Sonoran Deserts in California. In tamarisk thickets, saltcedar (*Tamarix ramosissima*) or another species of tamarisk (*Tamarix* spp.) is dominant in the shrub canopy with an open to continuous shrub canopy and a sparse herbaceous layer (Sawyer et al. 2009). This community does not have a State Rarity Rank as saltcedar and other species of tamarisk are nonnative to California and can be invasive in natural areas. The tamarisk thickets that occur within the Project Site and buffer are dominated by saltcedar with associated species including date palm (*Phoenix dactylifera*) and patchy arrow weed (*Pluchea sericea*). Approximately 0.36 acre of tamarisk thickets were mapped within the Project Site and approximately 5.48 acres were mapped within the buffer.

4.2.2.5 Other Land Cover Types

Disturbed

Disturbed land includes areas where the native vegetation community has been heavily influenced by human actions, such as grading, trash dumping, and Off-highway vehicle use, but lack development. Disturbed land is not a vegetation classification, but rather a land cover type and is not restricted by elevation. On this Project, the areas mapped as disturbed consisted primarily of bare ground and nonnative grasses. Native shrubs were present at very low cover in these areas. Most of the areas mapped as disturbed were near or adjacent to Highway 78. Approximately 0.82 acre of disturbed areas were mapped within the Project Site and approximately 9.63 acres were mapped within the buffer.

Urban/Developed

Developed areas do not constitute a vegetation classification, but rather a land cover type. Areas mapped as developed have been constructed upon or otherwise physically altered to an extent that natural vegetation communities are no longer supported. There may be irrigated, landscaped ornamental species present between the hardscape. Within the Survey Area, this land cover type was present along Highway 78 and the East Highline Canal. Sparse vegetation, consisting mostly of saltcedar, was growing along the edges of the East Highline Canal. Approximately 9.09 acres of developed areas were mapped within the Project Site and approximately 10.55 acres were mapped within the buffer.

4.2.2.6 *Vegetation Communities within Survey Area*

One additional vegetation community and one additional land cover type were observed within the survey buffer, but not within the Project Site. The vegetation community and land cover type are described in detail below. No impacts to this vegetation community or land cover type are expected as a result of Project-related activities.

4.2.2.7 *Arrow Weed Thickets (Pluchea sericea Shrubland Alliance)*

Arrow weed thickets is a vegetation community that is known to occur along waterways and near alkaline springs in the Mojave, Colorado, and Sonoran Deserts in California. In arrow weed thickets, arrow weed is dominant in the shrub canopy with an intermittent to continuous shrub canopy and a sparse herbaceous layer with seasonal annuals (Sawyer et al. 2009). This community has a State Rarity Rank of S3.3, meaning it is vulnerable statewide and it is considered a CDFW California Sensitive Natural Community. The arrow weed thickets that occur within the buffer are dominated by arrow weed with sparse saltcedar. Approximately 3.47 acres of arrow weed thickets were mapped within the buffer.

4.2.2.8 *Agriculture*

Fallow agricultural lands include remnant signs of row crops with open space between rows. Agricultural lands often occur in upland areas with high soil quality, or floodplains, and are almost always artificially irrigated. This land cover was observed in the western buffer areas and south of Highway 78. Approximately 3.75 acres of fallow agriculture was mapped within the buffer.

4.2.3 *Wildlife Observed*

Wildlife species observed included, monarch butterfly (*Danaus plexippus*), great basin whiptail (*Aspidoscelis tigris tigris*), side-blotched lizard (*Uta stansburiana*), loggerhead shrike (*Lanius ludovicianus*), northern flicker (*Colaptes auratus*), turkey vulture (*Cathartes aura*), mourning dove (*Zenaida macroura*), white-crowned sparrow (*Zonotrichia leucophrys*), house finch (*Haemorhous mexicanus*), black-tailed jackrabbit (*Lepus californicus*), and signs of western burrowing owl (*Athene cunicularia hypugaea*), desert kit fox (*Vulpes macrotis arsipus*), and kangaroo rat (*Dipodomys* sp.). A full list of wildlife species observed on or immediately adjacent to the Survey Area is included in Appendix C.

4.3 Special-Status Species Assessment

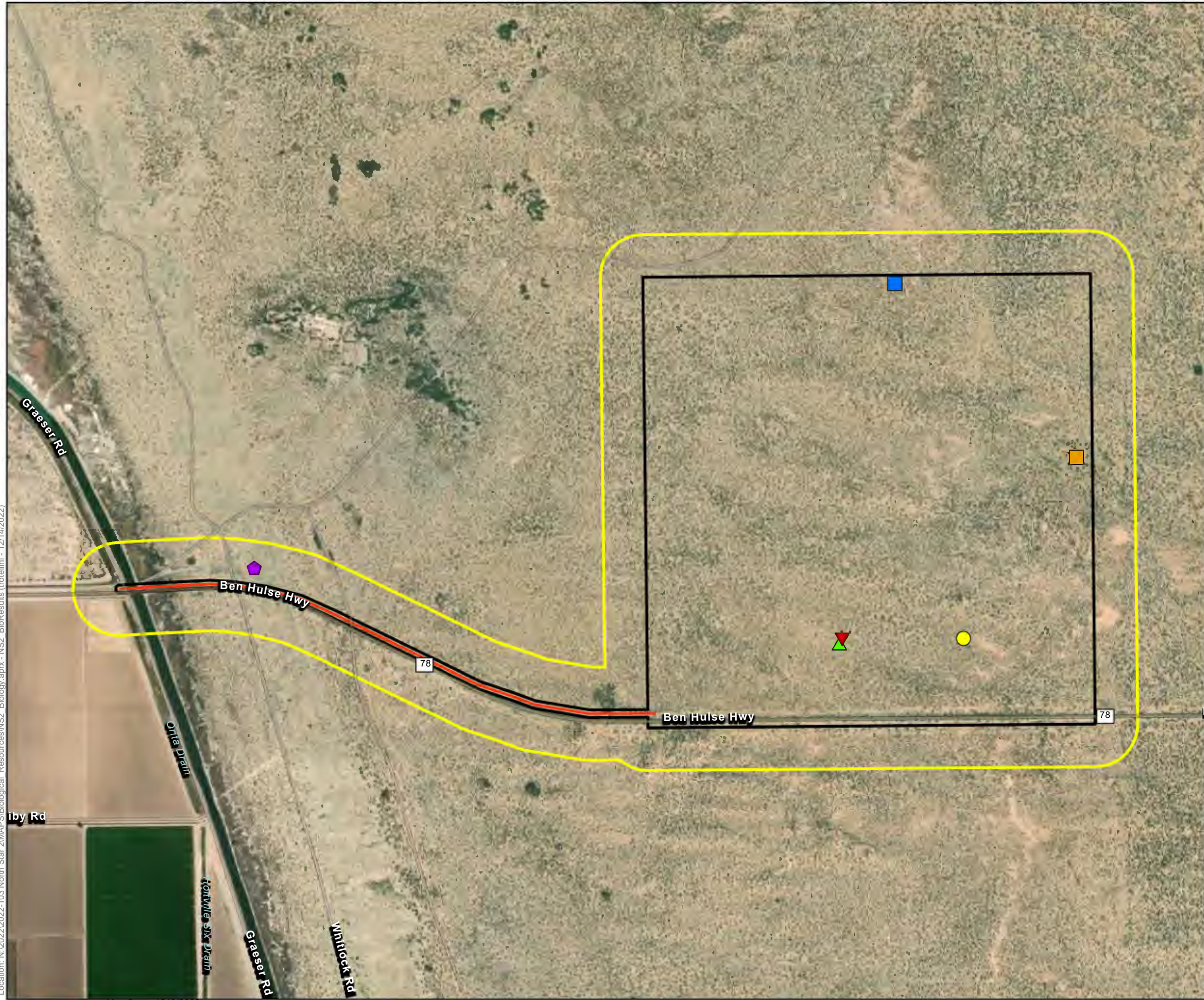
The literature review resulted in 10 special-status plant and 23 special-status wildlife species that have recently and historically been recorded in the vicinity of the Project Site or that are highly associated with habitat that occurs within the Survey Area. Special-status plants were evaluated for their potential to occur within the Project Site where impacts could occur (Appendix D). Special-status wildlife were evaluated for their potential to occur within the Survey Area, a broader area that includes the Project Site and buffer, where direct or indirect impacts could occur (Appendix E). Special-status wildlife species observed during the reconnaissance survey are depicted on Figure 5.

4.3.1 Plants

Numerous special-status plant species have been recorded within five miles of the Project Site, according to the CNDDDB (CDFW 2022a) and CNPSEI (CNPS 2022). Of all available records, a total of 10 species were identified as those with the potential for occurrence within the vicinity of the Project Site. None of these species have a high potential to occur within the Project Site. Additionally, CRPR 3 or 4 species were eliminated from the analysis because these rankings are considered a review list and a watch list, respectively. Descriptions of the CNPS designations, also known as CRPR are found in Table 4, followed by a list of the special-status plant species identified in the literature review.

Table 4. CNPS Status Designations	
List Designation	Meaning
1A	Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B	Plants Rare, Threatened, or Endangered in California and Elsewhere
2A	Plants Presumed Extirpated in California, But Common Elsewhere
2B	Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3	Plants about which we need more information; a review list
4	Plants of limited distribution; a watch list
List 1B, 2, and 4 extension meanings:	
.1	Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
.2	Moderately threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat)
.3	Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known)

Note: According to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code (California Department of Fish and Game [CDFG] 1984). This interpretation is inconsistent with other definitions.



Map Contents

- Project Area - 651.26 Acres
- 500-ft Buffer
- Gen-tie Line

Bird Observations

- Loggerhead Shrike

Burrowing Owl Observations

- Potential Burrow (With Sign)
- Potential Burrow (No Sign)

Desert kit Fox Observations

- Old Den (With Sign)
- Scat

Insect Observations

- Monarch Butterfly

Service Layer Credits: Community: California State Parks, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS
 Hybrid Reference Layer: Esri Community Maps Contributors, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA
 World Navigation Map: California State Parks, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS
 World Imagery: Maxar



Location: N:\2022\2022-103 North Star 2\MAPS\Biological Resources\NS2_Biology.aprx - NS2_BioResults (trotellini - 12/14/2022)

Map Date: 12/6/2022

Figure 5. Biological Survey Results

4.3.1.1 **Plant Species with a Moderate Potential to Occur**

Due to the presence of suitable habitat and several known occurrences within five miles of the Project Site, the following species was determined to have a moderate potential to occur:

- **Peirson's milk-vetch** is a federally listed threatened and state-listed endangered plant species with a CRPR of 1B.2. This species is known to occur at elevations between 60 and 225 meters (195 and 740 feet) and blooms between December – April. Peirson's milk-vetch is known to occur in desert dunes in creosote bush scrub habitat. There were multiple CNDDDB occurrences returned during the database search, with one record from 2018 documenting approximately 8,000 plants on Algodones Dunes, approximately four miles northeast of the Project Site. Marginally suitable habitat for this species exists in the creosote bush scrub (sand dunes) within the Project Site.
- **Wiggins' croton (*Croton wigginsii*)** is a CRPR 2B.2 plant species. This species is known to occur at elevations between 50 and 100 meters (164 and 328 feet) and blooms between March and May. Wiggins' croton is known to occur in sandy Sonoran desert scrub habitat. There were multiple CNDDDB occurrences returned during the database search, with one record from 2019 documenting thousands of individuals on Algodones Dunes, approximately three miles northeast of the Project Site. Marginally suitable habitat for this species exists in the creosote bush scrub (sand dunes) within the Project Site.
- **Munz's cholla (*Cylindropuntia munzii*)** is a CRPR 1B.3 plant species. This species is known to occur at elevations between 150 and 600 meters (490 and 1,970 feet) and blooms in May. Munz's cholla is known to occur in sandy or gravelly soils in Sonoran Desert scrub habitat. There are no CNDDDB records of this species within five miles of the Project Site; however, one record from 2018 documented one individual on Algodones Dunes, approximately eight miles northeast of the Project Site. Suitable habitat for this species exists in the desert scrub in the Project Site.
- **Abrams' spurge (*Euphorbia abramsiana*)** is a CRPR 2B.2 plant species. This species is known to occur at elevations between -5 and 1,310 meters (-15 and 4,300 feet) and blooms between September – November. Abrams' spurge is known to occur in creosote scrub habitat within sandy flats including playas, fields, disturbed areas, and washes. There are no CNDDDB records of this species within five miles of the Project Site; however, two records from 2012 documented hundreds to thousands of individuals on Algodones Dunes, approximately ten miles north of the Project Site. Suitable habitat for this species occurs within the Project Site in the creosote bush scrub.
- **Algodones Dunes sunflower (*Helianthus niveus ssp. tephrodes*)** is a state-listed endangered plant species with a CRPR of 1B.2. This species is known to occur at elevations between 50 and 100 meters (164 and 328 feet) and blooms between September and May. Algodones Dunes sunflower is known to occur on desert dunes in creosote bush scrub habitat. There were multiple CNDDDB occurrences returned during the database search, with one record from 2018 documenting hundreds of individuals on Algodones Dunes approximately four miles from the

Project Site. Marginally suitable habitat for this species exists in the creosote bush scrub (sand dunes) in the Project Site.

- **Darlington's blazing star (*Mentzelia puberula*)** is a CRPR 2B.2 plant species. This species is known to occur at elevations between 90 and 1,280 meters (295 and 4,200 feet) and blooms between March and May. Darlington's blazing star is known to occur in Mojavean and Sonoran Desert scrub and creosote bush scrub in rocky or sandy soils. There are no CNDDDB records of this species within five miles of the Project Site; however, one historic record from 1960 documented the plant at Hwy 78 crossing of Coachella Canal less than five miles east of the Project Site. Suitable habitat for this species exists in the creosote bush scrub in the Project Site.
- **Giant Spanish-needle (*Palafoxia arida* var. *gigantea*)** is a CRPR 1B.3 plant species. This species is known to occur at elevations between 15 and 100 meters (50 and 330 feet) and blooms between February and May. Giant Spanish-needle is known to occur on desert dunes in creosote bush scrub habitat. There were multiple CNDDDB occurrences returned during the database search, with one record from 2013 documenting multiple plants on Algodones Dunes approximately four miles from the Project Site. Marginally suitable habitat for this species exists in the creosote bush scrub (sand dunes) in the Project Site.
- **Roughstalk witch grass (*Panicum hirticaule* ssp. *hirticaule*)** is a CRPR 2B.1 plant species. This species is known to occur at elevations between 45 and 1315 meters (150 and 4315 feet) and blooms between August and December. Roughstalk witch grass is known to occur in creosote bush scrub, Joshua tree woodland, Mojavean desert scrub, and Sonoran Desert scrub in silty or sandy soils, often on desert dunes. There are no CNDDDB records of this species within five miles of the Project Site, however one record from 2012 documented the plant on Algodones Dunes, approximately 8 miles north of the Project Site. Suitable habitat for this species exists in the creosote bush scrub in the Project Site.
- **Sand food (*Pholisma sonorae*)** is a CRPR 1B.2 plant species. This parasitic species attaches to the roots of host *Eriogonum*, *Tiquilia*, *Ambrosia*, and *Pluchea* species. Sand food is known to occur at elevations between sea level and 200 meters (sea level and 656 feet) and blooms between April and June. It is known to occur in sandy Sonoran Desert scrub habitat. There were multiple CNDDDB occurrences returned during the database search including two recent occurrences within 5 miles of the Project Site. Marginally suitable habitat occurs for this species in the creosote bush scrub in the Project Site.

4.3.1.2 **Plant Species with Low Potential to Occur**

The following species was found to have a low potential to occur within the Project Site because of limited habitat for the species on the site and a known occurrence has been reported in the database, but not within 5 miles of the Project Site, or suitable habitat strongly associated with the species occurs within the Project Site, but no records were found in the database search:

- slender cottonheads (*Nemacaulis denudata* var. *gracilis*), CRPR 2B.2

4.3.2 Wildlife

The literature search documented 23 special-status wildlife species in the vicinity of the Survey Area. Of the 23 special-status wildlife species identified in the literature review, four were present within the Survey Area, three were found to have a high potential to occur, four were found to have a moderate potential to occur and six were found to have a low potential to occur; the remaining six species are presumed absent from the Project Site. Table 5 provides descriptions of the federal and state wildlife designations, and a brief natural history and discussion of the special-status wildlife species found onsite and species that have a high or moderate potential to occur within the Survey Area are provided below.

Table 5. Wildlife Status Designations	
List Designation	Meaning
Federal Designation	Jurisdiction under United States Fish and Wildlife Service (USFWS)
END	Federally listed as Endangered
THR	Federally listed as Threatened
CAN	Federal Candidate Species
FSC	Federal Species of Concern
FPD	Federal Proposed for Delisting
BCC	Bird of Conservation Concern
State Designation	Jurisdiction under California Fish and Wildlife Service (CDFW)
END	State listed as Endangered
THR	State listed as Threatened
SSC	California Species of Special Concern
FP	Fully Protected Species
WL	Watch List
BLM Designation	Jurisdiction under Bureau of Land Management (BLM)
S	Sensitive

4.3.2.1 Special-Status Wildlife Species Present

The following species were observed on the site during the reconnaissance survey:

- Monarch butterfly (*Danaus plexippus*) is a USFWS candidate federally listed butterfly species. Monarchs occur throughout a variety of habitats in North America and can be found along roadsides, open areas, and urban gardens. Key habitat requirements of monarchs include their

host plant for reproduction, nectar sources for adults, and forested groves providing suitable microclimate protected from the elements during the winter (Center for Biological Diversity 2014, USFWS 2022b). Milkweed (*Asclepias* sp.) is the host plant for this species and used for sheltering eggs and feeding larvae. One individual was observed on a rush milkweed (*Asclepias subulata*) in the buffer surrounding the gen-tie line during the October 2022 biological reconnaissance survey (Figure 5).

- Burrowing owl (*Athene cunicularia*) is a USFWS Bird of Conservation Concern (BCC), a CDFW SSC, and a BLM sensitive species. This species is typically found in dry open areas with few trees and short grasses; it is also found in vacant lots near human habitation. It uses uninhabited mammal burrows for roosts and nests, often in close proximity to California ground squirrel colonies. It primarily feeds on large insects and small mammals but will also eat birds and amphibians. One burrow, with recent burrowing owl sign (i.e., pellets and feathers) was observed within the southern portion of the Project Site during the October 2022 biological reconnaissance survey (Figure 5). This burrow was observed near the location where the burrowing owls had previously been observed onsite (Recon 2022).
- Loggerhead shrike (*Lanius ludovicianus*) is a CDFW SSC. This species prefers open country with scattered shrubs and trees. They frequent agricultural fields, deserts, grasslands, savanna, and chaparral habitats. One individual was observed in the southern portion of the Project Site during the October 2022 biological reconnaissance survey (Figure 5).
- Desert kit fox (*Vulpes macrotis arsipus*) is a fur-bearing mammal that is protected under the CCR Title 14, Chapter 5, Section 460, which prohibits take of the species at any time. Therefore, CDFW does not have a mechanism for take of the species by development projects. The desert kit fox is found in desert habitats that include creosote bush, shadscale, greasewood, and sagebrush. It feeds primarily on nocturnal rodents and rabbits, but will opportunistically take birds, reptiles, and insects. Sign of desert kit fox, including scat and dens, were observed throughout the Project Site during the October 2022 biological reconnaissance survey (Figure 5).

4.3.2.2 Special-Status Wildlife Species with a High Potential to Occur

Three species were found to have high potential to occur within the Survey Area due to the presence of suitable habitat for the species on the site and because a known occurrence has been recorded within 5 miles of the site:

- Flat-tailed horned lizard (*Phrynosoma mcallii*) is a CDFW SSC and BLM Sensitive species. This species is most commonly found on sandy flats and valleys within desert scrub habitat with little or no windblown sand. They can also be found on salt flats and gravelly soils. The creosote bush scrub provides suitable habitat for the flat-tailed horned lizard. Two recent CNDDB records occur within 5 miles of the Survey Area. The most recent record (Occ #397), recorded in 2017, was approximately 5 miles east of the Project Site. The closest record (Occ #49), recorded in 2007, was located within the Project Site. According to the CNDDB, many collections of this species have been made along SR-78.

- Western yellow bat (*Lasiurus xanthinus*) is a CDFW SSC. This species roosts in trees, especially in fan palms with dead fronds. They can also be found in riparian woodlands in arid regions, oak or pinyon-juniper woodlands, and developed areas. Although the CNDDDB only revealed one historic record (Occ #6) of this species approximately 11 miles southwest of the Project Site, nearby and recent records of this species were found using iNaturalist, a citizen science resource. The records from iNaturalist were considered to be *research grade* and were taken by Drew Stokes, a field biologist for the San Diego Natural History Museum, who specializes in Southern California bats. In addition, the gen-tie line contains suitable roosting habitat for this species in the form of palm trees.
- Yuma myotis (*Myotis yumanensis*) is a BLM sensitive species. This species roosts near water in cliff crevices, caves, trees, buildings, and bridges. Occurs near water in riparian areas, moist woodlands and forests, and desert scrub. Although this species is not tracked in the CNDDDB, the Project Site contains suitable foraging and roosting habitat for this species. This species commonly roosts in bridges and may use the bridge along the gen-tie line if habitat is present.

4.3.2.3 Special-Status Wildlife Species with a Moderate Potential to Occur

Four species were found to have moderate potential to occur within the Survey Area because habitat (including soils and elevation factors) for the species occurs on the site and a known occurrence exists within the database search, but not within 5 miles of the site or a known occurrence exists within 5 miles of the site and marginal or limited amounts of habitat occurs within the Project Site:

- Colorado Desert fringe-toed lizard (*Uma notata*) is a CDFW SSC and BLM Sensitive species. This species is commonly found in sparsely vegetated areas with fine sand including flats, riverbanks, dunes, and washes. This species burrows in fine loose sand. Small areas of suitable habitat are present within the Survey Area.
- Pallid bat (*Antrozous pallidus*) is a CDFW SSC and BLM Sensitive species. This species is commonly found in desert habitat and is known to roost in bridges. Potential roosting habitat for this species may be present within the SR-78 bridge that crosses over the Highline Canal if habitat is present.
- Townsend's big-eared bat (*Corynorhinus townsendii*) is a CDFW SSC and BLM Sensitive species. The Survey Area is within the known range of this species and this species is known to roost in bridges. Potential roosting habitat for this species may be present within the SR-78 bridge that crosses over the Highline Canal if habitat is present.
- American badger (*Taxidea taxus*) is a CDFW SSC. Although the CNDDDB did not contain any nearby records of this species, suitable habitat for this species was present within the Project Site.

4.3.2.4 Wildlife Species with Low Potential to Occur

Six species were found to have a low potential to occur within the Survey Area because limited habitat for the species occurs on the site and a known occurrence has been reported in the database, but not within

5 miles of the site, or suitable habitat strongly associated with the species occurs on the site, but no records were found in the database search:

- Desert pupfish (*Cyprinodon macularius*), USFWS Endangered (END) and CDFW END,
- Razorback sucker (*Xyrauchen texanus*), USFWS END and CDFW END,
- Lucy's warbler (*Oreothlypis luciae*), CDFW SSC and BLM Sensitive species;
- Small-footed myotis (*Myotis ciliolabrum*), BLM Sensitive species;
- Long-eared myotis (*Myotis evotis*), BLM Sensitive species; and
- Fringed myotis (*Myotis thysanodes*, BLM Sensitive species.

4.3.2.5 Wildlife Species Presumed Absent

The following six species are presumed absent from the Survey Area due to the lack of suitable habitat on the site.

- Sonoran Desert toad (*Incilius alvarius*), CDFW SSC,
- Mountain plover (*Charadrius montanus*), USFWS BCC, CDFW SSC, and BLM Sensitive species,
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), USFWS Threatened (THR) and CDFW END,
- California black rail (*Laterallus jamaicensis coturniculus*), CDFW THR, and BLM Sensitive species,
- Yuma Ridgway's rail (*Rallus obsoletus ssp. yumanensis*), USFWS END, CDFW THR,
- Yuma hispid cotton rat (*Sigmodon hispidus eremicus*) is a CDFW SSC.

4.4 Jurisdictional Aquatic Resources Assessment

An aquatic resources delineation was conducted by Hernandez Environmental Services. The results are presented under separate cover.

4.5 Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

The concept of habitat corridors addresses the linkage between large blocks of habitat that allow the safe movement of mammals and other wildlife species from one habitat area to another. The definition of a corridor is varied, but corridors may include such areas as greenbelts, refuge systems, underpasses, and biogeographic land bridges. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix, which connects two or more large blocks of habitat. Wildlife movement corridors are critical for the survivorship of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife

species populations, thereby maintaining genetic variability and adaptability to maximize the success of wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. Naturally, the nature of corridor use and wildlife movement patterns varies greatly among species.

The Survey Area was assessed for its ability to function as a wildlife corridor. A review of the Terrestrial Connectivity, Areas of Conservation Emphasis (ACE) in the CNDDDB's Biogeographic Information and Observation System viewer determined that the Survey Area is located in an area ranked as *Connections with Implementation Flexibility* (Rank 3, CDFW 2022a). The Connections with Implementation Flexibility ranking includes areas that have been identified as having connectivity importance but are not channelized areas, species corridors, or habitat linkages.

The Project Site is bound by SR-78 to the south and the East Highline Canal to the west but is otherwise surrounded by undeveloped land with scattered desert washes. Throughout the Survey Area, the terrain is variable and contains many landforms including hills and washes. The friability of the soil is also variable throughout the Survey Area; some areas contain fine sand while other areas contain silty clay loam soils. The primary vegetation community in the Survey Area is creosote bush scrub; however, as the gen-tie line approaches the East Highline Canal, there is a change in vegetation community, consisting of creosote bush-white bursage scrub, bush seepweed scrub, arrow weed thickets, tamarisk thickets, agriculture, disturbed, and urban/developed land. In general, there is a variation in shrub size, ranging from small to large, that could provide cover for migrating and nesting birds. It could also provide foraging habitat for raptors and small and large mammals, including rodents and canids. The desert washes located throughout the Project Site are likely utilized by wildlife moving through the area and these features and associated habitats may be considered linkages between conserved natural habitat areas or critical areas for wildlife movement because of the nearby direct connectivity to open spaces to the north, east, and south. The west boundary is minimized by the East Highline Canal and agricultural areas. As such, the Survey Area may serve as an area for movement opportunities of local wildlife including nesting and migratory birds and small mammals but would likely not be considered a wildlife movement corridor that would need to be preserved to allow wildlife to move between important natural habitat.

5.0 PROJECT IMPACTS

Implementation of the Project has potential to impact creosote bush scrub, creosote bush-white bursage scrub, bush seepweed scrub, and tamarisk thickets. These communities may provide suitable raptor foraging habitat, rare plant habitat, and suitable nesting, burrowing, denning, and foraging habitat for a variety of sensitive species, including burrowing owl, desert kit fox, loggerhead shrike, and flat-tailed horned lizard. Additionally, the bridge crossing over the East Highline Canal and associated vegetation located on the gen-tie line portion of the Project Site was identified as potential bat roosting habitat for special-status bat species and maternity roosts.

Conceptual design of the Project has not been finalized; therefore, impacts and minimization measures cannot be confirmed at this time. The following recommendations would be required to determine if the Project would result in significant impacts to vegetation communities, special-status plant and wildlife species, jurisdictional waters, and wildlife movement corridors.

5.1.1 Special-Status Species

5.1.1.1 Special-Status Plants

The literature review identified 10 special-status plant species that have the potential to occur within the Project Site. One of these plant species (slender cottonheads) has a low potential to occur due to the limited suitable habitat within the Project Site.

There is moderate potential for nine rare plant species to occur within the Project Site. These species are Peirson's milk-vetch (CRPR 1B.2), Wiggins' croton (CRPR 2B.2), Munz's cholla (1B.3), Abram's spurge (*Euphorbia abramsiana*, CRPR 2B.2), Algodones Dunes sunflower (CRPR 1B.2), Darlington's blazing star (CRPR 2B.2), giant Spanish-needle (*Palafoxia arida* var *gigantea*, CRPR 1B.3), roughstalk witch grass (*Panicum hirticaule* ssp. *hirticaule* CRPR 2B.1), and sand food (*Pholisma sonora*, CRPR 1B.2). Suitable habitat for these species is present within the creosote bush scrub and desert scrub habitats. Impacts that may occur to the species includes loss of individuals, habitat, and seedbank. Depending on the size of the population, this impact may be significant. Implementation of BIO-1 and BIO-2 is recommended to reduce impacts to a less than significant level.

5.1.1.2 Special-Status Wildlife

The literature review identified 23 special-status wildlife species that have the potential to occur within the Survey Area. However, 12 of these species have a low or no potential to occur due to the lack of suitable habitat, limited habitat within the Survey Area, and/or the Project occurs outside the known range of these species. Wildlife species that are presumed absent from the Survey Area include Sonoran Desert toad, mountain plover (*Charadrius montanus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), California black rail, Yuma Ridgway's rail, and Yuma hispid cotton rat. Wildlife species with a low potential to occur include desert pupfish (*Cyprinodon macularius*), razorback sucker (*Xyrauchen texanus*), Lucy's warbler, small-footed myotis (*Myotis leibii*), long-eared myotis (*M. evotis*), and fringed myotis (*M. thysanodes*). Construction of the Project will not contribute to the overall decline of any of these species and no impacts to these species are anticipated to result from this Project.

Four special-status wildlife species were observed onsite during the habitat assessment. Burrowing owl, loggerhead shrike, and desert kit fox were all observed in the creosote bush scrub habitat in the solar field portion of the Survey Area. A monarch butterfly was observed within the creosote bush-white bursage scrub in the buffer of the gen-tie line. Direct impacts to these species that could occur include injury, mortality, nest failures, and loss of young. Indirect impacts include loss of nesting and foraging habitat, increase in anthropogenic effects (i.e., noise levels, introduction of invasive/nonnative species, increase in human activity, increase in dust). Impacts to these species could be considered significant; therefore, implementation of BIO-2, BIO-3, BIO-4, and BIO-5 is recommended. No additional avoidance/minimization or mitigation measures are recommended for monarch butterfly. The Project will address any potential impacts and may need to perform formal consultation with USFWS if formally listed under the ESA.

Three special-status wildlife species were found to have a high potential to occur within the Survey Area: flat-tailed horned lizard, western yellow bat (*Lasiurus xanthinus*), and Yuma myotis. Four special-status wildlife species were found to have a moderate potential to occur within the Survey Area: Colorado Desert fringe-toed lizard, pallid bat, Townsend's big-eared bat, and American badger. Direct impacts to these species that could occur include injury, mortality, loss of nests or young, and destruction of habitat. Indirect impacts could occur in the form of habitat loss, increased human and vehicular activity, ground vibrations, noise, and increased dust. Impacts to bats are discussed below. Implementation of BIO-2 and BIO-5 is recommended to minimize and mitigate for potential impacts.

Foraging habitat for a number of raptor species and breeding habitat for numerous passerine species protected by the MBTA occurs throughout the Project Site. The site provides nesting habitat for ground-nesting species as well as species that nest in desert scrub habitat. Direct impacts to nesting avian species include injury, mortality, loss of young, and nest failure. Indirect impacts include loss of foraging and nesting habitat for passerine and raptors species, increase in noise and human activities, and potential introduction of invasive/nonnative species. Implementation of BIO-4 and BIO-5 is recommended to mitigate for potential impacts.

The palm trees located within the Survey Area may provide roosting habitats for bat species, particularly western yellow bat, an SSC species. These trees could function as maternity roost sites for this species. The bridge located over the East Highline Canal within the Survey Area may provide roosting habitats for bat species if suitable roosting habitat is present. This bridge could function as maternity roost sites for multiple bat species. The bridge was not assessed for suitable bat roosting habitat due to the amount of water present in the East Highline Canal. Bat species in California are protected by Section 4150 (protection of non-game mammals from take) of the California Fish and Game Code. Section 4150 of the California Fish and Game Code prohibits the take of any naturally occurring mammals in California that are nongame mammals, which includes all species of the Order Chiroptera (bats). Further, bat maternity roosting habitats are protected as native wildlife nursery sites under CEQA. The reconnaissance survey was conducted outside of the maternity season, but based on the observation records and habitat suitability, there is high likelihood that the palm trees may serve as a maternity roost location. Direct impacts to special-status bat species and/or bat maternity colonies that could occur include injury, mortality, maternity colony failures, and loss of young. Indirect impacts include loss of roosting habitat, and increase in anthropogenic effects (i.e., noise levels, increase in human activity, increase in dust). Impacts to these species and maternity roosting sites could be considered significant; therefore, implementation of BIO-2, BIO-6, and BIO-7 is recommended.

5.1.2 Sensitive Natural Communities

The 651.26-acre Project Site is comprised of creosote bush scrub, creosote bush-white bursage scrub, bush seepweed scrub, tamarisk thickets, disturbed land, and urban/developed land, which would be directly impacted by the Project. In addition to the vegetation communities and land cover types present within the Project Site, agriculture and arrow weed thickets occur within the Project buffer area. One sensitive vegetation community, bush seepweed scrub, occurs along a small portion of the gen-tie line. In-kind mitigation, up to 3:1 ratio, may be required by CDFW to offset impacts to bush seepweed scrub in order to reduce impacts to a less than significant level. Approximately 0.22 acre of bush seepweed scrub

was mapped within the Project Site (Figure 3). It is recommended that Project activities are avoided in this area if possible; however, if Project activities occur in this area, implementation of BIO-8 is recommended to reduce potential impacts.

5.1.3 State- and/or Federally Protected Wetlands and Waters

The results of the Jurisdictional Aquatic Resources Delineation and discussion of potential impacts on state or federally protected wetlands or Waters of the U.S. are discussed in the Jurisdictional Aquatic Resources Delineation Report prepared under separate cover.

5.1.4 Wildlife Corridors and Nursery Sites

The Project Site is located in generally undeveloped open space but is adjacent to areas containing existing disturbances (i.e., roads and active agricultural land). The Project Site is not in a recognized species corridor or habitat linkage but the majority of the site contains suitable vegetation and/or cover to support some wildlife movement. However, the desert scrub habitat could function as a potential nursery site for wildlife species. The palm trees and bridge over the East Highline Canal present in the gen-tie line portion of the Project Site may serve as a native wildlife nursery site for roosting bats. Therefore, implementation of BIO-2, BIO-5, BIO-6, and BIO-7 are recommended to mitigate for potential significant impacts to potential nursery sites.

5.1.5 Habitat Conservation Plans and Natural Community Conservation Plans

The gen-tie line and buffer is located within the DRECP Area with a conservation designation of California Desert National Conserved Lands and falls within the Lake Cahuilla Shoreline ACEC (DRECP 2022). A small portion of the gen-tie is located on BLM Renewable Energy Development Focus Areas. If habitat within the California Desert National Conserved Lands area of the Project is to be impacted, implementation of BIO-9 is recommended to minimize potentially significant impacts. The Project will follow the guidelines in Imperial County's Conservation and Open Space Element and meet the requirements outlined in the plan. Consultation with BLM, County of Imperial Department of Planning and Development, USFWS, and CDFW would be required should listed plant or wildlife species be found to occur.

The buffer area surrounding the Project Site and gen-tie line is located within the East Mesa Flat-tailed Horned Lizard Management Area (Flat-tailed Horned Lizard Working Group 1997). The Project will follow the guidelines listed in Appendix 3 of the Flat-tailed Horned Lizard Range-wide Management Strategy document and implementation of the guidelines listed in Appendix 3 is recommended to minimize potentially significant impacts.

6.0 RECOMMENDATIONS AND MITIGATION MEASURES

ECORP developed the following recommendations in accordance with the CEQA impacts analysis for the Project (Section 5) but should not be considered mitigation measures at this point in the Project planning process. These actions are recommended prior to Project implementation:

- BIO-1: Rare Plant Surveys:** Rare plant surveys should be conducted within suitable habitat within the Survey Area during the appropriate blooming period for the Abrams' spurge (approximately September through November), Wiggins' croton (approximately March through May), and sand food (approximately April through June). The surveys should be conducted by a botanist or qualified biologist in accordance with the USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (USFWS 1996); the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018); and the CNPS Botanical Survey Guidelines (CNPS 2001). If any special-status species are observed during the rare plant surveys, the location of the individual plant or population will be recorded with a submeter GPS device for mapping purposes. Consultation with CDFW may be required to develop a mitigation plan or additional avoidance and minimization measures if Project-related impacts to rare plants within the Project Site are unavoidable. Mitigation measures that may be implemented if the species is observed include establishing a no-disturbance buffer around locations of individuals or a population, salvage or seed collection, and additional monitoring requirements.
- BIO-2: Biological Monitoring:** A qualified biologist should be present to monitor all ground-disturbing and vegetation-clearing activities conducted for the Project. During each monitoring day, the biological monitor should perform clearance survey *sweeps* at the start of each work day that vegetation clearing takes place to minimize impacts on special-status species with potential to occur (including, but not limited to, special-status and/or nesting bird species, special-status bat species, monarch butterfly, desert kit fox, flat-tailed horned lizard). The monitor will be responsible for ensuring that impacts to special-status species, nesting birds, and active nests will be avoided to the greatest extent possible. Biological monitoring should take place until the Project Site has been completely cleared of any vegetation. If an active nest is identified, the biological monitor should establish an appropriate disturbance limit buffer around the nest using flagging or staking. Construction activities should not occur within any disturbance limit buffer zones until the nest is deemed no longer active by the biologist. If special-status wildlife species are detected during biological monitoring activities, then consultation with the USFWS and/or CDFW should be conducted and a mitigation plan should be developed to avoid and offset impacts to these species. Mitigation measures may consist of work restrictions or additional biological monitoring activities after ground-disturbing activities are complete.
- BIO-3: Burrowing Owl Surveys:** Suitable habitat for burrowing owl was identified throughout the Survey Area. Focused burrowing owl surveys and preconstruction burrowing owl surveys are recommended. The focused burrowing owl surveys should follow the methods described in

the CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Four surveys should be conducted between February 15 and July 15, with at least one visit occurring before April 15 and one visit occurring after June 15. Pre-construction surveys for burrowing owl should be conducted within the Project Site and adjacent areas prior to the start of ground-disturbing activities. The surveys should follow the methods described in the CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Two surveys should be conducted, with the first survey being conducted between 30 and 14 days before initial ground disturbance (e.g., grading, grubbing, and construction), and the second survey being conducted no more than 24 hours prior to initial ground disturbance. If burrowing owls and/or suitable burrowing owl burrows with sign (e.g., whitewash, pellets, feathers, prey remains) are identified within the Survey Area during the survey and impacts to those features are unavoidable, consultation with the CDFW should be conducted and the methods described in the CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) for avoidance and/or passive relocation should be followed.

- BIO-4: Pre-Construction Nesting Bird Survey:** If construction or other Project activities are scheduled to occur during the bird breeding season (typically February 1 through August 31 for raptors and March 15 through August 31 for the majority of migratory bird species), a qualified avian biologist should conduct a pre-construction nesting-bird survey to ensure that active bird nests will not be disturbed or destroyed. The survey should be completed no more than 3 days prior to initial ground disturbance. The nesting-bird survey should include the Project Site and adjacent areas where Project activities have the potential to affect active nests, either directly or indirectly due to construction activity or noise. If an active nest is identified, the biologist should establish an appropriately sized disturbance-limit buffer around the nest using flagging or staking. Construction activities should not occur within any disturbance-limit buffer zones until the nest is deemed inactive by the qualified biologist. If construction activities cease for a period of greater than 3 days during the bird breeding season, a pre-construction nesting bird survey should be conducted prior to the commencement of activities.
- BIO-5: Pre-Construction Survey for Special-Status Species:** A pre-construction survey should be conducted for special-status wildlife species within all areas of potential permanent and temporary disturbance. The pre-construction survey should take place no more than 14 days prior to the start of ground-disturbing activities. The pre-construction surveys should take place regardless of breeding season timing and should focus on identifying the presence of special-status wildlife species present within the Survey Area or that were identified as having a high/moderate potential to occur on the site. These species include, but are not limited to, flat-tailed horned lizard, burrowing owl, monarch butterfly, desert kit fox, loggerhead shrike, western yellow bat, Yuma myotis, American badger. Should any special-status species be identified during the pre-construction survey, consultation to develop suitable avoidance and minimization measures with the appropriate agency (USFWS, CDFW) may need to be undertaken.

- BIO-6: Compliance with Section 4150 of California Fish and Game Code:** To avoid impacts to bat species, a qualified bat biologist should conduct an appropriate combination of sampling, exit counts, and acoustic surveys to determine if bats are using the palm tree resources in the Survey Area. If Project-related impacts to bat species are unavoidable, additional measures may need to be implemented to reduce or eliminate impacts to bat species, including maternity roosts, such as tree removal occurring outside of bat breeding season (October through February) or two-step, two-day removal of palm trees under supervision of a qualified bat biologist.
- BIO-7: Preparation of a Bat Management Plan:** No more less than one year prior to initial site clearing activities, focused surveys for bat species shall be completed by a qualified bat biologist to determine the approximate size of the colony(s), species present, and features being used within the palm trees and bridge over the East Highline Canal. Focused surveys shall include a combination of nighttime emergence counts and acoustic techniques appropriate for the roosting habitat and time of year. At a minimum, focused surveys shall be conducted during the spring, summer, fall, and winter to determine how the habitat is being used by bats throughout the year with at least two surveys conducted during the maternity season to determine a pre- and post-volant count of colonies present. If roosting bats are found during the surveys, a Bat Management Plan identifying situation-specific and species-specific avoidance and minimization measures to reduce impacts to roosting bats shall be prepared prior to the commencement of initial site clearing activities. The Bat Management Plan shall include, as appropriate to the findings of the focused surveys and roosting habitat affected, spatial and temporal avoidance measures, no-disturbance buffers, passive exclusion of bats outside of the maternity season (if necessary), and identification of species-specific replacement or alternative habitat to mitigate for permanent maternity roosting habitat loss.
- BIO-8: Sensitive Habitat Avoidance:** To the greatest extent possible, plans should avoid impacts to bush seepweed scrub to minimize potential impacts to special-status species. Excluding these habitats from the Project should also minimize mitigation and permitting requirements to meet the less than significance threshold.
- BIO-9: Minimization of Impacts to Sensitive Species on BLM Land:** All vehicles should stay on designated roads within BLM land to minimize impacts to habitat. Coordination with a qualified biologist should occur prior to the staging of equipment and placement of temporary or permanent structures within BLM land. Additionally, a biologist should demarcate temporary and permanent work spaces in the field prior to the commencement of construction-related activities. Construction plans should incorporate measures to minimize and avoid impacts to habitats within this area. Tires should be cleaned prior to entering BLM lands to control introduction of invasive plant species,.


The following best management practices are not mitigation measures pursuant to CEQA but are recommended to further reduce impacts to special-status species that have potential to occur on the property:

- Confine all work activities to a pre-determined work area.
- To prevent inadvertent entrapment of wildlife during the construction phase of the Project, all excavated, steep-walled holes or trenches more than 2 feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen fill or wooden planks should be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped wildlife.
- Wildlife are often attracted to burrow- or den-like structures such as pipes, and may enter stored pipes and become trapped or injured. To prevent wildlife use of these structures, all construction pipes, culverts, or similar structures with a diameter of 4 inches or greater should be capped while stored onsite.
- All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or Project Site.
- Use of rodenticides and herbicides within the Project Site should be restricted. This is necessary to prevent primary or secondary poisoning of wildlife, including burrowing owl and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the USEPA, California Department of Food and Agriculture, and other state and federal legislation. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to burrowing owl.

7.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or the applicant's representative and that I have no financial interest in the project.

Signed:  Date: December 29, 2022
 Carley Adams
 Staff Biologist

Signed:  Date: December 29, 2022
 Alden Lovaas
 Associate Biologist

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Appendix A – Representative Site Photographs

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Appendix D – Special-Status Plant Potential For Occurrence

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APPENDIX A

Representative Site Photographs



Photo 1: Creosote bush scrub habitat in the southeast side portion of the solar field; facing northwest.



Photo 2: Creosote bush scrub habitat in the middle of the solar field; facing south.



Photo 3: Creosote bush scrub habitat in the northwest corner of the solar field; facing south.



Photo 4: Access Road along southern boundary of solar field; standing at southwest corner of solar field, facing northeast.



Photo 5: Creosote bush scrub in gen-tie line; facing east.



Photo 6: Creosote bush-white bursage scrub in gen-tie line; facing northeast



Photo 7: Arrow weed thickets in gen-tie line; facing south.



Photo 8: Bush seepweed scrub dominated by alkali goldenbush in gen-tie line; facing west.



Photo 9: Tamarisk thickets in gen-tie line; facing west.



Photo 10: North side of SR-78 bridge crossing over the East Highline Canal; facing south.



Photo 11: Occupied burrowing owl burrow, with feathers and pellets, observed in the southern portion of the solar field.



Photo 12: Old, collapsed desert kit fox den complex with a lot of desert kit fox scat surrounding the old den complex.

APPENDIX B

Plant Species Observed

Attachment B: Plant Species Observed

SCIENTIFIC NAME	COMMON NAME
GYMNOSPERMS	
<i>Ephedra trifurca</i>	Long leafed ephedra
ANGIOSPERMS (EUDICOTS)	
<i>Ambrosia dumosa</i>	White bursage
<i>Ambrosia salsola</i>	Cheesebush
<i>Asclepias subulata</i>	Rush milkweed
<i>Atriplex canescens</i>	Fourwing saltbrush
<i>Eriogonum deserticola</i>	Colorado desert buckwheat
<i>Euphorbia polycarpa</i>	Smallseed sandmat
<i>Isocoma acradenia</i>	Alkali goldenbush
<i>Larrea tridentata</i>	Creosote bush
<i>Parkinsonia aculeata*</i>	Mexican palo verde
<i>Pectis papposa</i>	Many bristle chinchweed
<i>Pluchea sericea</i>	Arrow weed
<i>Prosopis pubescens</i>	Screw bean mesquite
<i>Psoralea argemone</i>	Emory's indigo bush
<i>Stephanomeria pauciflora</i>	Wire lettuce
<i>Tamarix ramosissima*</i>	Tamarisk
<i>Tiquilia plicata</i>	Fanleaf crinkleemat
<i>Tribulus terrestris*</i>	Puncture vine
ANGIOSPERMS (MONOCOTS)	
<i>Arundo donax*</i>	Giant reed
<i>Distichlis spicata</i>	Saltgrass
<i>Hesperocallis undulata</i>	Desert lily
<i>Juncus acutus ssp. leopoldii</i>	Leopold's rush
<i>Phoenix dactylifera*</i>	Date palm
<i>Schismus barbatus*</i>	Common Mediterranean grass
<i>Typha</i> sp.	Cattail

*Nonnative species

APPENDIX C

Wildlife Species Observed

SCIENTIFIC NAME	COMMON NAME
INSECTA	Insects
<i>Danaus plexippus</i> ^{FED CAN}	monarch butterfly
REPTILA	REPTILES
<i>Aspidoscelis tigris tigris</i>	great basin whiptail
<i>Uta stansburiana</i>	side-blotched lizard
AVES	BIRDS
<i>Athene cunicularia</i> ^{CDFW SSC}	burrowing owl
<i>Cathartes aura</i>	turkey vulture
<i>Colaptes auratus</i>	northern flicker
<i>Haemorhous mexicanus</i>	house finch
<i>Lanius ludovicianus</i> ^{CDFW SSC}	loggerhead shrike
<i>Zenaida macroura</i>	mourning dove
<i>Zonotrichia leucophrys</i>	white-crowned sparrow
MAMMALIA	MAMMALS
<i>Dipodomys</i> sp.	kangaroo rat
<i>Lepus californicus</i>	black-tailed jackrabbit
<i>Vulpes macrotis</i> ^{CCR, 14, 5 § 460}	desert kit fox

*Non-native species

^{FED CAN} Federal Candidate Species

^{CDFW SSC}CDFW Species of Special Concern

^{CCR, 14, 5 § 460} CCR Title 14 Chapter 5 § 460

Special-Status Plant Potential For Occurrence

Special-Status Plant Species with Potential to Occur within the Project Site				
Scientific Name Common Name	Status	Blooming Period/ Elevation Range (meters)	Habitat	Potential to Occur within the Project site
<i>Astragalus magdalenae</i> var. <i>peirsonii</i> Peirson's milk-vetch	Fed: THR Ca: END CRPR: 1B.2 BLM: S	December- April (60-225)	Occurs on desert dunes in creosote bush scrub habitat.	Moderate potential to occur. Marginally suitable habitat for this species exists in the creosote bush scrub (sand dunes) on the Project site. Multiple occurrences returned during the database search. One CNDDDB record from 2018 documents approx. 8,000 plants on Algodones Dunes, approx. 3.95 miles NE of Project site
<i>Croton wigginsii</i> Wiggins' croton	Fed: none Ca: RAR CRPR: 2B.2 BLM: S	March-May (50 – 100)	Occurs on desert dunes in Sonoran Desert scrub habitat, usually in sandy soils.	Moderate potential to occur. Marginally suitable habitat for this species exists in the creosote bush scrub (sand dunes) on the Project site. Multiple occurrences returned during the database search. One CNDDDB record from 2019 documents thousands of individuals on Algodones Dunes, approx. 3.26 miles NE of Project site
<i>Cylindropuntia munzii</i> Munz's cholla	Fed: none Ca: none CRPR: 1B.3 BLM: S	May (150 - 600)	Occurs in sandy or gravelly soils in Sonoran Desert scrub. Known only from the Chocolate and Chuckwalla Mountains.	Moderate potential to occur. Suitable habitat for this species exists in the desert scrub on the Project site. Multiple occurrences returned during the database search; however, none within 5 miles of the Project site. One CNDDDB record from 2018 documents one individual on Algodones Dunes, approx. 7.59 miles NE of Project site.

Special-Status Plant Species with Potential to Occur within the Project Site				
Scientific Name Common Name	Status	Blooming Period/ Elevation Range (meters)	Habitat	Potential to Occur within the Project site
<i>Euphorbia abramsiana</i> Abrams' spurge	Fed: none Ca: none CRPR: 2B.2 BLM: none	August- November (-5-1310)	Occurs in Mojavean and Sonoran Desert scrub and creosote bush scrub habitats in sandy soils.	Moderate potential to occur. Suitable habitat for this species exists in the creosote bush scrub on the Project site. Multiple recent record returned during the database search; however, none within 5 miles of the Project site. Two CNDDB records from 2012 documents hundreds to thousands of individuals on Algodones Dunes, approx. 9.04 miles and 9.59 miles north of the Project site.
<i>Helianthus niveus ssp. tephrodes</i> Algodones Dunes sunflower	Fed: none Ca: END CRPR: 1B.2 BLM: S	September- May (50-100)	Occurs on desert dunes in creosote bush scrub habitat.	Moderate potential to occur. Marginally suitable habitat for this species exists in the creosote bush scrub (sand dunes) on the Project site. Multiple occurrences returned during the database search. One CNDDB record from 2018 documents hundreds of individual plants on Algodones Dunes approx. 3.84 miles NE of Project site.
<i>Mentzelia puberula</i> Darlington's blazing star	Fed: none Ca: none CRPR: 2B.2 BLM: none	March-May (90-1280)	Occurs in Mojavean and Sonoran Desert scrub and creosote bush scrub in rocky or sandy soils.	Moderate potential to occur. Suitable habitat for this species exists in the creosote bush scrub on the Project site; however, no recent occurrences were returned within 5 miles of the Project site. One historic CNDDB record form 1960 documents the plant at Hwy 78 crossing of Coachella Canal less than 5 miles east from Project site.

Special-Status Plant Species with Potential to Occur within the Project Site				
Scientific Name Common Name	Status	Blooming Period/ Elevation Range (meters)	Habitat	Potential to Occur within the Project site
<i>Nemacaulis denudata</i> var. <i>gracilis</i> slender cottonheads	Fed: none Ca: none CRPR: 2B.2 BLM: none	April-May (50-400)	Occurs on coastal dunes and desert dunes in creosote bush scrub and Sonoran Desert scrub.	Low potential to occur. Marginally suitable habitat for this species exists in the creosote bush scrub (sand dunes) on the Project site; however, only historical records were returned during the database search. One CNDDDB record from 2001, documents the plant approx. nine miles east of Project site on Algodones Dunes.
<i>Palafoxia arida</i> var. <i>gigantea</i> Giant Spanish- needle	Fed: none Ca: none CRPR: 1B.3 BLM: S	February-May (15-100)	Occurs on desert dunes in creosote bush scrub habitat.	Moderate potential to occur. Marginally suitable habitat for this species exists in the creosote bush scrub (sand dunes) on the Project site. Multiple occurrences returned during the database search, including one CNDDDB occurrence from 2013 approx. 3.51 miles NE of the Project site that documents multiple plants on Algodones Dunes.
<i>Panicum hirticaule</i> ssp. <i>hirticaule</i> Roughstalk witch grass	Fed: none Ca: none CRPR: 2B.1 BLM: none	August- December (45-1315)	Occurs in creosote bush scrub, Joshua tree woodland, Mojavean desert scrub, and Sonoran Desert scrub in silty or sandy soils, often on desert dunes.	Moderate potential to occur. Suitable habitat for this species exists in the creosote bush scrub on the Project site; however, no recent occurrences were returned within 5 miles of the Project site. One CNDDDB record from 2012 located in northern portion of Algodones Dunes approximately 8.21 miles north of the Project site.

Special-Status Plant Species with Potential to Occur within the Project Site				
Scientific Name Common Name	Status	Blooming Period/ Elevation Range (meters)	Habitat	Potential to Occur within the Project site
<i>Pholisma sonorae</i> sand food	Fed: none Ca: none CRPR: 1B.2 BLM: S	April-June (0 - 200)	Occurs in desert dunes and Sonoran Desert scrub in sandy soils.	Moderate potential to occur. Marginally suitable habitat for this species exists in the creosote bush scrub (sand dunes) on the Project site. Multiple occurrences returned during the database search, including two recent occurrences within 5 miles of the Project site.
Federal Designations: (Federal Endangered Species Act, USFWS) END: Federally-listed, Endangered THR: Federally-listed, Threatened			State Designations: (California Endangered Species Act, CDFW) END: State-listed, Endangered THR: State-listed, Threatened RAR: State-listed, Rare	
California Native Plant Society (CNPS) Designations: 1A: Plants presumed extinct in California. 1B: Plants rare and endangered in CA and throughout their range. 2: Plants rare, threatened, or endangered in CA but more common elsewhere in their range. 3: Plants about which need more information; a review list. 4: Plants of limited distribution; a watch list. Plants 1B, 2, and 4 extension meanings: 0.1 Seriously endangered in CA (over 80% of occurrences threatened / high degree and immediacy of threat) 0.2 Fairly endangered in California (20-80% occurrences threatened) 0.3 Not very endangered in CA (<20% of occurrences threatened or no current threats known) *Note: according to CNPS [Skinner and Pavlik 1994], plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code (CDFG 2010b). This interpretation is inconsistent with other				
Other Designations S: Bureau of Land Management Sensitive Species				

Sources:

California Natural Diversity Data Base (CNDDDB) (CDFW 2022)
 CNPS Rare and Endangered Plant Inventory (CNPS 2022)
 Calflora Information on California Plants (Calflora 2022)
 Special Status Plants (BLM 2015)

Special-Status Wildlife Potential For Occurrence

Special-Status Wildlife Species Potential for Occurrence				
Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
INSECTS				
<i>Danaus plexippus</i> Monarch butterfly	Fed: Ca: BLM:	CAN none none	Adult monarchs west of the Rocky Mountains typically overwinter in sheltered wooded groves of Monterey pine, Monterey cypress, and gum eucalyptus along coastal California, then disperse in spring throughout California, Nevada, Arizona, and parts of Oregon and Washington. Adults require milkweed and additional nectar sources during the breeding season. Larval caterpillars feed exclusively on milkweed.	Present. One monarch butterfly was observed in the Survey Area during the 2022 biological reconnaissance survey. Suitable habitat is present within the Project site.
FISH				
<i>Cyprinodon macularius</i> Desert pupfish	Fed: Ca: BLM:	END END none	Shallow and slow-moving water features with sand or silt bottoms and aquatic plants. May include desert springs, marshes, lakes, and saline or stream pools.	Low Potential to Occur. Although the CNDDDB and USFWS species occurrence data did not contain any nearby records of this species, suitable habitat is present within the East Highline Canal.
<i>Xyrauchen texanus</i> Razorback sucker	Fed: Ca: BLM:	END END none	Rivers with backwaters, deep runs, flooded off-channels in the spring. Shallow runs and pools in summer. Slow flowing runs and eddies in winter.	Low Potential to Occur. Although the CNDDDB and USFWS species occurrence data did not contain any nearby records of this species, suitable habitat is present within the East Highline Canal.
AMPHIBIANS				
<i>Incilius alvarius</i> Sonoran Desert toad	Fed: Ca: BLM:	none SSC none	Creosote bush desert scrub, grasslands up into oak-pine woodlands, thorn scrub and tropical deciduous forest in Mexico.	Presumed Absent. Two historic records (Occ # 2 and 3) of this species were recorded in 1912 approximately 11 miles southwest of the Project site. According to the CNDDDB, this population to be considered possibly extirpated from the area.

Special-Status Wildlife Species Potential for Occurrence				
Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
REPTILES				
<i>Phrynosoma mcallii</i> Flat-tailed horned lizard	Fed: Ca: BLM:	none SSC S	Desert scrub on sandy flats and valleys with little or no windblown sand, salt flats, and areas with gravelly soils.	High Potential to Occur. Although the literature review revealed 16 CNDDDB records, only six of those records were located within five miles of the Project site. Of the six records located within five miles, two are recent (Occ # 49 and 397) and four are historic (36, 290, 291, and 292). The most recent record (Occ # 397), recorded in 2017, was approximately five miles east of the Project Site. The closest record (Occ # 49), recorded in 2007, was located within the Project site. According to the CNDDDB, many collections of this species have been made along SR-78.
<i>Uma notata</i> Colorado Desert fringe-toed lizard	Fed: Ca: BLM:	none SSC S	Sparsely vegetated areas with fine sand including flats, riverbanks, dunes, and washes. Burrows in fine loose sand.	Moderate Potential to Occur. One recent record (Occ # 14) of this species was observed in 2018 approximately 12.5 miles south of the Project site. According to the CNDDDB record, two adult individuals were document.
BIRDS				
<i>Athene cunicularia</i> Burrowing owl	Fed: Ca: BLM:	BCC SSC S	Open grasslands including prairies, plains, and savannah, or vacant lots and airports. Nests in abandoned dirt burrows.	Present. The CNDDDB revealed 49 recent records of this species within five miles of the Project site. The closest record (Occ # 1326) was observed in 2007 approximately 0.04 mile west of the Project site. One burrow with recent burrowing owl sign (pellets and feathers) was observed on the Project site during the 2022 biological reconnaissance survey. In addition, the Project site contains suitable foraging and nesting habitat in the form of desert scrub and agriculture fields.

Special-Status Wildlife Species Potential for Occurrence				
Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
<i>Charadrius montanus</i> Mountain plover	Fed: Ca: BLM:	BCC SSC S	Shrubland and grassland, particularly in heavily grazed shortgrass prairie, fallow fields, and xeric scrub. Known to winter in semi-desert agricultural land.	Presumed Absent. Although the literature search revealed four recent records (Occ # 73, 74, 81, and 82) of this species, all four records were recorded over five miles from the Project site. In addition, the Project site contains minimal marginal suitability habitat for this species in the form of agricultural land.
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	Fed: Ca: BLM:	THR END none	Open woodland habitat, near water, especially with dense willow and cottonwood understory. Requires broad riparian forest habitat (usually > 50 acres)	Presumed Absent. Although the USFWS species occurrence data revealed one record of this species, observed in 2002, it was recorded over twelve miles from the Project site. In addition, no suitable habitat for this species was present on the Project site.
<i>Lanius ludovicianus</i> Loggerhead shrike	Fed: Ca: BLM:	none SSC none	Open country, with scattered shrubs and trees or other perches for hunting; includes agricultural fields, deserts, grasslands, savanna, and chaparral. Nests 2.5 to 4 feet off ground in thorny vegetation.	Present. One loggerhead shrike was observed on the Project site during the 2022 biological reconnaissance survey. Although the CNDDDB did not reveal any records of this species, multiple recent research grade records of this species, observed within five miles of the Project Site, were found using iNaturalist.
<i>Laterallus jamaicensis coturniculus</i> California black rail	Fed: Ca: BLM:	none THR, FP S	Coastal and estuarine saltmarshes especially dominated by pickleweed and matted salt grass. Freshwater marshes with shallow and stable water levels and flat shorelines.	Presumed Absent. Although the literature search revealed three historic records (Occ # 1, 13, and 59) of this species, all three records were recorded over five miles from the Project site. In addition, the Project site contains minimal marginal suitability habitat for this species in the form of the East Highline Canal.
<i>Oreothlypis luciae</i> Lucy's warbler	Fed: Ca: BLM:	none SSC S	Mesquite and mixed mesquite-riparian woodlands near desert streams and washes. Nests in tree or cactus cavities.	Low Potential to Occur. Although the CNDDDB did not contain any nearby records of this species, small areas of marginal suitability habitat are present within the Project site. Additional citizen science resources, including eBird and iNaturalist, were used to find other records of this species, however, none of the records were observed within five miles of the Project site.

Special-Status Wildlife Species Potential for Occurrence				
Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
<i>Rallus obsoletus</i> ssp. <i>yumanensis</i> Yuma Ridgway's rail	Fed: Ca: BLM:	END THR, FP none	Consistently found in freshwater marshes that are composed of cattail and bulrush. This emergent vegetation averages greater than 6 feet tall. Water depth tends to be around 3.5 inches deep. Range extends from Nevada, California, and Arizona to Baja California and Sonora Mexico.	Presumed Absent. Although the literature search revealed three historic records (Occ # 30, 37, and 279) of this species, all three records were recorded over five miles from the Project site. In addition, the Project site contains minimal marginal suitability habitat for this species in the form of the East Highline Canal.
MAMMALS				
<i>Antrozous pallidus</i> Pallid bat	Fed: Ca: BLM:	none SSC S	Roosts in rock crevices, caves, mines, buildings, bridges, and in trees. Generally, in mountainous areas, lowland desert scrub, arid grasslands near water and rocky outcrops, and open woodlands.	Moderate Potential to Occur. Although the CNDDDB did not contain any nearby records of this species, one area of potentially suitable habitat was present within the Project site. This species is known to roost in bridges and may use the bridge in the gen-tie line, if habitat is present.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	Fed: Ca: BLM:	none SSC S	Roosts in mines, caves, buildings, bridges or other cavities. Prefers hollow cavity roosting spaces.	Moderate Potential to Occur. Although the CNDDDB did not contain any nearby records of this species, one area of potentially suitable habitat was present within the Project site. This species is known to roost in bridges and may use the bridge in the gen-tie line, if habitat is present.
<i>Lasiurus xanthinus</i> Western yellow bat	Fed: Ca: BLM:	none SSC none	Roosts in trees, especially in fan palms with dead fronds. Found in riparian woodlands in arid regions, oak or pinyon-juniper woodlands, and human developed areas.	High Potential to Occur. Although the CNDDDB only revealed one historic record (Occ # 6) of this species approximately 11 miles southwest of the Project site, nearby and recent records of this species were found using iNaturalist, a citizen science resource. The records from iNaturalist were considered to be "research grade" and were taken by a field biologist for the San Diego Natural History Museum, who specializes in southern California bats. In addition, the gen-tie line contains suitable roosting habitat for this species in the form of palm trees.

Special-Status Wildlife Species Potential for Occurrence				
Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
<i>Myotis ciliolabrum</i> Small-footed myotis	Fed: Ca: BLM:	none none S	Roosts in rock crevices and cracks, caves, and mines. Maternity roosts include abandoned buildings. Occurs in in deserts, badlands, woodlands, riparian areas, and near outcrops and cliffs.	Low Potential to Occur. Although this species is not tracked in the CNDDDB, the Project site contains marginal roosting habitat for this species. This species sometimes uses bridges but primarily roosts in caves and mines.
<i>Myotis evotis</i> Long-eared myotis	Fed: Ca: BLM:	none none S	Roosts in man-made structures, trees, mines, caves, and erosional cavities and rock crevices (sometimes in ground). Found in woodlands ranging from lowland to subalpine, shrublands, riparian areas, and meadows.	Low Potential to Occur. Although this species is not tracked in the CNDDDB, the Project site contains marginal roosting habitat for this species. This species sometimes uses bridges but primarily roosts in caves/mines/and trees
<i>Myotis thysanodes</i> Fringed myotis	Fed: Ca: BLM:	none none S	Roosts in cliff faces, rock crevices, mines, caves, tree snags, and in man-made structures. Most common at mid elevations in deserts, riparian areas, woodlands, and grasslands.	Low Potential to Occur. Although this species is not tracked in the CNDDDB, the Project site contains marginal roosting habitat for this species. This species sometimes uses bridges but primarily roosts in caves/mines/and trees
<i>Myotis yumanensis</i> Yuma myotis	Fed: Ca: BLM:	none none S	Roosts near water in cliff crevices, caves, trees, buildings, and bridges. Occurs near water in riparian areas, moist woodlands and forests, and desert scrub.	High Potential to Occur. Although this species is not tracked in the CNDDDB, the Project site contains suitable foraging and roosting habitat for this species. This species commonly roosts in bridges and may use the bridge along the gentle line, if habitat is present.
<i>Sigmodon hispidus ssp. eremicus</i> Yuma hispid cotton rat	Fed: Ca: BLM:	none SSC none	Inhabits a variety of habitats, but generally associated with drainage ditches, canals, and seeps vegetated with plants such as arrow weed, salt grass, common reed, cattails, sedges, tamarisk, heliotrope, and annual grasses. They utilize runways through dense herbaceous growth and nests are built of woven grass. Noted presence in moist agricultural fields.	Presumed Absent. Although the literature search revealed three recent records (Occ # 2, 7, and 18) of this species, all three records were recorded over five miles from the Project site. In addition, no suitable habitat for this species is present on site.

Special-Status Wildlife Species Potential for Occurrence				
Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
<i>Taxidea taxus</i> American badger	Fed: Ca: BLM:	none SSC none	Occurs in open habitats with friable soil such as grasslands, brushlands with sparse ground cover, open chaparral, and sometimes riparian zones.	Moderate Potential to Occur. Although the CNDDDB did not contain any nearby records of this species, suitable habitat was present within the Project site.
<i>Vulpes macrotis arsipus</i> Desert kit fox	Fed: Ca: BLM:	none CCR Title 14 Chapter 5 § 460 none	Occurs in desert habitats that include creosote bush, shadscale, greasewood, and sagebrush. This species feeds primarily on nocturnal rodents and rabbits, but will also opportunistically feed birds, reptiles, and insects.	Present. Although this species is not tracked in the CNDDDB, the Project site contains suitable foraging and denning habitat for this species. Multiple old den complexes, with desert kit fox scat on the apron, were observed during the survey. This species could utilize the portions of the Project Site while foraging, denning, or moving through the area.
Federal Designations: (Federal Endangered Species Act, USFWS) END: Federally-listed, Endangered THR: Federally-listed, Threatened CAN: Federal Candidate Species FSC: Federal Species of Concern FPD: Federal Proposed for Delisting		State Designations: (California Endangered Species Act, CDFW) END: State-listed, Endangered THR: State-listed, Threatened CAN: State Candidate Species SSC: California Species of Special Concern FP: Fully Protected Species CCR Title 14 Chapter 5 § 460:Furbearing Mammals		Bureau of Land Management (BLM) Classifications: S: BLM Sensitive Species