Biological Resources Assessment Report

Twentynine Palms Hatch Sullivan Bike Path Project
Twentynine Palms, San Bernardino County, California

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1.0 INTRODUCTION

This report presents the results of a biological resources assessment conducted by WSP USA, Inc. (WSP) for proposed bike lanes (project) to be created in the shoulder of a 2.1 mile stretch of an existing road, in the city of Twentynine Palms, San Bernardino County, California. WSP was contracted to perform this work by Terra Nova Planning and Research. This report presents the regulatory framework, methods, and results of baseline biological surveys for the proposed project.

1.1 Project Description/Existing Conditions

The project is generally located along Hatch Road and Sullivan Road, south of 29 Palms Hwy, with a proposed staging yard at Sullivan Road and Adobe Road (Figure 1 – Appendix A). The project is located within Sections 31 and 32, Township 1 North, Range 9 East, as shown on the United States Geological Survey (USGS) 7.5-minute Twentynine Palms, California quadrangle (Figure 2 – Appendix A). As shown on Figure 3, the project is bounded on the west by Morongo Road and a mix of residential development, commercial development and intermittent disturbed open space; by Adobe Road, commercial development and open space on the east; by residential development, commercial development and intermittent open space on the south; and by residential development, commercial development and intermittent open space to the north. The existing Hatch Road and Sullivan Road is paved with some areas of the shoulder that have already been improved. The proposed bike path appears to be located entirely within an existing paved road and its previously cleared dirt shoulders. The proposed staging yard is located partially in an existing paved parking lot and stretches into the adjacent, previously disturbed, undeveloped area (please see the photographs in Appendix B). Elevations within the project site range from approximately 648 meters (2,125 feet) above mean sea level (AMSL) at Morongo Road to approximately 614 meters (2,014 feet) AMSL at Adobe Road. The average rainfall for the area (City of Twentynine Palms) is 6 inches per year (distributed more or less across 21 days of precipitation), with an average of 285 sunny days per year (Best Places Climate 2025).

1.2 Regulatory Framework

1.2.1 Federal

1.2.1.1 Endangered Species Act (ESA) –

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

Section 9 of the ESA prohibits the “take” of listed (i.e., endangered or threatened) species. The ESA’s definition of take is “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct.” Recognizing that take cannot always be avoided, Section 10(a) includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Specifically, Section 10(a)(1)(A) permits (authorized take permits) are issued for scientific purposes. Section 10(a)(1)(B) permits (incidental take

permits) are issued for the incidental take of listed species that does not jeopardize the species.

Section 7 (a)(2) requires federal agencies to evaluate the proposed project with respect to listed or proposed listed, species and their respective critical habitat (if applicable). Federal agencies must employ programs for the conservation of listed species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat."

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

Section 10(a) of the ESA authorizes the issuance of incidental take permits and establishes standards for the content of habitat conservation plans (see Section 3.3 below).

1.2.1.2 Migratory Bird Treaty Act (MBTA) –

Treaties signed by the U.S., Great Britain, Mexico, Japan, and the countries of the former Soviet Union make it unlawful to pursue, capture, kill, and/or possess, or attempt to engage in any such conduct to any migratory bird, nest, egg, or parts thereof listed in the document. As with the ESA, the MBTA also allows the Secretary of the Interior to grant permits for the incidental take of these protected migratory bird species.

1.2.1.3 National Environmental Policy Act (NEPA) –

If portions of a proposed project could fall under the jurisdiction of a federal agency (i.e., U.S. Army Corps of Engineers) they are subject to environmental review pursuant to NEPA. NEPA establishes certain criteria that must be adhered to for any project that is "financed, assisted, conducted or approved" by a federal agency. The federal lead agency is required to "determine whether the proposed action will significantly affect the quality of the human environment."

1.2.1.4 Section 404 of the Clean Water Act –

This section of the Clean Water Act, administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredged and fill material into "waters of the United States." The USACE has created a series of nationwide permits that authorize certain activities within waters of the U.S. provided that the proposed activity does not exceed the impact threshold of 0.5 acre for nationwide permits, takes steps to avoid impacts to wetlands where practicable, minimizes potential impacts to wetlands, and provides compensation for any remaining, unavoidable impacts through activities to restore or create wetlands. For projects that exceed the threshold for nationwide permits, individual permits under Section 404 can be issued.

1.2.2 State

California Endangered Species Act (CESA) – This legislation is similar to the federal ESA, but it is administered by the California Department of Fish and Wildlife (CDFW – formerly Department of Fish and Game). The CDFW is authorized to enter into "memoranda of understanding" with individuals, public agencies, and other institutions to import, export, take,

or possess state-listed species for scientific, educational, or management purposes. CESA prohibits the take of state-listed species except as otherwise provided in state law. Unlike the federal ESA, the CESA applies the take prohibitions to species currently petitioned for state-listing status (candidate species). State lead agencies are required to consult with CDFW to ensure that actions are not likely to jeopardize the continued existence of any state-listed species or result in the destruction or degradation of occupied habitat.

1.2.2.1 California Environmental Quality Act (CEQA) –

The basic goal of CEQA is to maintain a high-quality environment now and in the future. The specific goals are for California's public agencies to:

1) identify the significant environmental effects of their actions; and, either
2) avoid those significant environmental effects, where feasible; or
3) mitigate those significant environmental effects, where feasible.

CEQA applies to "projects" proposed to be undertaken or requiring approval by state and local government agencies. Projects are activities that have the potential to have a physical impact on the environment and may include the enactment of zoning ordinances, the issuance of conditional use permits and the approval of tentative subdivision maps. Where a project requires approvals from more than one public agency, CEQA requires one of these public agencies to serve as the "lead agency."

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

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

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

1.2.2.2 The Native Plant Protection Act (NPPA) –

The NPPA includes measures to preserve, protect, and enhance rare and endangered native plant species. Definitions for “rare and endangered” are different from those contained in CESA. However, the list of species afforded protection in accordance with the NPPA includes those listed as rare and endangered under CESA. NPPA provides limitations on take as follows: “no person will import into this state, or take, possess, or sell within this state” any

rare or endangered native plants, except in accordance with the provisions outlined in the act. If a landowner is notified by CDFW, pursuant to section 1903.5 that a rare or endangered plant is growing on their property, the landowner shall notify CDFW at least 10 days prior to the changing of land uses to allow CDFW to salvage the plants.

1.2.2.3 Natural Community Conservation Planning (NCCP) Program –

The NCCP, which is managed by the CDFW, is intended to conserve multiple species and their associated habitats, while also providing for compatible use of private lands. Through local planning, the NCCP planning process is designed to provide protection for wildlife and natural habitats before the environment becomes so fragmented or degraded by development that species listing are required under CESA. Instead of conserving small, often isolated "islands" of habitat for just one listed species, agencies, local jurisdictions, and/or other interested parties have an opportunity through the NCCP to work cooperatively to develop plans that consider broad areas of land for conservation that would provide habitat for many species. Partners enroll in the programs and, by mutual consent, areas considered to have high conservation priorities or values are set aside and protected from development. Partners may also agree to study, monitor, and develop management plans for these high value "reserve" areas. The NCCP provides an avenue for fostering economic growth by allowing approved development in areas with lower conservation value. See further discussion in Section 3.3 below.

1.2.2.4 Sections 1600-1603 of the State Fish and Game Code –

The California Fish and Game (Wildlife) Code, pursuant to Sections 1600 through 1603, regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife resources. Under state code, CDFW jurisdiction is assessed in the field based on one, or a combination, of the following criteria:

1) At minimum, intermittent and seasonal flow through a bed or channel with banks and that also supports fish or other aquatic life.
2) A watercourse having a surface or subsurface flow regime that supports or that has supported riparian vegetation.
3) Hydrogeomorphically distinct top-of-embankment to top-of-embankment limits.
4) Outer ground cover and canopy extents of, typically, riparian associated vegetation species that would be sustained by surface and/or subsurface waters of the watercourse.

The CDFW requires that public and private interests apply for a "Streambed Alteration Agreement" for any project that may impact a streambed or wetland. The CDFW has maintained a "no net loss" policy regarding impacts to streams and waterways and requires replacement of lost habitats on at least a 1:1 ratio.

1.2.2.5 Section 2081 of the State Fish and Game Code –

Under Section 2081 of the California Fish and Game Code, the CDFW authorizes individuals or public agencies to import, export, take, or possess state endangered, threatened, or candidate species in California through permits or memoranda of understanding. These acts, which are otherwise prohibited, may be authorized through permits or "memoranda of

understanding" if (1) the take is incidental to otherwise lawful activities, (2) impacts of the take are minimized and fully mitigated, (3) the permit is consistent with regulations adopted in accordance with any recovery plan for the species in question, and (4) the applicant ensures suitable funding to implement the measures required by the CDFW. The CDFW shall make this determination based on the best scientific information reasonably available and shall include consideration of the species' capability to survive and reproduce.

1.2.2.6 Section 3505.5 of the State Fish and Game Code –

This section makes it unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey, e.g.: owls, hawks, eagles, etc.) or to take, possess, or destroy the nest or eggs of any bird-of-prey.

2.0 METHODS

Methods employed in the performance of this biological assessment consisted of a literature review, followed by a reconnaissance-level site assessment to obtain a general inventory of plant and wildlife species on the project site; and to determine the potential for, or presence of, special status biological resources or their habitat on the project site.

2.1 Literature Review

In preparation for the field survey, a literature search was conducted to identify special status biological resources known from the vicinity of the project site. In the context of this report, and for the purpose of this assessment, vicinity is defined as areas within a 5-mile radius of the project site.

The literature search included a review of the following documents:

- California Natural Diversity Data Base (CNDDB) RareFind 5 (CDFW 2025a)
- Special Animals List (CDFW 2025b)
- California Native Plant Society's (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2025)
- Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. (NRCS 2024) Web Soil Survey.
- USGS 7.5' Desert Hot Springs, Seven Palms Valley, Cathedral City, and Palms Springs, Calif. quadrangles (USGS 2021)
- USFWS IPAC Report
- Pertinent documents from the WSP library

2.2 Biological Reconnaissance of the Project Site

The project site was assessed by vehicle and on foot between the hours of 0830 and 1025 on 28 January 2025, by WSP biologist Melanie Bukovac, accompanied by WSP senior biologist Michael Wilcox. Weather conditions during the survey consisted of partly cloudy skies (20-60% cloud cover) with temperatures ranging from 48°F to 53°F (degrees Fahrenheit), and light winds between 0 and 5 mph. Surveys were conducted systematically, visually inspecting all areas of the site and adjacent accessible areas (within a 50 meter (160 foot) buffer) for components of sensitive species habitat and potential sign of sensitive biological resources.

The assessment of the potential for occurrence of sensitive biological resources known from the project vicinity was based on geographic range, CNDDB records, habitat associations, the biologists' experience in the region, general site conditions, and observable soil types. All plant and vertebrate species observed were recorded in field notes.

Some wildlife species were identified through indirect sign (*e.g.*, scat, tracks, nests, burrows, vocalizations, etc.). Scientific nomenclature for this report is from the following standard reference sources: plant communities, Sawyer, Keeler-Wolf, and Evens (2009), reptiles and amphibians, Stebbins and McGinnis (2012); birds, California Bird Records Committee (2025); and mammals, CDFW (2016). Vegetation nomenclature follows The Jepson eFlora, Vascular Plants of California, (website 2020). When the Jepson eFlora does not list a common name, common name nomenclature follows the United States Department of Agriculture, Natural Resources Conservation Service (USDA) Plants Database (USDA 2025).

3.0 RESULTS

3.1 Soils

The USDA online Web Soil Survey (Online website 2025) was accessed to determine the soil types mapped as occurring along the project alignment. Unfortunately, there is no existing soil data present for the project alignment and immediate vicinity. Soils observed during the biological assessment were typical light-colored sandy soils lacking rocks, rock outcrops, clay soils, sand dunes or excessively sandy areas.

3.2 Vegetation and Flora

Appendix B includes the scientific and common names for plant species identified during the assessment. Forty-two (42) plant species were identified. Of the plant species detected on the site during the survey, 19% were non-native species, many of which were landscaped.

The project site occurs in an area that has been previously development and/or disturbance during the past. In addition to the project footprint, much of the area surrounding the proposed bike path alignment has been moderately to greatly altered from its natural state and is located in close proximity to areas of both residential and commercial development (please see Figure 3 – Appendix A). The proposed bike path is located within the shoulder of an existing road that has been graded and paved (please see Photographs in Appendix B). Most of the plant species observed were associated with the intermittent open spaces and included but were not limited to the following: creosote bush (*Larrea tridentata*), cheesebush (*Ambrosia salsola*), allscale saltbush (*Atriplex polycarpa*), smoke tree (*Psorothamnus spinosus*), catclaw (*Senegalia greggii*), bladderpod (*Cleomella arborea*), Mexican palo verde (*Parkinsonia aculeata*), and Thurber's sandpaper plant (*Petalonyx thurberi*).

3.3 Wildlife

The list of vertebrate animals detected on the project site during the survey totaled nine (9) species (8 birds and 1 mammal). This low number is a direct reflection of the semi-urban/residential setting of the project site, which is located adjacent to the "downtown" portion of Twentynine Palms. The list was also limited by the seasonal timing and short duration of the assessment, and by the nocturnal and fossorial habits of many animals.

No reptiles were observed, most likely due to the relatively cool weather conditions present during the assessment, but some species would be expected to occur, including, but not limited to, northern desert iguana (*Dipsosaurus dorsalis dorsalis*), western side-blotched lizard (*Uta stansburiana elegans*), Great Basin whiptail (*Aspidoscelis tigris tigris*), and red racer (*Masticophis flagellum piceus*). The disturbed nature of the project alignment reduces the potential for use of the site by a greater variety of desert reptiles, as many of these species require better quality natural habitats, and some are substrate specialists (typically on sand dunes or wind-deposited blow sand). However, there are some adjacent areas that are not disturbed, which increases the potential for some special status species to occur within the vicinity of the project.

Birds observed during the survey included a mix of native and non-native species common to desert edge habitats and developed areas of the Mojave Desert. The birds observed included: cactus wren (*Campylorhynchus brunneicapillus*), Say's phoebe (*Sayornis saya*), phainopepla (*Phainopepla nitens*), northern mockingbird (*Mimus polyglottos*), house finch (*Haemorhous mexicanus*), common raven (*Corvus corax*), rock dove (*Columba livia*), and mourning dove (*Zenaida macroura*).

Desert woodrat (*Neotoma lepida*) was the only mammal detected during the surveys. Other mammals that may be present include coyote *(Canis latrans*), round-tailed ground squirrels (*Xerospermophilus tereticaudus*), desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), kangaroo rats (*Dipodomys* sp.) and various other small rodents.

3.4 Sensitive Elements

Plant or animal taxa may be considered "special status" due to declining populations, vulnerability to habitat change or loss, or because of restricted distributions. Certain sensitive species have been listed as Threatened or Endangered by the USFWS or by the CDFW and are protected by the federal and state ESAs and the California Native Plant Protection Act. Other species have been identified as sensitive by the USFWS, the CDFW, or by private conservation organizations, including the CNPS, but have not been formally listed as Threatened or Endangered. Impacts to such species can still be considered significant under CEQA, if the project related impact reduces the population size to a less-than self-sustaining level.

The literature review and WSP biologists' knowledge of the project vicinity indicated that as many as thirty-six (36) sensitive biological resources potentially occur in and around the vicinity (within a five-mile radius) of the project alignment. For a summary of sensitive species and habitats known to occur or potentially occurring in the vicinity of the project site, see Tables 1 through 6 and Figure 3. There is no USFWS designated critical habitat for any special status species within the project alignment. There is designated critical habitat for desert tortoise 1.8 miles southeast of the eastern portion of the project alignment, but will not be directly or indirectly impacted by the proposed project.

Table 1. Special Status Plants

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Allium parishii Parish's onion	F: ND C: ND CNPS List: 4.3 State Rank: S3	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland in rocky areas. 2955 – 5695 feet elevation	Apr-May	**Absent** No suitable rocky habitat for this species is present within the project area. No CNDDB records within vicinity. Outside elevation limits.
Aloysia wrightii Wright's beebrush	F: ND C: ND CNPS List: 4.3 State Rank: S4	Joshua tree "woodland", Pinyon and juniper woodland in carbonate and rocky areas 2955 – 5250 feet elevation	Apr-Oct	**Absent** No suitable rocky habitat for this species is present within the project area. No CNDDB records within vicinity. Outside elevation limits.
Astragalus bernardinus San Bernardino milk-vetch	F: ND C: ND CNPS List: 1B.2 State Rank: S3	Joshua tree woodland, Limestone, Pinon & juniper woodlands 2,460 – 5,645 feet elevation	April – June	**Absent** No suitable habitat for this species is present within the project area. No CNDDB records within vicinity. Site is also outside of known elevational range. Nearest CNDDB records 6.75 mi away.
Ayenia compacta California ayenia	F: ND C: ND CNPS List: 2B.3 State Rank: S3	Sandy and gravelly washes, dry canyons. 490 – 3,595 feet elevation	March – April	**Absent** No suitable habitat for this species is present within the project area. Nearest CNDDB records 2.5 mi away.
Calochortus striatus alkali mariposa-Lily	F: ND C: ND CNPS List: 1B.2 State Rank: S2S3	Alkaline (mesic) areas in chaparral, chenopod scrub, Mojavean desert scrub, meadows, and seeps. 230 – 5,235 feet elevation	April – June	**Absent** No alkaline areas present. Much of the alignment has already been previously disturbed. Nearest CNDDB records occur within the immediate vicinity of the project alignment.
Castilleja montigena Heckard's paintbrush	F: ND C: ND CNPS List: 4.3 State Rank: S3	Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest 6400 – 9185 feet elevation	May-Aug	**Absent** No suitable habitat for this species is present within the project area. No CNDDB records within vicinity. Outside elevation limits.
Eschscholzia androuxii Joshua Tree poppy	F: ND C: ND CNPS List: 4.3 State Rank: S3	Joshua tree "woodland", Mojavean desert scrub in desert wash habitats 1920 – 5530 feet elevation	Feb-May(Jun)	**Absent** No suitable habitat for this species is present within the project area. No CNDDB records within vicinity.
Escobaria alversonii Alverson's foxtail cactus	F: ND C: ND CNPS List: 4.3 State Rank: S3	Mojavean desert scrub, Sonoran desert scrub, 246 – 5,003 feet elevation	May – June	**Absent** No suitable habitat for this species is present within the project area. No CNDDB records within the vicinity. Nearest CNDDB records 5.6 mi away.

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Funastrum utahense *Utah vine milkweed*	F: ND C: ND CNPS List: 4.2 State Rank: S4	Mojavean desert scrub, Sonoran desert scrub in gravelly soils 330 – 4710 feet elevation	(Mar) Apr-Jun (Sep-Oct)	**Absent** No suitable habitat for this species is present within the project area. No CNDDB records within vicinity.
Galium angustifolium ssp. *Gracillimum* slender bedstraw	F: ND C: ND CNPS List: 4.2 State Rank: S4	Joshua tree "woodland", Sonoran desert scrub with granite and rocky outcrops 425 – 5085 feet elevation	Apr-Jun(Jul)	**Absent** No suitable habitat for this species is present within the project area. No CNDDB records within vicinity.
Grusonia parishii Parish's club-cholla	F: ND C: ND CNPS List: 2B.2 State Rank: S2	Joshua tree woodland, Mojavean desert scrub, Sonoran desert scrub, 900 – 5,000 feet elevation	Late spring – early summer	**Low** Suitable habitat marginally present. Much of the alignment has already been previously disturbed. Nearest CNDDB records 4.8 mi away.
Jaffueliobryum wrightii Wright's Jaffueliobryum moss	F: ND C: ND CNPS List: 2B.3 State Rank: S2S3	Has been found in dry openings (such as rock crevices), carbonate deposits in alpine dwarf scrub, Mojavean desert scrub, and Pinyon – Juniper Woodland. 525 – 8,205 feet elevation	N/A (mosses are not flowering plants)	**Absent** No suitable habitat for this species is present within the project area. Nearest CNDDB records 1.8 mi away.
Johnstonella costata ribbed cryptantha	F: ND C: ND CNPS List: 4.3 State Rank: S4	Desert dunes, Mojavean desert scrub, Sonoran desert scrub in sandy soils -195 – 1640 feet elevation	Feb-May	**Absent** No suitable habitat for this species is present within the project area. No CNDDB records within vicinity. Below elevation limit.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	F: ND C: ND CNPS List: 1B.1 State Rank: S2	Coastal salt marshes and swamps, playas, and vernal pools. 5 – 4,005 feet elevation.	February – June	**Absent** No suitable habitat for this species is present within the project area. No current occurrence records within the vicinity. (According to CNPS, this species is assumed to be extirpated in the 29 Palms area)
Linanthus maculatus ssp. *maculatus* Little San Bernardino Mtns. Linanthus	F: ND C: ND CNPS List: 1B.2 State Rank: S2	Endemic to California and currently only known from a few locales (sandy flats) in the Little San Bernardino Mountains and adjacent Palm Springs area in the northern end of the Coachella Valley. 460 – 4005 feet elevation.	March – May	**Absent** No suitable habitat for this species is present within the project area. No CNDDB records within vicinity. Site may also be outside of known geographical range. Nearest CNDDB records 6.3 mi away.
Matelea parvifolia spear-leaf matelea	F: ND C: ND CNPS: List 2B.3 State Rank: S3	Mojavean desert scrub, Sonoran desert scrub. 1,510 – 4,890 feet elevation	March – May	**Absent** No CNDDB records within vicinity. Nearest CNDDB records 6.0 mi away.

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Menodora spinescens var. *mohavensis* Mojave Menodora	F: ND C: ND CNPS: List 2B.2 State Rank: S2	Mojavean desert scrub with andesite gravel, rocky hillsides, and canyons. 2,265 – 6,560 feet elevation.	April – May	**Absent** No suitable habitat for this species is present within the project area. Site is also outside of known elevational range. Nearest CNDDB records 3.3 mi away.
Monardella robisonii Robison's Monardella	F: ND C: ND CNPS: List 2B.2 State Rank: S2	A California endemic, known only from Mojave Desert mountains primarily within Joshua Tree N.P. and lower elevations in Sand to Snow Nat. Monument. Grows among granitic boulders in desert chaparral and pinyon-juniper woodlands. 2,000 – 4,920 feet elevation.	(February) April – September (October)	**Absent** No suitable habitat for this species is present within the project area. Site is also not within the currently known geographical range of the species. Nearest CNDDB records 3.8 mi away.
Penstemon clevelandii var. *mohavensis* Mohave beardtongue	F: ND C: ND CNPS: List 1B.2 State Rank: S2	Mojavean desert scrub, Pinon & juniper woodlands. 2,165 – 5,645 feet elevation.	March – May	**Absent** No suitable habitat present within the project alignment. Much of the alignment has already been previously disturbed. Nearest CNDDB records occur within the immediate vicinity of the project alignment.
Saltugilia latimeri Latimer's woodland-gilia	F: ND C: ND CNPS: List 1B.2 State Rank: S3	Chaparral, Limestone, Mojavean desert scrub, Pinon & juniper woodlands. 2,135 – 5,645 feet elevation.	March – June	**Absent** No CNDDB records within vicinity. Site is also outside of known elevational range. Nearest CNDDB records 5.0 mi away.
Sidalcea neomexicana Salt Spring checkerbloom	F: ND C: ND CNPS: List 2B.2 State Rank: S2	Alkaline and mesic areas in chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub and playas. 50 – 5,020 feet elevation.	March – June	**Absent** No Suitable alkaline habitat present. Much of the alignment has already been previously disturbed. Nearest CNDDB records occur within the immediate vicinity of the project alignment.
Streptanthus bernardinus Laguna Mountains Jewelflower	F: ND C: ND CNPS: List 4.3 State Rank: S3S4	Known from the Transverse Ranges around Los Angeles and the Peninsular Ranges to the south (including the Laguna Mountains east of San Diego). Grows in temperate coniferous forest and chaparral on slopes. 2,200 – 8,205 feet elevation.	May – August	**Absent** No suitable habitat for this species is present within the project area. Site is also not within the currently known geographical or elevational range of the species.
Tetracoccus hallii Hall's tetracoccus	F: ND C: ND CNPS: List 4.3 State Rank: S4	Mojavean desert scrub, Sonoran desert scrub 100 – 3935 feet elevation.	Jan-May	**Absent** No suitable habitat for this species is present within the project area. No CNDDB records within vicinity.
Wislizenia refracta ssp. *refracta* jackass-clover	F: ND C: ND CNPS: List 2B.2 State Rank: S1	Low, sandy, or alkaline soil in deserts and arid grasslands, often along roads or washes. 1,970 – 2,625 feet elevation	April – November	**Absent** No Suitable habitat present. Much of the alignment has already been previously disturbed. Nearest CNDDB records 0.22 mi away.

Table 2. Special Status Habitats

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Desert Fan Palm Oasis Woodland	State rank: S3.2	This designation does not include cultivated (planted) stands of California fan palm. Restricted to areas with permanent water such as moist alkaline areas near seeps, springs, and streams. Also found on hillsides or canyons, arroyos, or washes. Often adjacent to fault areas (upwelling).	**Absent** This plant community is not present within the project area.

Table 3. Special Status Insects

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Rhopalolemma robertsi Roberts' rhopalolemma bee	F: ND C: ND State rank: S1	Desert habitats (a fairly rare genus, not much is known about this species)	**Absent** No CNDDB records within the vicinity. Nearest CNDDB records 5.1 mi away.
Danaus plexippus Monarch Butterfly	F: FC C: ND State rank: S2S3	Western winter roost sites primarily occur along the coast from northern Mendocino to Baja California, Mexico, located in wind protected tree groves (*Eucalyptus* species, Monterey pine (*Pinus radiata*), cypress), with nectar and water sources nearby. During breeding season, adults widespread. Larvae require milkweed.	**Absent** No suitable habitat present. No milkweed observed. No CNDDB records within the vicinity. Nearest CNDDB records 5.1 mi away.

Table 4. Special Status Reptiles

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Crotalus ruber red diamond rattlesnake	F: ND C: SSC State rank: S3	Inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grasslands, desert slopes of mountains onto adjacent rocky flats.	**Absent** Despite the map showing a potential CNDDB record north of the site, the NE extent of this species range is understood to be Pioneertown and Morongo Valley, habitat on project site too disturbed to be likely to support this species. Nearest CNDDB record 4.5 mi away.
Gopherus agassizii desert tortoise	F: THR C: THR State rank: S2S3	Found in a variety of Mojave Desert habitats from sandy flats to rocky hills, alluvial fans, washes, and canyons with suitable soils for burrow/den excavation, most often in Creosote bush scrub habitat, although occurs in other vegetation communities too.	**Low** Site is located in an area of residential and commercial development, however surrounding open areas support suitable tortoise habitat and the species is known to occur in the vicinity. Nearest CNDDB records occur within the immediate vicinity to the W/NW.

Table 5. Sensitive Birds

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Athene cunicularia burrowing owl	F: ND C: C. END, SSC State rank: S2	Inhabits a variety of open habitats (including edges of ag. Fields), often occupies unused ground squirrel burrows	**Low** No CNDDB records within the vicinity. Site is located in an area of residential and commercial development, however surrounding open areas within 500-feet of the project alignment may support burrowing owl habitat. Nearest CNDDB records 7.0 mi away.
Toxostoma bendirei Bendire's thrasher	F: ND C: SSC State rank: S2	Joshua tree woodland, Mojavean desert scrub	**Absent** Suitable nesting absent, there are no CNDDB records within the vicinity. Nearest CNDDB records 7.5 mi away.

Table 6. Sensitive Mammals

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Chaetodipus fallax pallidus pallid San Diego pocket mouse	F: ND C: ND State rank: S3S4	Often in desert border areas in desert wash, scrubs, pinyon-juniper, canyons	**Absent** No suitable habitat for this species is present within the project area. Low potential in adjacent open areas. Nearest CNDDB records occur within the immediate vicinity of the project alignment.
Euderma maculatum spotted bat	F: ND C: SSC State rank: S3	Known from a small number of localities in our state. Mostly in foothills, mountains, and desert regions from below sea level to above 3,000 m (New Mexico). Prefers to roost in rock crevices, occasionally in caves and buildings, cliffs are best roosting habitat.	**Absent** No suitable roosting habitat for this species is present within the project area. Low foraging potential in adjacent open areas. Nearest CNDDB records occur within the immediate vicinity of the project alignment.
Lasiurus cinereus hoary bat	F: ND C: ND State rank: S4	Broadleaved upland forest, Cismontane woodland, Lower montane coniferous forest, North coast coniferous forest	**Absent** No suitable habitat for this species is present within the project area. No CNDDB records within the vicinity. Nearest CNDDB records 6.7 mi away.
Lasiurus xanthinus western yellow bat	F: ND C: SSC State rank: S3	This uncommon bat is known from Lost Angeles and San Bernardino Counties south to the Mexican border. Usually below 600 m in elevation in valley foothill and desert riparian areas, desert wash and palm oasis habitats. Strongly associated with palm trees in CA for roosting.	**Absent** No palm trees or other suitable roosting habitat on the project alignment, however there are palms within the immediate vicinity, which may be used for foraging. Nearest CNDDB records occur within the immediate vicinity of the project alignment.
Ovis canadensis ssp. *Nelson* desert bighorn sheep	F: ND C: FP State rank: S3	Desert bighorn sheep inhabit rocky slopes and canyons, washes, and alluvial fans; often with rugged and open terrain with grasses and forbs for grazing.	**Absent** No suitable habitat for this species is present within the project area. Project site is not located in close proximity to rocky hillsides where this species could wander in from in search of water or forage. Nearest CNDDB records 0.68 mi away

Definitions of status designations and occurrence probabilities.

Definitions of occurrence probability:

Occurs: Observed on the site by WSP personnel or recorded on-site by other qualified biologists.

High: Observed in similar habitat in region by qualified biologists, or habitat on the site is a type often utilized by the species and the site is within the known range of the species.

Moderate: Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.

Low: Site is within the known range of the species but habitat on the site is rarely used by the species.

Absent: A focused study failed to detect the species, or, no suitable habitat is present.

Federal designations: (federal Endangered Species Act, US Fish and Wildlife Service):

END: Federally listed, Endangered.
THR: Federally listed, Threatened.
BCC: Birds of Conservation Concern
C: Candidate for Federal listing
ND: Not designated.

State designations: (California Endangered Species Act, California Dept. of Fish and Game)

END: State listed, Endangered.
THR: State listed, Threatened.
RARE: State listed as Rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
SSC: California Species of Special Concern.
C: Candidate for State Listing
ND: Not designated.

California Native Plant Society (CNPS) designations: (Non-regulatory, compilation by a non-profit organization which tracks rare plants)

CNPS California Rare Plant Ranks (CRPR) Note: According to the CNPS (http://www.cnps.org/programs/Rare_Plant/inventory/names.htm), ALL plants on Lists 1A, 1B, 2A, and 2B meet definitions for state listing as threatened or endangered under Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code. Certain plants on Lists 3 and 4 do as well. The CDFW (http://www.dfg.ca.gov/hcpb/species/t_e_spp/nat_plnt_consv.shtml) states that plants on Lists 1A, 1B, 2A, and 2B of the CNPS Inventory consist of plants that may qualify for listing, and recommends they be addressed in CEQA projects (CEQA Guidelines Section 15380). However, a plant need not be in the Inventory to be considered a rare, threatened, or endangered species under CEQA. In addition, CDFW recommends, and local governments may require, protection of plants which are regionally significant, such as locally rare species, disjunct populations of more common plants, or plants on the CNPS Lists 3 and 4.

List 1A: Plants presumed extinct in California.
List 1B: Plants rare and endangered in California and throughout their range.
List 2A: Plants presumed extirpated in California, but more common elsewhere.
List 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.
List 3: Plants for which more information is needed.
List 4: Plants of limited distribution; a "watch list."
CA Endemic: Taxa that occur only in California

CNPS Threat Code:

.1 – Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Note: All List 1A (presumed extinct in California) and some List 3 (need more information- a review list) plants lacking any threat information receive no threat code extension. Also, these Threat Code guidelines represent a starting point in the assessment of threat level. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are also considered in setting the Threat Code.

CDFW CNDDB rankings: Animals
S1 = Extremely endangered: <6 viable occurrences or <1,000 individuals, or < 2,000 acres of occupied habitat
S2 = Endangered: about 6-20 viable occurrences or 1,000 – 3,000 individuals, or 2,000 to 10,000 acres of occupied habitat
S3 = Restricted range, rare: about 21-100 viable occurrences, or 3,000 – 10,000 individuals, or 10,000 – 50,000 acres of occupied habitat
S4 = Apparently secure; some factors exist to cause some concern such as narrow habitat or continuing threats
S5 = Demonstrably secure; commonly found throughout its historic range
SH = all sites are historical, this species may be extinct, further field work is needed

CDFW CNDDB rankings: Plants and Vegetation Communities
S1 = Less than 6 viable occurrences OR less than 1,000 individuals OR less than 2,000 acres
S1.1 = very threatened
S1.2 = threatened
S1.3 = no current threats known
S2 = 6-20 viable occurrences OR 1,000-3,000 individuals OR 2,000-10,000 acres
S2.1 = very threatened
S2.2 = threatened
S2.3 = no current threats known
S3 = 21-80 viable occurrences or 3,000-10,000 individuals OR 10,000-50,000 acres
S3.1 = very threatened
S3.2 = threatened
S3.3 = no current threats known
S4 = Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern;
i.e., there is some threat, or somewhat narrow habitat.
S5 = Demonstrably secure to ineradicable in California.

3.4.1 Special Status Plants

No sensitive plants were observed during the biological assessment survey. Table 1 lists sixteen (16) sensitive plants known from the general project vicinity, and most of these species would not be expected to occur on the project site due to lack of habitat, and unsuitable microhabitat characteristics. Only five (5) species have a low occurrence potential. These plants are listed in Table 1, and the reasons for their occurrence potential (or lack thereof) is described for each species in this table.

3.4.2 Special Status Habitats

No desert fan palm oasis woodlands were observed during the biological assessment survey. This habitat is distinctive and easily identifiable. The project alignment is in an area of residential and commercial development and would not be expected to support this vegetation community. Note that cultivated (planted) stands of California fan palm are not considered to belong to this vegetation community. This sensitive habitat is not present in the open areas adjacent to the project.

3.4.3 Special Status Insects

No sensitive insect species were observed on or around the project site during the assessment. The one (1) insect listed in the Table 3, Roberts' rhopalolemma bee (*Rhopalolemma robertsi*), is fairly rare and not expected to occur on the project alignment.

Due to this rarity and the lack of occurrence records in the vicinity of the project, it is WSP's opinion that this species is absent from the project area.

3.4.4 Special Status Reptiles

No special status reptiles were observed during the biological assessment survey Table 4 lists two sensitive reptile species that are known to occur in the region: red diamond rattlesnake (*Crotalus ruber*) and desert tortoise (*Gopherus agassizii*). A search of the current CNDDB online database revealed that there is a record from 1945 for red diamond rattlesnake from what is now the MCAGCC Visitor's Center parking lot and Adobe Road. This record may have been recorded incorrectly or could represent a displaced animal due to human development. Twentynine Palms is not located in the currently accepted range of this species, as red diamond rattlesnakes are supposed to reach their northeastern limit in the Morongo Valley and Pioneertown area. Due to the disturbed/developed nature of the project alignment and lack of suitable habitat, it is WSP's opinion that this species is absent from the project area. As stated previously, the project alignment is located in a largely developed residential and commercial area.

No desert tortoise sign (scat, burrows, carcasses, or tracks) or desert tortoises were observed on the project alignment or immediately adjacent areas during the general biological assessment. After an assessment of both the proposed bike path alignment and adjacent undeveloped areas, WSP biologists identified adjacent undeveloped areas (especially those on the south side that connect to largely untouched land), which contain (low) potential habitat capable of supporting desert tortoise. Therefore, it is WSP's opinion that this species has a low occurrence potential adjacent to the project area. Although it is highly unlikely to occur within the project alignment, we cannot completely rule out the possibility that this species may occur in the vicinity of the project If desert tortoise were to occur adjacent to the project alignment, they could potentially occur on-site since much of the site is not fenced and there are no physical barriers between the adjacent habitat and the site.

3.4.5 Special Status Birds

Neither of the two sensitive bird species listed in Table 4 were detected on the site. While there is potentially suitable habitat for Bendire's thrasher (*Toxostoma bendirei*), there were no available occurrence records found within the vicinity, and so this species was determined to be absent from the project site.

No burrowing owl sign (whitewash, pellets, or feathers) or burrowing owls were observed on the project alignment or immediately adjacent areas during the general biological assessment. Suitable habitat for the burrowing owl (*Athene cunicularia*) was present within immediately adjacent undeveloped areas. The open nature of the project site, and specifically, habitat found along the adjacent undeveloped areas provide (low) potential habitat for burrowing owls. In California, burrowing owls often occur in association with colonies of the California ground squirrel (*Otospermophilus beecheyi*) or other ground squirrel species, where they often make use of the squirrels' burrows. In southern California, burrowing owls are not only found in undisturbed natural areas, but also fallow agricultural fields, margins of active agricultural areas, berms and levees of flood control and creek

channels, livestock farms, airports, golf courses, and vacant lots. The burrowing owl has been designated a Candidate Species for Listing as an Endangered Species by CDFW, and is protected by the federal MBTA and the California Fish and Game Code. Due to their fossorial behavior, burrowing owls are subject to direct and indirect disturbance resulting from loud noise, vibrations and other human activities. Although it is highly likely that burrowing owl will not occur within the project alignment we cannot completely rule out the possibility that this species may occur in the vicinity.

3.4.6 Special Status Mammals

No sensitive mammal species were observed on or around the project site during the assessment. None of the five (5) mammals listed in Table 5 are expected to occur on the project alignment, apart from the low potentials for the pallid San Diego pocket mouse and various sensitive bat species discussed in the Table to occur and may have the potential to occasionally forage on-site and in adjacent areas. As stated previously, the project alignment is located in a largely developed residential and commercial area; and does not contain habitat to support roosting habitat for special status bat species. The proposed bike path alignment is along a paved city road, with cleared, and somewhat compacted dirt shoulders; and therefore, does not provide habitat for any of the species stated in Table 5.

3.4.7 Jurisdictional Drainage Features

No drainage features under the jurisdiction of the USACE, RWQCB, and CDFW were observed within the project alignment. There is evidence of historic flows on aerial imagery that were ground-truthed during the assessment. Based on the developed nature of the project alignment and the installation of either a curb and gutter system or graded road-side berms, there are no active drainage features within the project footprint and therefore regulatory permits will not be required.

4.0 DISCUSSION

4.1 Potential Impacts of the Proposed Project

4.1.1 Potential Impacts to Federally Listed Endangered or Threatened Species or Listed Critical Habitat

Based on the results of this biological resource assessment, WSP has determined that development of the proposed project may have adverse effects on desert tortoise and burrowing owl, if present. No other federally listed endangered or threatened species, proposed endangered or threatened species, federally designated critical habitats, or to state-designated listed or sensitive species potentially occur on-site. Due to the low potential for occurrence, construction activities may proceed without protocol-level surveys, but will require additional avoidance and minimization measures discussed below.

4.1.2 Potential Impacts to Nesting Birds

All native birds are protected while nesting under the federal MBTA. Grading and other project activities have the potential to impact nesting birds, including in those areas containing open ground.

4.2 Suggested Impact Avoidance Measures

Due to the low potential for desert tortoise, burrowing owl, and nesting birds, WSP recommends a Worker Environmental Awareness Program be completed prior to any construction activities. The purpose of this training is to inform the construction crews of the importance of avoiding these sensitive natural resources and the penalties associated with direct impacts during construction. The training will provide a hand-out with photographs of the special status species, the key characteristics on how to identify them, and how to report any sightings.

Because the area adjacent to the project alignment contains potentially suitable habitat for burrowing owls, CDFW recommends two take avoidance burrowing owl surveys for the project. These “pre-construction” surveys ensure that no owls have occupied the site subsequent to this report. The CDFW recommends that the first survey take place between 14 and 30 days prior to ground disturbance, and the second survey within 24 hours of any ground-breaking activities. The survey area includes all suitable habitat within the project alignment, plus any additional workspace areas and a 500-foot buffer area where accessible. The second survey is typically completed the morning prior to completing the WEAP training.

Pre-construction surveys for desert tortoise typically require a one-time clearance survey immediately prior to any ground disturbance or vegetation removal. The desert tortoise clearance survey can be completed in concert with the burrowing owl pre-construction surveys. WSP recommends installation of a perimeter fence to identify the limits of construction to minimize the project impact footprint to the smallest extent feasible.

To comply with the MBTA, any vegetation removal, or grading or other site disturbance occurring between February 1 to August 31 and having the potential to impact nesting birds shall require a qualified biologist to conduct at least one nesting bird survey, and more if deemed necessary by the consulting biologist, ending no less than 3 days prior to grading. All vegetation and suitable nesting habitat (including open ground) on the project site, whether or not it will be removed or disturbed, shall be surveyed for nesting birds. If active nests of any native birds are found on the site, they will be avoided until after the young have fledged. If there are no nests present, ground disturbance activities can move forward. Conducting construction activities outside the breeding season (September 1 through January 31) can avoid having to implement these measures, although even non-occupied raptor nests are protected under *Section 3505.5 of the State Fish and Game Code* and permission must be granted by CDFW to remove them. These pre-construction nesting bird surveys can also be conducted in concert with the burrowing owl and desert tortoise pre-construction surveys.

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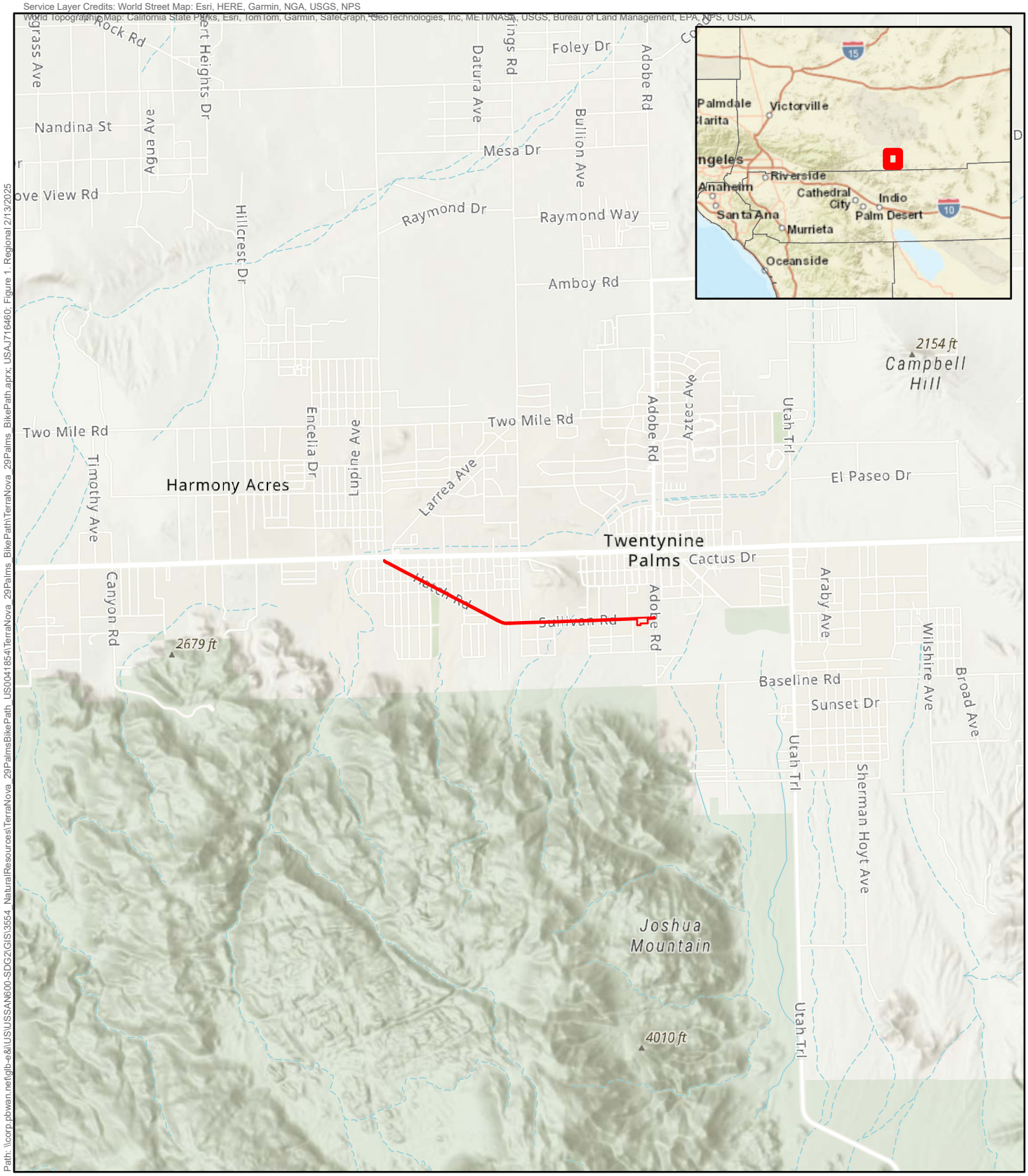
Appendix A

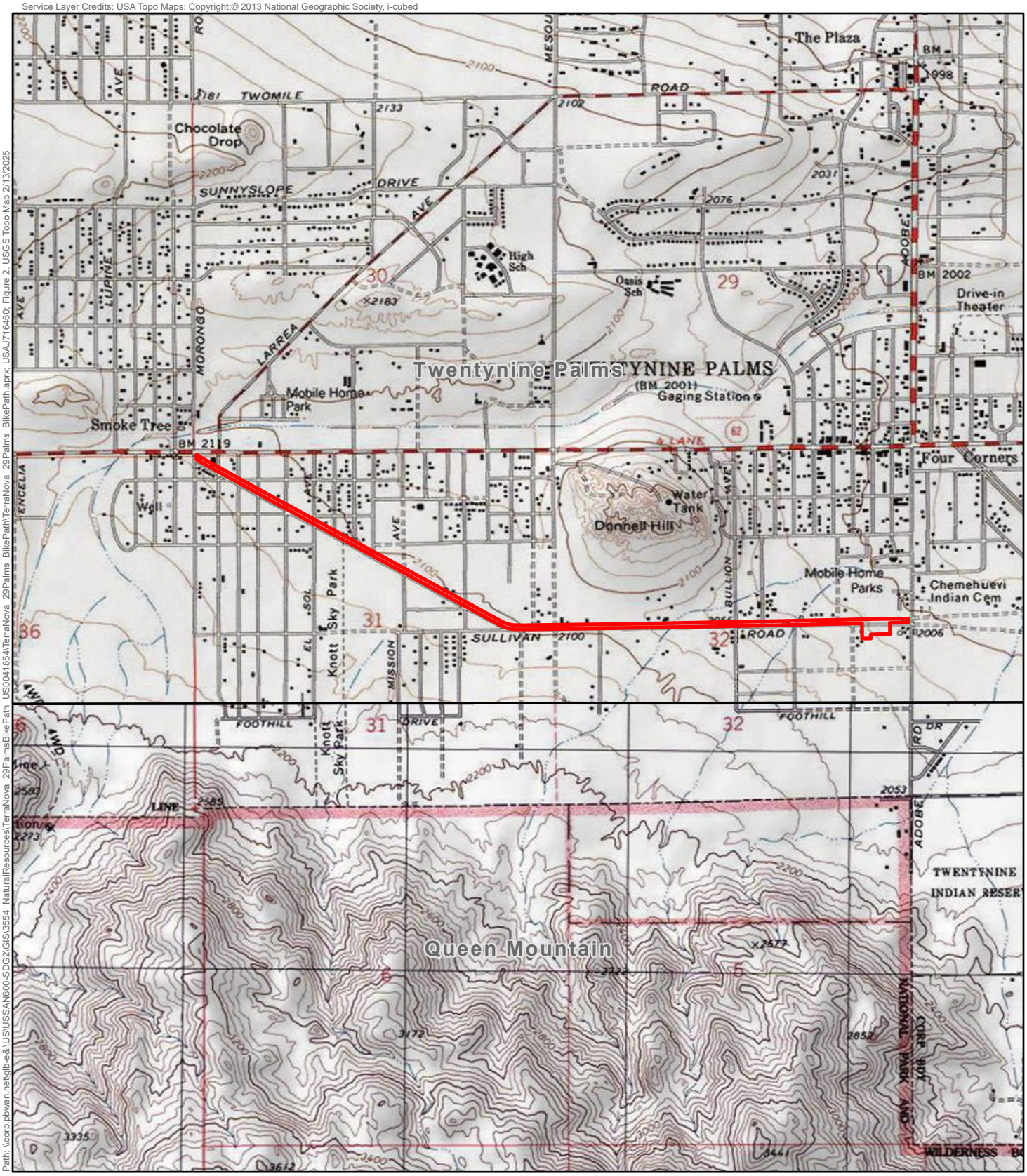
FIGURES AND MAPS



Project Area

FIGURE 1

Regional Location
Twentynine Palms
Hatch and Sullivan Bike Path Project
San Bernardino County, CA

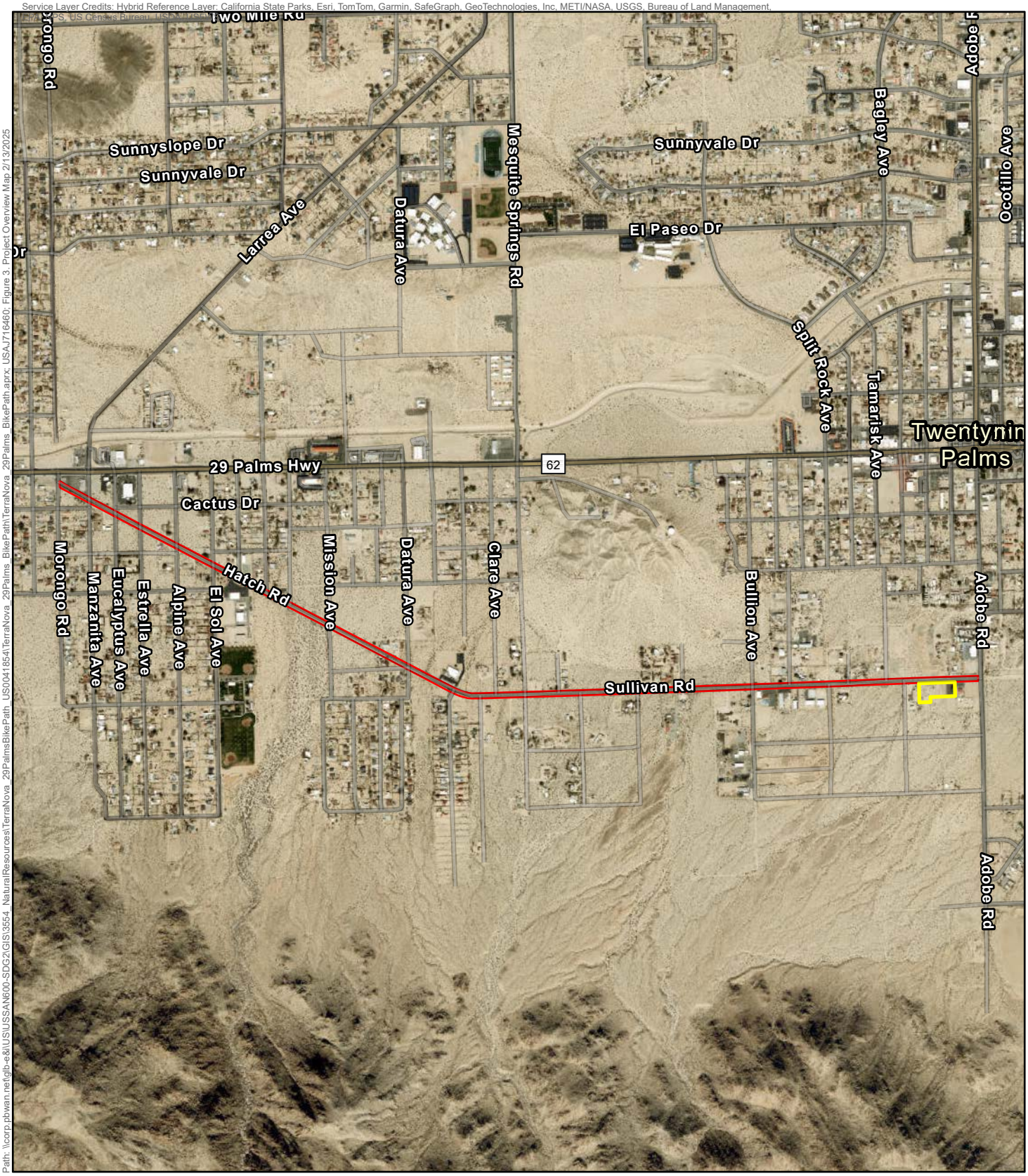


1 inch =2,000 feet
0 1,000 2,000 Feet

Project Area

FIGURE 2

USGS 7.5' Topo Quad: Twentynine Palms
Twentynine Palms
Hatch and Sullivan Bike Path Project
San Bernardino County, CA



1 inch = 1,557 feet
0 750 1,500 Feet

Project Area
Potential Staging Area

FIGURE 3

Project Overview Map
Twentynine Palms
Hatch and Sullivan Bike Path Project
San Bernardino County, CA

1 inch = 300 feet
0 150 300
Feet

Project Area
Developed/Disturbed
Creosote Bush Scrub

FIGURE 4a

Vegetation Communities
Twentynine Palms
Hatch and Sullivan Bike Path Project
San Bernardino County, CA

Project Area

Developed/Disturbed

Creosote Bush Scrub

FIGURE 4b

Vegetation Communities
Twentynine Palms
Hatch and Sullivan Bike Path Project
San Bernardino County, CA

Project Area

Developed/Disturbed

Creosote Bush Scrub

FIGURE 4c

Vegetation Communities
Twentynine Palms
Hatch and Sullivan Bike Path Project
San Bernardino County, CA

1 inch = 300 feet
0 150 300
Feet

Project Area
Developed/Disturbed
Creosote Bush Scrub

FIGURE 4d

Vegetation Communities
Twentynine Palms
Hatch and Sullivan Bike Path Project
San Bernardino County, CA

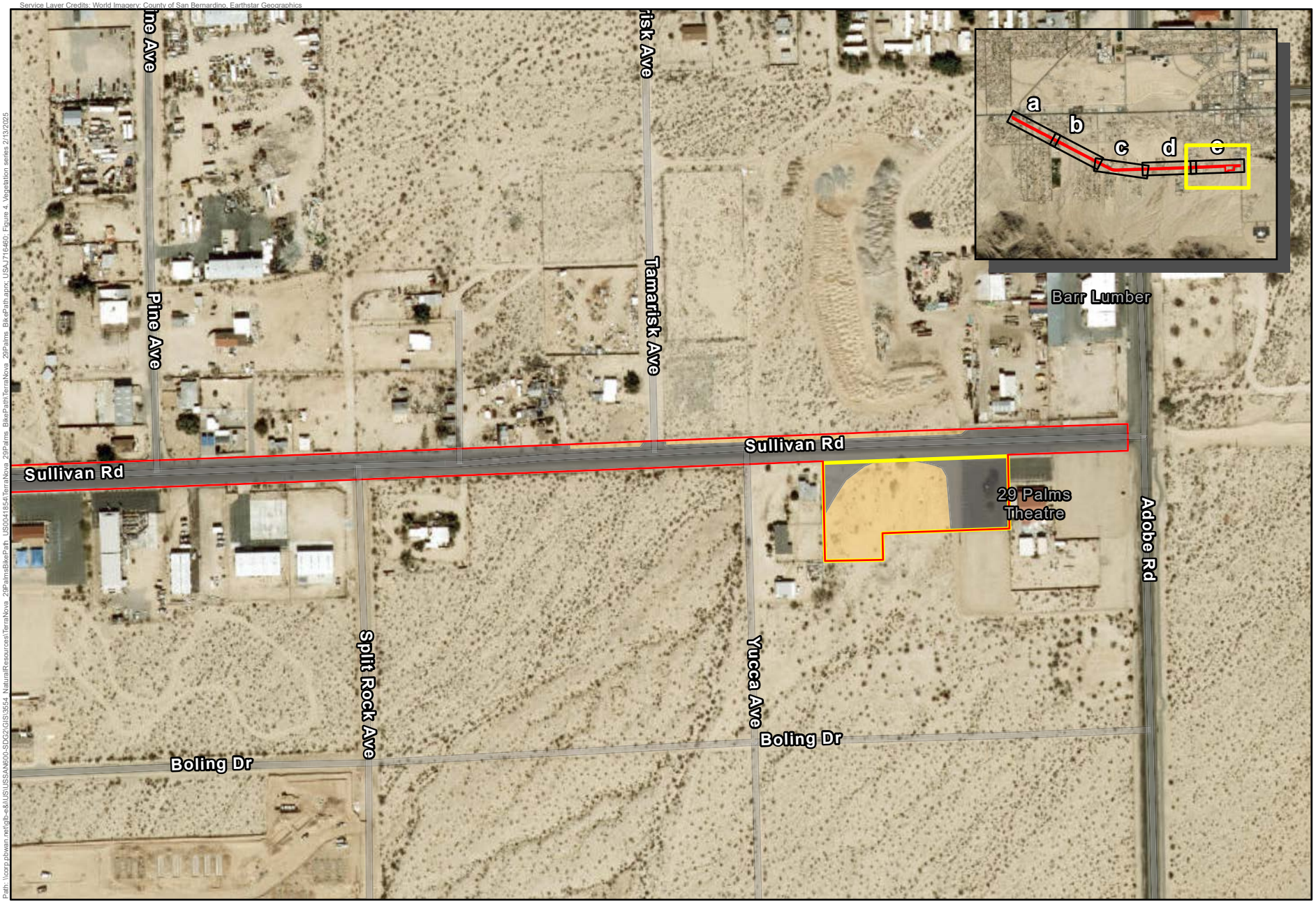
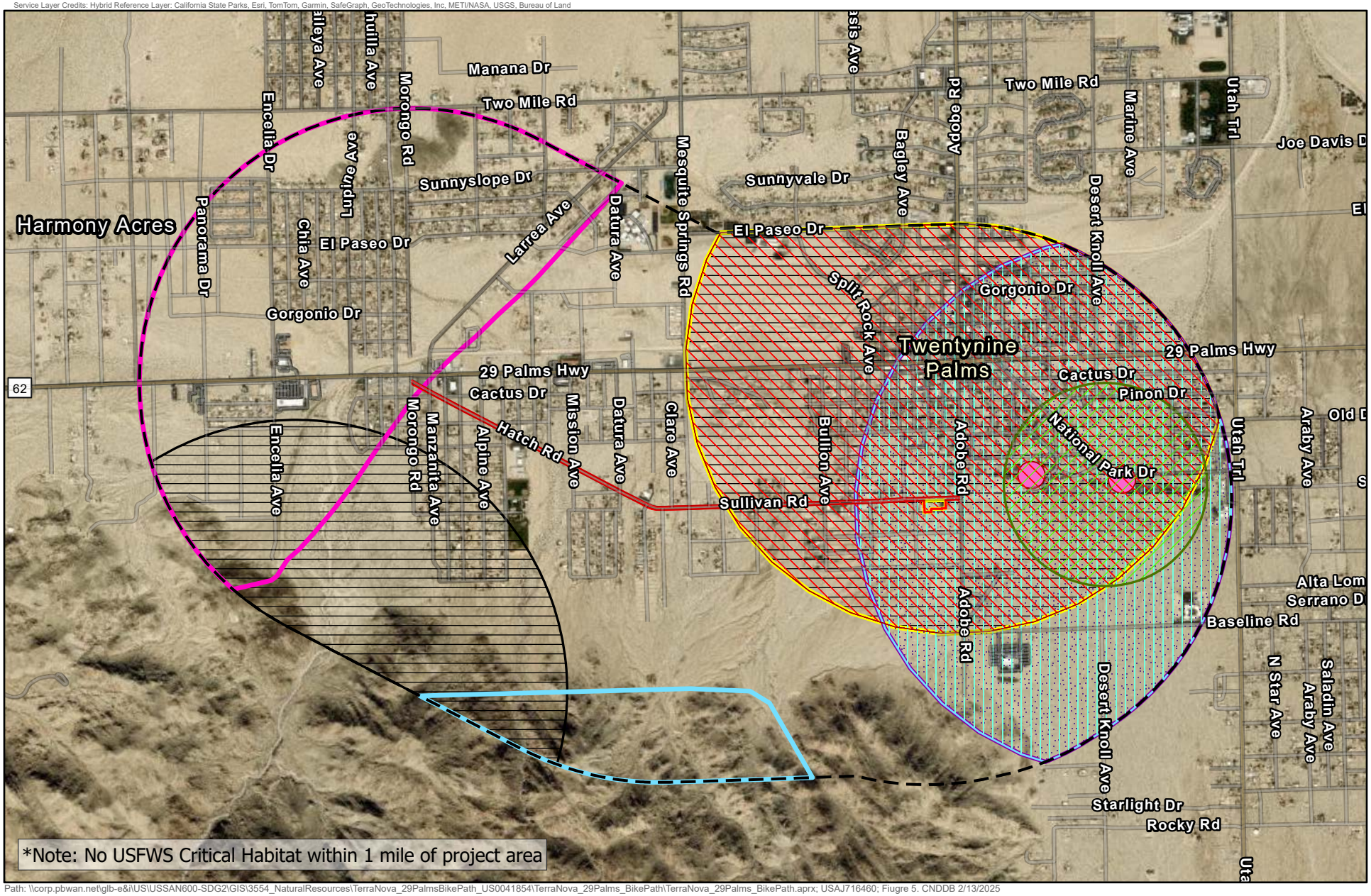


FIGURE 4e

Vegetation Communities
Twentynine Palms
Hatch and Sullivan Bike Path Project
San Bernardino County, CA



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- Desert bighorn sheep
- Desert tortoise
- Pallid San Diego pocket mouse
- Spotted bat, western yellow bat
- Coulter's goldfields
- Mojave beardtongue, alkali mariposa-lily, Laguna Mountains jewelflower
- Jackass-clover
- Salt spring checkerbloom
- Desert Fan Palm Oasis Woodland
- Project Area
- Potential Staging Area
- 1-Mile Buffer of Project Area

1 inch =1 mile
0 0.25 0.5 Miles

FIGURE 5

CNDDB Occurrences and USFWS Critical Habitat
Twentynine Palms
Hatch and Sullivan Bike Path Project
San Bernardino County, CA

Appendix B

PHOTOGRAPHS OF THE PROJECT SITE

Figure 1. Looking southeast on Hatch Rd from Morongo Rd.

Figure 2. Looking southeast on Hatch Rd from Morongo Rd, depicting another view from the southern shoulder.

Figure 3. Looking east from Hatch Rd, depicting a view of the northern adjacent undeveloped area between Manzanita Ave and Eucalyptus Ave.

Figure 4. Looking northeast from Hatch Rd, depicting a view of the northern adjacent undeveloped area between Manzanita Ave and Eucalyptus Ave.

Figure 5. Looking south/southeast from Hatch Rd, depicting the cleared dirt shoulder and the southern adjacent undeveloped area between Manzanita Ave and Eucalyptus Ave.

Figure 6. Looking west/southwest from Hatch Rd, depicting a view of the southern adjacent undeveloped area between Eucalyptus Ave and Estrella Ave.

Figure 7. Looking southwest from Hatch Rd, depicting a view of the southern adjacent undeveloped area between Eucalyptus Ave and Estrella Ave.

Figure 8. Looking south from Hatch Rd, depicting a view of the southern adjacent undeveloped area between Eucalyptus Ave and Estrella Ave.

Figure 9. Looking west/northwest on Hatch Rd, depicting the view of the project alignment between Eucalyptus Ave and Estrella Ave.

Figure 10. Looking east/southeast on Hatch Rd, depicting the view of the project alignment between Eucalyptus Ave and Estrella Ave.

Figure 11. Looking east/southeast on Hatch Rd, depicting a view of the previously improved shoulder along the project alignment.

Figure 12. Looking southwest from Hatch Rd, depicting a view of the southern adjacent undeveloped area between El Sol Ave and Mission Ave.

Figure 13. Looking southeast on Hatch Rd, depicting a view of the southern shoulder at La Buena Tierra Ave.

Figure 14. Looking southeast on Hatch Rd, depicting a view of the northern shoulder at La Buena Tierra Ave.

Figure 15. Looking west on Sullivan Rd, depicting a view of the project alignment at Clare Ave.

Figure 16. Looking east from Sullivan Rd, depicting a view of the northern adjacent undeveloped area between Margot Ave and Bullion Ave.

Figure 17. Looking northeast from Sullivan Rd, depicting a view of the northern adjacent undeveloped area between Margot Ave and Bullion Ave.

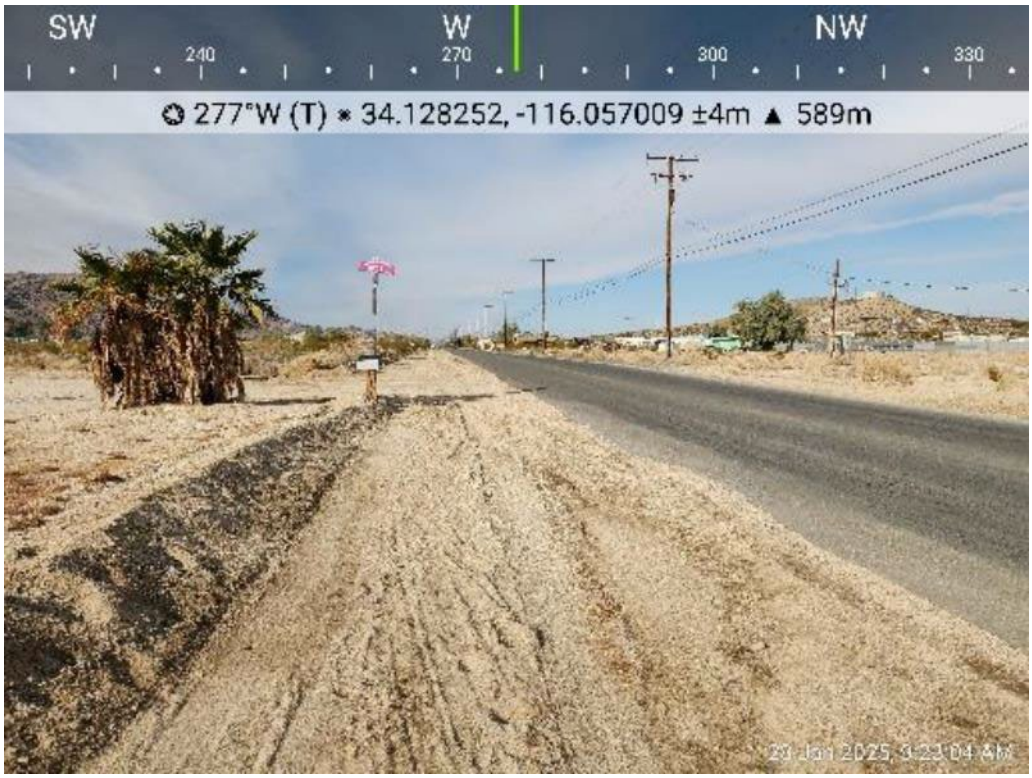

Figure 18. Looking west on Sullivan Rd, depicting a view of the project alignment at Tamarisk Ave.

Figure 19. Looking south/southwest, depicting a view of the southern adjacent undeveloped area between Split Rock Ave and Tamarisk Ave.

Figure 20. Depicting old wood rat midden (nest remnants) found adjacent to the project alignment.

Figure 21. Looking west from Adobe Rd towards Sullivan Rd, depicting a view of the project alignment.

Figure 22. Looking west from Adobe Rd towards Sullivan Rd, depicting a view of the project alignment.

Figure 23. Looking southwest from Sullivan Rd, depicting a view of the site for the proposed staging yard.

Figure 24. Looking southwest from the parking lot portion of the proposed staging yard, depicting a view of the adjacent disturbed undeveloped area.

Figure 25. Looking south from the parking lot portion of the proposed staging yard, depicting a view of the adjacent disturbed undeveloped area.

Figure 26. Looking west from the parking lot portion of the proposed staging yard, depicting a view of the other portion, an adjacent disturbed undeveloped area.

Figure 27. Looking northwest from the parking lot portion of the proposed staging yard, depicting a view of the other portion, an adjacent disturbed undeveloped area.

Figure 28. Looking west on Hatch Rd, depicting a view of the previously improved shoulders section on the project alignment.

Appendix C

PLANTS AND VERTEBRATE SPECIES OBSERVED ON-SITE

Flora Compendia

Apocynaceae		**Dogbane Family**
Asclepias	*sp.*	unknown milkweed
Asteraceae		**Sunflower Family**
Ambrosia	*acanthicarpa*	annual burrweed
Ambrosia	*dumosa*	burro weed
Ambrosia	*salsola*	burrobrush
Bebbia	*juncea*	sweetbush
Encelia	*farinosa*	brittlebush
Boraginaceae		**Borage Family**
Amsinckia	*tessellata*	Devil's lettuce
Brassicaceae		**Mustard Family**
Lepidium	*sp.*	unknown pepperweed sp.
Cactaceae		**Cactus Family**
Cylindropuntia	*echinocarpa*	silver cholla
Cylindropuntia	*ramosissima*	branched pencil cholla
Cylindropuntia	*sp.*	unknown cholla sp.
Opuntia	*basilaris var. basilaris*	beavertail cactus
Opuntia	*littoralis*	prickly pear
Chenopodiaceae		**Goosefoot Family**
Atriplex	*polycarpa*	allscale saltbush
Salsola	*tragus*	Russian thistle
Cleomaceae		**Spider Flower Family**
Peritoma	*arborea*	bladderpod
Euphorbiaceae		**Spurge Family**
Euphorbia	*sp.*	unknown spurge sp.
Fabaceae		**Legume Family**
Acacia	*sp.*	unknown acacia sp.
Parkinsonia	*aculeata*	Mexican palo verde
Parkinsonia	*florida*	blue palo verde
Prosopis	*glandulosa*	honey mesquite
Psorothamnus	*spinosus*	smoke tree
Senegalia	*greggii*	catclaw
Senna	*armata*	desert senna
Fouquieriaceae		**Ocotillo Family**
Fouquieria	*splendens*	ocotillo
Lamiaceae		**Mint Family**
Condea	*emoryi*	desert lavender
Loasaceae		**Loasa Family**
Petalonyx	*thurberi ssp. thurberi*	Thurber's sandpaper plant

Flora Compendia

Myrtaceae		**Myrtle Family**
Eucalyptus	*sp.*	unknown eucalyptus sp.
Polygonaceae		**Buckwheat Family**
Eriogonum	*inflatum*	desert trumpet
Eriogonum	*sp.*	unknown buckwheat sp.
Simmondsiaceae		**Jojoba Family**
Simmondsia	*chinensis*	Jojoba
Solanaceae		**Nightshade Family**
Physalis	*crassifolia*	thick leaved groundcherry
Solanum	*sp.*	nightshade
Tamaricaceae		**Tamarisk Family**
Tamarix	*sp.*	unknown tamarisk sp.
Viscaceae		**Mistletoe Family**
Phoradendron	*californicum*	mequite mistletoe
Zygophyllaceae		**Caltrop Family**
Larrea	*tridentata*	creosote bush
Agavaceae		**Agave Family**
Yucca	*brevifolia*	Joshua tree
Yucca	*schidigera*	Mohave yucca
Arecaceae		**Palm Family**
Washingtonia	*robusta*	Mexican fan palm
Poaceae		**Grass Family**
Cynodon	*dactylon*	Bermuda grass
Hilaria	*rigida*	big galleta
Schismus	*barbatus*	old han schismus

Fauna Compendium

Columbidae		**Pigeons/Doves**
Columba	*livia*	rock pigeon
Zenaida	*macroura*	mourning dove
Tyrannidae		**Flycatchers**
Sayornis	*saya*	Say's phoebe
Corvidae		**Jays/Crows**
Corvus	*corax*	common raven
Troglodytidae		**Wrens**
Campylorhynchus	*brunneicapillus*	cactus wren
Mimidae		**Mockingbirds/Thrashers**
Mimus	*polyglottos*	northern mockingbird
Prilogonatidae		**Silky-flycatchers**
Phainopepla	*nitens*	phainopepla
Fringillidae		**Finches**
Haemorhous	*mexicanus*	house finch
Muridae		**Mice, Rats, and Voles**
Neotoma	*lepida*	desert woodrat

Appendix D

CNDDB/CNSPEI/IPAC Reports

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE **RareFind**

Query Summary:
Quad IS (Twentynine Palms (3411621) OR Twentynine Palms Mtn. (3411518) OR Queen Mtn. (3411611) OR Valley Mtn. (3411528))

Print Close

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Astragalus bernardinus	San Bernardino milk-vetch	Dicots	PDFAB0F190	42	2	None	None	G3	S3	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Joshua tree woodland, Limestone, Pinon & juniper woodlands
Athene cunicularia	burrowing owl	Birds	ABNSB10010	2058	1	None	Candidate Endangered	G4	S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Coastal prairie, Coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley & foothill grassland
Ayenia compacta	California ayenia	Dicots	PDSTE01020	74	1	None	None	G4	S3	2B.3	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Desert wash, Mojavean desert scrub, Sonoran desert scrub
Calochortus striatus	alkali mariposa-lily	Monocots	PMLIL0D190	113	1	None	None	G3	S2S3	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Chaparral, Chenopod scrub, Meadow & seep, Mojavean desert scrub, Wetland
Chaetodipus fallax pallidus	pallid San Diego pocket mouse	Mammals	AMAFD05032	79	2	None	None	G5T3T4	S3S4	null	null	Desert wash, Pinon & juniper woodlands, Sonoran desert scrub
Crotalus ruber	red-diamond rattlesnake	Reptiles	ARADE02090	192	1	None	None	G4	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Chaparral, Mojavean desert scrub, Sonoran desert scrub
Desert Fan Palm Oasis Woodland	Desert Fan Palm Oasis Woodland	Riparian	CTT62300CA	80	2	None	None	G3	S3.2	null	null	Riparian woodland
Escobaria alversonii	Alverson's foxtail cactus	Dicots	PDCAC0X060	55	3	None	None	G3	S3	4.3	null	Mojavean desert scrub, Sonoran desert scrub
Euderma maculatum	spotted bat	Mammals	AMACC07010	68	1	None	None	G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	null

Gopherus agassizii	desert tortoise	Reptiles	ARAAF01012	988	5	Threatened	Threatened	G3	S2S3	null	IUCN_CR-Critically Endangered	Joshua tree woodland, Mojavean desert scrub, Sonoran desert scrub
Grusonia parishii	Parish's club-cholla	Dicots	PDCAC0D2H0	45	3	None	None	G3G4	S2	2B.2	null	Joshua tree woodland, Mojavean desert scrub, Sonoran desert scrub
Jaffueliobryum wrightii	Wright's jaffueliobryum moss	Bryophytes	NBMUS97020	21	1	None	None	G5	S2S3	2B.3	null	Alpine dwarf scrub, Limestone, Mojavean desert scrub, Pinon & juniper woodlands
Lasiurus cinereus	hoary bat	Mammals	AMACC05032	238	1	None	None	G3G4	S4	null	IUCN_LC-Least Concern	Broadleaved upland forest, Cismontane woodland, Lower montane coniferous forest, North coast coniferous forest
Lasiurus xanthinus	western yellow bat	Mammals	AMACC05070	58	1	None	None	G4G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Desert wash
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	Dicots	PDAST5L0A1	109	1	None	None	G4T2	S2	1B.1	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden	Alkali playa, Marsh & swamp, Salt marsh, Vernal pool, Wetland
Matelea parvifolia	spear-leaf matelea	Dicots	PDASC0A0J0	68	2	None	None	G5	S3	2B.3	USFS_S-Sensitive	Mojavean desert scrub, Sonoran desert scrub
Menodora spinescens var. mohavensis	Mojave menodora	Dicots	PDOLE09061	13	1	None	None	G4T2	S2	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Mojavean desert scrub
Monardella robisonii	Robison's monardella	Dicots	PDLAM180K0	37	4	None	None	G3	S3	1B.3	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Pinon & juniper woodlands
Ovis canadensis nelsoni	desert bighorn sheep	Mammals	AMALE04013	46	1	None	None	G4T3	S3	null	BLM_S-Sensitive, CDFW_FP-Fully Protected, USFS_S-Sensitive	Alpine, Alpine dwarf scrub, Chaparral, Chenopod scrub, Great Basin scrub, Mojavean desert scrub, Montane dwarf scrub, Pinon & juniper woodlands, Riparian woodland, Sonoran desert scrub
Penstemon clevelandii var. mohavensis	Mojave beardtongue	Dicots	PDSCR1L1D3	31	4	None	None	G5T3?	S2	1B.2	null	Mojavean desert scrub, Pinon

												& juniper woodlands
Rhopalolemma robertsi	Roberts' rhopalolemma bee	Insects	IIHYM83010	1	1	None	None	G1	S1	null	null	null
Saltugilia latimeri	Latimer's woodland-gilia	Dicots	PDPLM0H010	60	1	None	None	G3	S3	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_USDA-US Dept of Agriculture, USFS_S-Sensitive	Chaparral, Limestone, Mojavean desert scrub, Pinon & juniper woodlands
Sidalcea neomexicana	salt spring checkerbloom	Dicots	PDMAL110J0	30	1	None	None	G4	S2	2B.2	USFS_S-Sensitive	Alkali playa, Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Wetland
Streptanthus bernardinus	Laguna Mountains jewelflower	Dicots	PDBRA2G060	22	1	None	None	G3G4	S3S4	4.3	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest
Toxostoma bendirei	Bendire's thrasher	Birds	ABPBK06050	68	3	None	None	G4	S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFWS_BCC-Birds of Conservation Concern	Joshua tree woodland, Mojavean desert scrub
Wislizenia refracta ssp. refracta	jackass-clover	Dicots	PDCPP09013	6	1	None	None	G5T5?	S1	2B.2	null	Alkali playa, Desert dunes, Desert wash, Mojavean desert scrub, Sonoran desert scrub

CNPS Rare Plant Inventory

Search Results

23 matches found. Click on scientific name for details

Search Criteria: , Quad is one of [3411518:3411621:3411611:3411528]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Allium parishii	Parish's onion	Alliaceae	perennial bulbiferous herb	Apr-May	None	None	G3	S3	4.3		1974-01-01	 © 2010 Justin M. Wood
Aloysia wrightii	Wright's beebrush	Verbenaceae	perennial evergreen shrub	Apr-Oct	None	None	G5	S4	4.3		2001-01-01	 © 2010 James M. Andre
Astragalus bernardinus	San Bernardino milk-vetch	Fabaceae	perennial herb	Apr-Jun	None	None	G3	S3	1B.2	Yes	2011-02-16	No Photo Available
Ayenia compacta	California ayenia	Malvaceae	perennial herb	Mar-Apr	None	None	G4	S3	2B.3		1974-01-01	No Photo Available
Calochortus striatus	alkali mariposa-lily	Liliaceae	perennial bulbiferous herb	Apr-Jun	None	None	G3	S2S3	1B.2		1974-01-01	No Photo Available
Castilleja montigena	Heckard's paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	May-Aug	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available

Eschscholzia androuxii	Joshua Tree poppy	Papaveraceae	annual herb	Feb-May(Jun)	None	None	G3	S3	4.3		2014-12-17	No Photo Available
Escobaria alversonii	Alverson's foxtail cactus	Cactaceae	perennial stem	Apr-Jun(Sep-Oct)	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available
Funastrum utahense	Utah vine milkweed	Apocynaceae	perennial herb	(Mar)Apr-Jun(Sep-Oct)	None	None	G4	S4	4.2		1980-01-01	 © 2004 James M. Andre
Galium angustifolium ssp. *gracillimum*	slender bedstraw	Rubiaceae	perennial herb	Apr-Jun(Jul)	None	None	G5T4	S4	4.2	Yes	1994-01-01	 © 2011 Duncan S. Bell
Grusonia parishii	Parish's club-cholla	Cactaceae	perennial stem	May-Jun(Jul)	None	None	G3G4	S2	2B.2		2007-03-20	 © 2012 James M. Andre
Jaffueliobryum wrightii	Wright's jaffueliobryum moss	Grimmiaceae	moss		None	None	G5	S2S3	2B.3		2014-05-15	No Photo Available
Johnstonella costata	ribbed cryptantha	Boraginaceae	annual herb	Feb-May	None	None	G4G5	S4	4.3		1974-01-01	No Photo Available
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	Asteraceae	annual herb	Feb-Jun	None	None	G4T2	S2	1B.1		1994-01-01	 © 2013 Keir Morse
Matelea parvifolia	spear-leaf matelea	Apocynaceae	perennial herb	Mar-May(Jul)	None	None	G5	S3	2B.3		1974-01-01	No Photo Available

Menodora spinescens var. *mohavensis*	Mojave menodora	Oleaceae	perennial deciduous shrub	Apr-May	None	None	G4T2	S2	1B.2	Yes	2011-08-17	No Photo Available
Monardella robisonii	Robison's monardella	Lamiaceae	perennial rhizomatous herb	(Feb)Apr-Sep(Oct)	None	None	G3	S3	1B.3	Yes	1974-01-01	No Photo Available
Penstemon clevelandii var. *mohavensis*	Mojave beardtongue	Plantaginaceae	perennial herb	Mar-May	None	None	G5T3?	S2	1B.2		2022-11-28	 © 2018 Lisa Schauer
Saltugilia latimeri	Latimer's woodland-gilia	Polemoniaceae	annual herb	Mar-Jun	None	None	G3	S3	1B.2	Yes	2004-01-01	No Photo Available
Sidalcea neomexicana	salt spring checkerbloom	Malvaceae	perennial herb	Mar-Jun	None	None	G4	S2	2B.2		1994-01-01	No Photo Available
Streptanthus bernardinus	Laguna Mountains jewelflower	Brassicaceae	perennial herb	May-Aug	None	None	G3G4	S3S4	4.3	Yes	1980-01-01	No Photo Available
Tetracoccus hallii	Hall's tetracoccus	Picrodendraceae	perennial deciduous shrub	Jan-May	None	None	G4	S4	4.3		2001-01-01	No Photo Available
Wislizenia refracta ssp. *refracta*	jackass-clover	Cleomaceae	annual herb	Apr-Nov	None	None	G5T5?	S1	2B.2		1994-01-01	No Photo Available

Showing 1 to 23 of 23 entries

Go to top

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IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

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

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

Location

San Bernardino County, California

Local office

Carlsbad Fish And Wildlife Office

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

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

Endangered species

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

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

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

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

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

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

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

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

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

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

Reptiles

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

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Critical habitats

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

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31

Probability of Presence Summary

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

Probability of Presence (■)

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

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

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

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

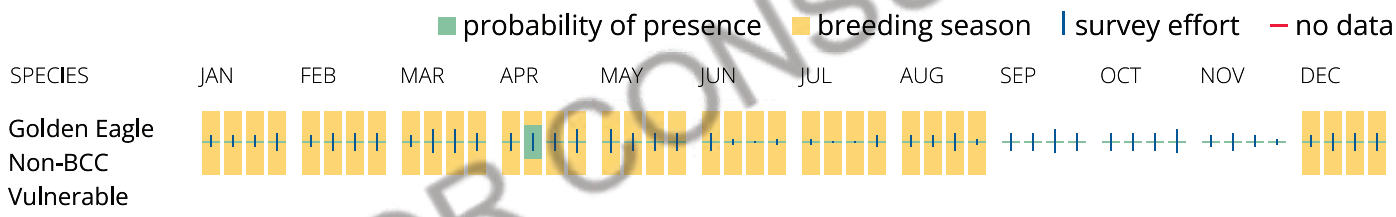
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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

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

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

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



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report
On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help

you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

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

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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

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

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

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

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
American Avocet Recurvirostra americana This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 21 to Aug 10
California Thrasher Toxostoma redivivum This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Costa's Hummingbird Calypte costae This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9470	Breeds Jan 15 to Jun 10
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Lawrence's Goldfinch Spinus lawrencei This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Leconte"s Thrasher Toxostoma lecontei This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8969	Breeds Feb 15 to Jun 20
Western Grebe aechmophorus occidentalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31

Probability of Presence Summary

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

Probability of Presence (▪)

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

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

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

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

Breeding Season (▪)

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

Survey Effort (|)

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

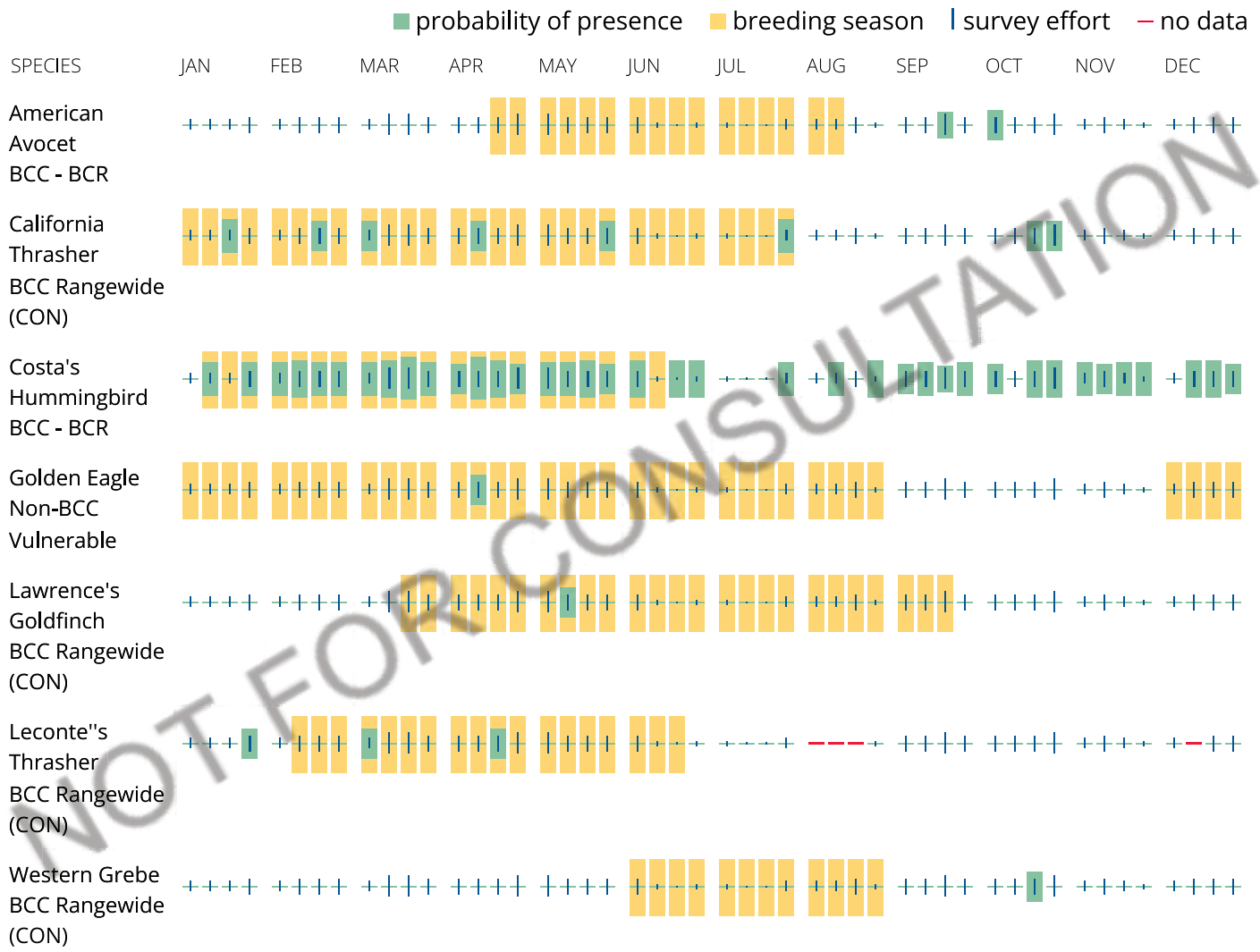
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

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



Migratory Bird FAQs

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

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

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

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

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

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

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

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

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

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

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

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

Details about birds that are potentially affected by offshore projects

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

Proper interpretation and use of your migratory bird report

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

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

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Facilities

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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

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

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

This location overlaps the following wetlands:

RIVERINE

R4SBJ

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

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

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

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

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

Data exclusions

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

Data precautions

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