Appendix A1

Biological Resources Letter Report

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Jacumba Fire Station Project
Biological Resources Letter Report

Jacumba, San Diego County, California

1.0 INTRODUCTION

Blackhawk Environmental, Inc. (Blackhawk) was contracted by Ascent Environmental to conduct a literature review, perform baseline biological and aquatic resources assessment surveys, assess existing conditions, gauge special-status species habitat suitability and provide a biological resources letter report for a 5-acre property in support of the proposed County of San Diego Department of General Services Fire Authority – Jacumba Station #43 Project (Project). The proposed Project includes a new fire station, parking lot and associated facilities of the fire station on an approximately 2.77-acre portion of the 5-acre property (Project Site). This report summarizes the existing biological conditions of the Project site.

To assess the existing conditions of the property, Blackhawk first determined if special-status plant and wildlife species occur or have potential to occur within the Project area. This report describes the results of the literature evaluation, habitat assessment and aquatic resources assessment tasks completed on the approximately 5-acre property and associated 100-foot buffer (Survey Area). The habitat assessment focused on determining the presence or potential for occurrence of sensitive biological resources required for review under the California Environmental Quality Act (CEQA) review process.

The Project footprint was reduced from 5.01 acres to 2.77 acres following the completion of this habitat and aquatic resources assessment, as well as the focused burrowing owl (*Athena cunicularia*) and Quino checkerspot butterfly (*Euphydras editha quino*) surveys.

2.0 PROJECT SETTING

The Project site is located in the unincorporated community of Jacumba in the southeast corner of the County of San Diego, California. The site is situated immediately north of Old Highway 80, east of Laguna Street, and approximately 0.36 miles north of the international border fence that separates the United States from Mexico (Attachment A, Figure 1).

The Project site is mostly flat and vegetated by non-native grassland throughout, with grading lines showing evidence of past agricultural use within the property. Elevations on the site range slightly from

2796 above mean sea level (amsl) along the southern border to 2800 feet amsl along the northern border. The Project site is open to natural areas to the north, west and east and is bounded by Old Highway 80 to the south. Undeveloped lands continue south of Old Highway 80, as well as to the north and east. Developed lands consisting of a trailer park occur to the west.

3.0 METHODS

3.1 Literature Review

Blackhawk Environmental conducted a database review consisting of a query of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2024), the United States Fish & Wildlife Service (USFWS) Information for Planning and Consultation (IPAC) database (USFWS 2024a), the USFWS Critical Habitat Portal (USFWS 2024b), and the California Native Plant Society's (CNPS) Rare Plant Inventory (CNPS 2024). A 2-mile radius surrounding the Project site was reviewed in the CNDDB and Critical Habitat Portal. For the CNPS Rare Plant Inventory, the query focused on the US Geological Service (USGS) 7.5' *Jacumba* quadrangle in which the Project site is located. The CNDDB contains records of reported occurrences of federal- and state-listed species, proposed endangered or threatened species, federal Birds of Conservation Concern, California Species of Special Concern (SSC), or otherwise sensitive species or communities that may occur within and/or in the vicinity of a given project. This database and literature review were used to provide details on special-status species that have a potential to occur within the Project site prior to conducting the habitat assessment. Additionally, County of San Diego Planning & Development Services provided Blackhawk a list of County sensitive species requiring analysis for the Project. All species from the database query and County list are included in Tables 3 and 4 in Section 4.2.3 below.

Reviews of the USFWS National Wetlands Inventory (NWI, USFWS 2024c) and the USGS National Hydrography Dataset (NHD, USGS 2024) were also conducted to assess any aquatic features within the Survey Area.

Utilizing the background data described above, Blackhawk Environmental biologists Seth Reimers and Hayley Milner conducted a field survey on March 13, 2024, to assess the Project site for its existing conditions and to assess its capacity to potentially harbor sensitive biological resources identified in the literature review (target species). Furthermore, species specific assessments for target species were done before/during/after subsequent field survey visits for Quino checkerspot butterfly, burrowing owl, and sensitive plant species to determine presence/absence or their potential to occur.

3.2 Habitat Assessment and Aquatic Resources Mapping

The habitat assessment was conducted on March 13, 2024. Blackhawk biologists Seth Reimers and Hayley Milner performed a pedestrian survey of the entire 5-acre property. Methods included walking belt transects spaced approximately five to 15 meters apart in addition to meandering transects. Where appropriate, the biologist paused at select vantage points to provide full visual coverage of the Project site. During the field survey, all plant and wildlife species observed or detected were recorded in field notebooks. Binoculars were used as needed to identify wildlife species. Plant species observed were identified to species level when feasible according to the nomenclature in The Jepson Manual: Vascular Plants of California Edition 2 (2012). Vegetation communities were described according to dominant plant(s) species and annotated on high-resolution aerial photographs of the

Project Area for GIS interpolation (Figure 4). The habitat assessment did not include focused or protocol level surveys for any sensitive plant or wildlife species; however, data collected during focused surveys for Quino checkerspot butterfly and burrowing owl are included in this report. Representative photos of the Project site, habitats and existing site conditions are included in Attachment B. Table 1 details the survey conditions during the habitat assessment and aquatic resources surveys.

Table 1. Habitat Assessment/Aquatic Resources Assessment Survey Conditions

Biologists	Date	Time	Air Temperature (°F)	Wind Speed (mph)	Cloud Cover (%)	Precipitation
Seth Reimers & Hayley Milner	3/14/2024	0915-1125	51-54	3-7	65-70	None

Methods described below focused on determination of potential for occurrence of sensitive plant and wildlife species. Species are considered to be sensitive, and are therefore subject to analysis in this section, if they meet one or more of the following criteria:

- Plant and animal species listed as endangered (FE), threatened (FT), or candidates (FC) for listing under the Federal Endangered Species Act (ESA);
- Plant and animal species listed as endangered (SE), threatened (ST), or candidates (SC) for listing under the California Endangered Species Act (CESA);
- Animals designated as Fully Protected Species (FP), as defined in California Fish and Game Code Sections 3511, 4700, 5050, and 5515;
- Animal species designated as Species of Special Concern (SSC) by the CDFW;
- County of San Diego Sensitive Plants (Lists, A, B, C & D) and Animals (Groups 1 & 2);
- Bat species designated as High Priority (H) by the Western Bat Working Group;
- Plants that are state-listed as Rare[1]; or
- Plant species ranked by the California Native Plant Society (CNPS) as having a California Rare Plant Rank (CRPR) of 1 or 2.[2]

Sensitive natural communities are communities that have a limited distribution and are often vulnerable to the environmental effects of projects. These communities may or may not contain sensitive species or their habitats. For purposes of this assessment, sensitive natural communities are considered to be any of the following:

- Vegetation communities listed in the California Natural Diversity Database (CNDDB);

[1] Plants that were previously state listed as "Rare" have been re-designated as state threatened.
[2] Under the CEQA review process, only CRPR 1 and 2 species are considered, as these are the only CNPS species that meet CEQA's definition of "rare" or "endangered." Impacts to List 3 and 4 species do not meet CEQA's definition of "rare" or "endangered."

- Communities listed in the Natural Communities List with a rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable); or

- San Diego County General Plan (SCGP) Sensitive Wildlife Areas.

Following the habitat assessment, potentials for sensitive species to occur were evaluated based on proximity, recency and abundance of known occurrences, availability of suitable habitats, and historic distributions of the species. Potentials for occurrence were generally evaluated based on the following criteria:

- **Observed** – The species was observed within the Project Area during the survey effort.

- **High** – Historic records indicate that the species has been known to occur within the vicinity of the Project Area (1 mile), and suitable habitat occurs onsite.

- **Moderate** – Historic records indicate that the species has been known to occur within the vicinity of the Project Area, but low-quality suitable habitat occurs onsite, or; no historic records occur within the vicinity of the Project Area, but the Project Area occurs within the historic range of the species, and moderate to high quality habitat occurs.

- **Low** – Historic records indicate that the species has not been known to occupy the immediate vicinity of the Project Area, and low-quality habitat for the species exists onsite.

- **Unlikely** – The species is restricted to habitats not occurring within the Project Area or is considered extirpated from the Project Area.

4.0 RESULTS

4.1 Literature Review Results

The literature review resulted in a total of 30 sensitive wildlife species, 28 sensitive plant species, and no sensitive natural communities known to occur in the vicinity of the Project. All 58 species were determined to be sensitive based on the criteria described in Section 3.2 above. The potential, species status, and habitat requirements for each sensitive wildlife and plant species are further described in Tables 2 and 3 below in Sections 4.2.5 and 4.2.6, respectively.

4.2 Habitat Assessment Results

4.2.1 Existing Land Use and Site Conditions

The Project site is mostly flat and vegetated by non-native grassland throughout. Evidence of historical agriculture use and grading within the property is evident with low grading berms running north-south throughout the Project area, which are particularly evident within the western portion of the Project. Elevations on the site range slightly from 2796 to 2800 feet amsl and gradually slope from north to south. The Project site is open to natural areas to the north and east and is bounded by Old Highway 80 to

the south. Undeveloped lands continue south of Old Highway 80, as well as to the north and east. Developed lands consisting of a trailer park occur to the west.

Total vegetative cover in the Survey Area ranged from 0% on Old Highway 80 to 100% cover in the non-native grassland habitat on the Project site. The entirety of the Project site lacked shrubs and consisted of only an herbaceous layer. The Project site provides suitable habitat for some common and sensitive plant and wildlife species known to occur in the region.

4.2.2 Aquatic Resources Assessment Results

The literature review did not yield any National Hydrography Dataset (NHD) or National Wetland Inventory (NWI) features within or immediately adjacent to the Project site (Figure 2). A north-south running stormwater conveyance channel is situated outside of the Project footprint (west) and will not be impacted by the Project. Furthermore, the field survey effort did not identify any ephemeral drainages, vernal pools, or any other isolated water features on the Project site.

Additionally, Ascent Environmental biologist Scott Gressard completed an aquatic resources assessment of the Project site in March 2024 to determine the extents of any potential jurisdictional resources within the proposed Project boundary. The assessment evaluated characteristics that would indicate a particular resource would be under the jurisdiction of the United States Army Corps of Engineers (USACE) pursuant to Section 404 of the federal Clean Water Act (CWA), under the jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to CWA Section 401 and the Porter-Cologne Water Quality Control Act, and CDFW pursuant to Sections 1600-1603 of the California Fish and Game Code. Mr. Gressard found the Project site to consist primarily of non-native grassland within historic agricultural lands and disturbed upland habitat. No portion of the Project boundary contains indicators of jurisdictional aquatic resources (e.g., bed and bank, hydrophytic vegetation, etc.). The stormwater conveyance channel is located approximately 150 feet west of the Project boundary and carries flows south under Old Highway 80.

4.2.3 Vegetation Communities and Land Use Types

A total of three vegetation communities and/or land cover types were observed within the Survey Area, including non-native grassland, disturbed habitat, and developed areas (Figure 4). Vegetation communities were preliminarily described according to the *Draft Vegetation Communities of San Diego County based on Preliminary Descriptions of the Terrestrial Natural Communities of California* (Oberbauer et al 2008). Specific habitats were further described based on dominant plant(s) species generally characterizing the specific vegetation community.

Non-native Grassland

Non-native grassland habitat was dominated by London rocket (*Sisymbrium irio*), red-stem filaree (*Erodium cicutarium*), wall barley (*Hordeum murinum*), short-pod mustard (*Hirschfeldia incana*), and wild oat (*Avena* sp.). With the exception of Old Highway 80 and its disturbed roadside shoulder, the entirety of the Survey Area was comprised of herbaceous coverage, with the only shrub coverage consisting of a few scattered fourwing saltbush in the northwest corner. Herbaceous coverage ranged

between 85 and 100 percent. All wildlife species listed in Attachment D were observed/detected in non-native grassland.

Disturbed Habitat

Disturbed habitat characterized the Old Highway 80 road shoulder and consisted of mostly bare ground with sparse non-native herbaceous species such as short-pod mustard and red-stem filaree.

Developed

Developed land was void of vegetation and consisted of the pavement of Old Highway 80 running east and west through the southern portion of the Survey Area.

Table 2. Vegetation Communities/Land Use Type Present within the Project Site and Survey Area

Vegetation Community/ Land Use Type	Project Site (Acres)	Survey Area (Acres)
Non-native Grassland	*2.55*	*3.20*
Disturbed Habitat	*0.22*	*0.38*
Developed	0.00	*0.38*
Subtotals: Sensitive Lands	**2.55**	**3.20**
TOTAL	**2.77**	**3.96**

4.2.4 Sensitive Natural Communities

No sensitive natural communities were identified during the literature review, and except for non-native grasslands none were found during the field survey.

4.2.5 Special-Status Wildlife Species

The literature review resulted in a list of 30 special-status wildlife species with potential to occur within the Project site.

Eight special status species were found to have moderate to high potential to occur within the Project Site based on the presence of historical records within two miles of the Project site and moderate- to high-quality suitable habitat. These species include burrowing owl (*Athene cunicularia;* a California Species of Special Concern [SSC] and Group 1), Cooper's hawk- foraging only (*Accipiter cooperii*; Group 1), prairie falcon- foraging only (*Falco mexicanus;* and County of San Diego Group 2 species [Group 2]), turkey vulture- foraging only (*Cathartes aura;* Group 1), American badger (*Taxidea taxus;* SSC and Group 2), greater western mastiff bat- foraging only (*Eumops perotis californicus;* SSC and Group 2), tricolored blackbird- foraging only (*Agelaius tricolor*; State Threatened [ST], SSC, and Group 1), and pocketed free-tail bat- foraging only (*Nyctinomops femorosaccus;* SSC and Group 2). Two of the special status species were observed, or previously observed, in the surrounding area of the Project

site. Turkey vultures were observed 550 feet west of the Project Site during the survey. Previously, the remains of an American badger were found approximately 0.67 miles east of the Project site during the 2022 burrowing owl surveys associated with a former project (Blackhawk 2022).

Three sensitive species have a low potential to occur on the Project site and 19 sensitive species are unlikely to occur within the Project site. These species are unlikely to occur or have a low potential to occur due to the absence of suitable habitat, nesting habitat, and/or roosting habitat.

All 30 sensitive species and their potentials for occurrence are further described in Table 3 below. A complete list of wildlife species observed during the survey is included in Attachment D.

Table 3. Special-Status Wildlife Species Potentially Occurring Within the Project Site

Species Name	Listing Status	Habitat Requirements	Observed	Potential to Occur	Factual Basis for Potential
Invertebrates					
Quino checkerspot butterfly (*Euphydras editha quino*)	Federal: **FE** State: None County: **Group 1**	Coastal sage scrub and chaparral habitats that contain open areas with low-growing or sparse vegetation - required the presence of at least one of its larval host plants, the most important of which is the dot-seed plantain (Plantago erecta), white snapdragon (*Antirrhinum coulterianum*), thread- leaved bird's beak (*Cordylanthus rigidus*), purple owl's clover (*Castilleja exserta*), and Chinese houses (*Collinsia concolor*) as larval host plants.	No	**Low (nectaring only)**	Historical occurrence within 2 miles. No suitable larval host plants occur onsite. Low-quality potential habitat for adult nectaring or basking occurs onsite.

Amphibians					
Western spadefoot (*Spea hammondii*)	Federal: None State: **SSC** County: **Group 2**	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Breeding sites include vernal pools and other temporary rain pools, cattle tanks, and occasionally in pools of intermittent streams. Typically, the pools are turbid with little or no cover.	No	**Unlikely**	Historical occurrence within 2 miles, however, no suitable upland soils for burrowing occur on-site.
Reptiles					
Barefoot gecko (*Coleonyx switaki*)	Federal: None State: **ST** County: **Group 2**	Found in arid rocky areas on flatlands, canyons, thornscrub, especially where there are large boulders and rock outcrops, and where vegetation is sparse.	No	**Unlikely**	No historical occurrences within 2 miles and no suitable habitat for this species occurs onsite.

California glossy snake (*Arizona elegens occidentalis*)	Federal: None State: **SSC** County: None	This nocturnal species inhabits a variety of grassland, sage scrub, dry wash and chaparral habitats from sea level to over 7,000 feet in elevation. Tends to prefer sandy, loose soils. It remains in its burrow by day.	No	**Unlikely**	Historical occurrence within 2 miles is greater than 30 years old. Suitable sandy, loose soils do not occur on-site and evidence of high levels of disturbance provides unsuitable habitat for this species.
Coast horned lizard (*Phrynosoma blainvillii*)	Federal: None State: **SSC** County: **Group 2**	Occurs widely in sage scrub, woodlands, grasslands, and chaparral communities within microhabitats of loose granitic soils and open areas for sunning and foraging. This species is commonly associated with the presence of native harvester ants.	No	**Unlikely**	Historical occurrence within 2 miles, however, suitable sandy soils and open areas for sunning do not occur on-site. Furthermore, no native harvest ants were observed on site.

Southern California legless lizard or silvery legless lizard (*Anniella stebbinsi;* formerly *Anniella pulchra pulchra*)	Federal: None State: **SSC** County: **Group 2**	Occurs in moist, loose soils with some plant cover in coastal sand dunes, suburban gardens, chaparral, pine-oak woodlands, stream terraces with sycamores, cottonwoods, or oaks, oak woodlands, Joshua/juniper woodland, mixed conifer forest, desert scrub, sandy washes, and alluvial fans.	No	**Unlikely**	Only historical occurrence within 2 miles is from 1928. No suitable soils and low available food sources on site.
Northern red diamond rattlesnake (*Crotalus ruber ruber*)	Federal: None State: **SSC** County: **Group 2**	Inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, cultivated areas. On the desert slopes of the mountains, it ranges into rocky desert flats.	No	**Unlikely**	Historical occurrence within 2 miles, however, with a history of agricultural grading on site, there is no suitable habitat that occurs.

Birds					
Burrowing Owl (*Athene cunicularia*)	Federal: None State: **SSC** County: **Group 1**	Inhabits shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	No	**Moderate**	Historical occurrence within 2 miles. Suitable, but low-quality foraging and nesting habitat for this species occurs onsite. Suitable ground squirrel burrows occur on-site, though no owl sign was observed.
Cooper's hawk (*Accipiter cooperii*)	Federal: None State: None County: **Group 1**	Mature forest, open woodlands, wood edges, river groves. Nests in coniferous, deciduous, and mixed woods, typically those with tall trees and with openings or edge habitat nearby. Also found along trees along rivers through open country, and increasingly in suburbs and cities where some tall trees exist for nest sites.	No	**Moderate (foraging only)**	Historical occurrence within 2 miles. Moderate quality foraging habitat for this species occurs onsite. No suitable nesting habitat for this species occurs onsite, though some suitable nesting trees occur adjacent to the site within the developed trailer park area.

Leconte's thrasher (*Toxostoma lecontei lecontei*)	Federal: None State: **SSC** County: **Group 2**	Found in desert scrub with areas of sparse saltbush and/or creosote bush, typically with interspersed mesquite or cholla cactus.	No	**Low**	No historical occurrence within 2 miles. No suitable nesting and/or foraging habitat for this species occurs onsite, though areas of suitable saltbush scrub occurs adjacent to the site.
Osprey (*Pandion haliaetus*)	Federal: None State: None County: **Group 1**	Forages along the coast and inland lakes and builds nests on man-made structures near water bodies.	No	**Unlikely**	No suitable nesting or foraging habitat for this species occurs onsite and no historical occurrence within 2 miles.

Prairie falcon (*Falco mexicanus*)	Federal: None State: None County: **Group 1**	Distributed from annual grasslands to alpine meadows, but associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areas. Requires sheltered cliff ledges for cover. Usually nests in a scrape on a sheltered ledge of a cliff or steep canyon wall overlooking a large, open area. Sometimes nests on old raven or eagle stick nest on cliff, bluff, or rock outcrop	No	**Moderate (foraging only)**	Historical occurrence within 2 miles. Moderate-quality foraging habitat for this species occurs onsite; however, no suitable nesting habitat for this species occurs onsite.
Summer tanager (*Piranga rubra*)	Federal: None State: **SSC** County: **Group 2**	Inhabits mature riparian woodland, especially where Fremont cottonwoods form a fairly continuous canopy.	No	**Unlikely**	No suitable nesting or foraging habitat for this species occurs onsite and no historical occurrences within 2 miles.

Tricolored blackbird (*Agelaius tricolor*)	Federal: None State: **ST, SSC** County: **Group 1**	Nests and roosts in large colonies in freshwater marshes while foraging in nearby grasslands, fields, or pastures.	No	**High (foraging only)**	No suitable nesting habitat for this species occurs onsite; however, the non-native grassland does provide suitable foraging habitat and this species is known to nest in a freshwater marsh west of Jacumba and forage in the surrounding areas.
Turkey vulture (*Cathartes aura*)	Federal: None State: None County: **Group 1**	Forages in a broad variety of habitats and nests in caves or crevices on steep rocky slopes.	No	**High (foraging only)**	This species was observed outside the survey area buffer during the habitat assessment. Moderate-quality foraging habitat for this species occurs onsite; however, no suitable nesting habitat for this species occurs onsite.
Mammals					

American badger (*Taxidea taxus*)	Federal: None State: **SSC** County: **Group 2**	Found where rodent prey is ample in flat terrain to moderate slopes in a variety of open habitats including grasslands, alluvial fans, scrubs, fallow agricultural lands, and deserts.	No	**Moderate**	American Badger remains were found approximately 0.67 miles east of the project site during the 2022 burrowing owl surveys associated with the initial Project site. Moderate quality foraging habitat for this species occurs onsite, but no suitable burrows occur on site.
Big free-tailed bat (*Nyctinomops macrotis*)	Federal: None State: **SSC** County: **Group 2** WBWG: **M**	Forages in sage scrub, pine-oak woodlands, and rocky canyon lands. Roosts primarily in high rocky outcrops and rock-strewn slopes or artificial structures.	No	**Unlikely**	No suitable roosting or foraging habitat for this species occurs onsite and no historical occurrences within 2 miles.
Dulzura California pocket mouse (*Chaetodipus californicus femoralis*)	Federal: None State: **SSC** County: **Group 2**	Found in foothills, mountains, and a short distance into the desert slopes. Prefers gravelly substrates with good sun exposure, usually in or near chaparral, but also in coastal sage scrub, oak woodland, or at the edges of grasslands.	No	**Unlikely**	No historic records and no suitable habitat occurs onsite for this species.

Greater western mastiff bat (*Eumops perotis californicus*)	Federal: None State: **SSC** County: **Group 2** WBWG: **M**	Occurs in semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, palm oases, chaparral, desert scrub, and urban. Crevices in cliff faces, high buildings, trees, and tunnels are required for roosting. Is known to forage over 25 miles away from its roost site.	No	**Moderate (foraging only)**	No historical occurrence within 2 miles. Moderate-quality foraging habitat occurs onsite for this species. No suitable roosting habitat occurs onsite.
Jacumba little pocket mouse (*Perognathus longimembris internationalis*)	Federal: None State: None Other: **SSC** County: **Group 2**	Prefers flat or gently sloped terrain, loose sandy soils (tolerates a wide range of soils), and sparse vegetation. In San Diego, limited to the south and central county on the desert side of the mountains between 600-1100 m.	No	**Unlikely**	No historical occurrence within 2 miles. No suitable habitat on site due to the dense vegetation and lack of open areas.
Mountain lion (*Felis concolor*)	Federal: None State: None County: **Group 2**	Found in riparian woodland, forest, scrub, chaparral, grassland and desert -- wherever mule deer and sufficient cover to stalk them exist.	No	**Unlikely**	No suitable habitat for this species occurs onsite.

Pallid bat (*Antrozous pallidus*)	Federal: None State: **SSC** County: **Group 2** WBWG: **L**	Forages within a number of habitat types, frequently by pursuing insects while walking on the ground. Most commonly associated with arid open scrub or grassland and gentle terrain with scattered rocky outcrops. Can also be found in higher elevation coniferous forests on steep terrain. Often occurs on oak- and sycamore-lined flood plain terraces at low elevations in the inland valleys. Uses some agricultural areas for foraging. Roosts in man-made structures, rock and sandstone crevices and caves, under tree bark, and in rodent burrows or crevices in the ground.	No	**Low (foraging only)**	Historical occurrence within 2 miles. Low-quality foraging habitat occurs onsite for this species.
Pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*)	Federal: None State: **SSC** County: **Group 2**	Found on desert slopes in rocky habitat near shrubs, also grassland and sage scrub. Prefers sandy herbaceous areas, usually in association with rocks or course gravel.	No	**Unlikely**	No historical occurrence within 2 miles, and low-quality habitat occurs onsite for this species with the lack of sandy soils and rocky outcroppings.

Peninsular bighorn sheep (*Ovis canadensis nelsoni*)	Federal: **FE** State: **ST, FP** County: **Group 1**	Desert bighorn sheep inhabit rocky slopes and cliffs, canyons, washes and alluvial fans. They prefer rugged and open habitats with grasses and forbs for grazing.	No	**Unlikely**	No suitable habitat for this species occurs onsite.
Pocketed free-tailed bat (*Nyctinomops femorosaccus*)	Federal: None State: None Other: **SSC** County: **Group 2** WBWG: **M**	Roosts in steep rugged cliffs, high rocky outcrops, slopes, and man-made structures. It has been found in riparian, oak woodland, coniferous forest, open meadow and grassland, and coastal and desert scrublands, including over scrubby ridges, reservoirs, ponds, wetlands, and artificial lights.	No	**Moderate (foraging only)**	No historical occurrence within 2 miles. Potential moderate-quality foraging habitat occurs onsite for this species. No suitable roosting habitat occurs onsite.
Small-footed myotis (*Myotis ciliolabrum*)	Federal: None State: None County: **Group 2** WBWG: **M**	Roosts are found in rock crevices, snags, bridges, and buildings. Foraging occurs in areas with surface water and riparian habitat in chaparral, oak woodlands, coniferous forests and rocky areas along the desert edge.	No	**Unlikely**	No suitable roosting or foraging habitat for this species occurs onsite.

Southern grasshopper mouse (*Onychomys torridus ramona*)	Federal: None State: **SSC** County: **Group 2**	Found in perennial grassland, coastal sage scrub, alluvial fans, and desert scrub habitats with friable soils and scattered shrubs.	No	**Unlikely**	Only historical occurrence within 2 miles is from 1909. Furthermore, no suitable soils for this species occurs onsite.
Southern mule deer (*Odocoileus hemionus*)	Federal: None State: None County: **Group 2**	In Southern California, inhabits a wide array of habitats from coastal sage scrub to chaparral, oak woodland, riparian woodland, and montane conifer-hardwood forest in the mountains and riparian woodland and desert scrub on the east slope of the mountains.	No	**Unlikely**	No historical occurrence within 2 miles and no suitable habitat occurs onsite for this species.
Townsend's big-eared bat (*Corynorhinus townsendii*)	Federal: None State: None Other: **SSC** County: **Group 2** WBWG: **H**	Found in a variety of habitats from scrub deserts to pine and piñon-juniper forests, prefers mesic habitats; roosts in rock crevices, buildings, bridges and large tree cavities. Preferred foraging is among the foliage of trees and shrubs in mosaics of forested and edge habitats, including riparian zones, but tends to avoid open grasslands.	No	**Unlikely**	No historical occurrence within 2 miles and no suitable roosting or foraging habitat for this species occurs onsite.

Western red bat (*Lasiurus blossevillii*)	Federal: None State: None Other: **SSC** County: **Group 2** WBWG: **H**	Primarily roosts in shrubs or riparian trees. Day roosts in edge habitats adjacent to streams or fields, in orchards and urban areas. Foraging occurs along river and stream courses, forested meadow edges, parks and neighborhoods, and around artificial lighting.	No	**Unlikely**	No historical occurrences within 2 miles and no suitable roosting or foraging habitat for this species occurs onsite.

4.2.6 Special-Status Plant Species

The literature review resulted in a list of 28 special-status plant species with potential to occur within the Project site.

No sensitive plant species were observed within the Project site during the field survey efforts.

All 28 sensitive species are unlikely to occur within the Project site due to the absence of suitable habitat. Furthermore, opportunistic surveys for target list sensitive plant species were performed before and after focused surveys for burrowing owl and Quino checkerspot butterfly to definitively determine their absence. No sensitive plant species were observed.

These species and their potentials for occurrence are further described in Table 4 below. A complete list of plant species observed is included in Attachment C.

Table 4. Special-Status Plant Species Potentially Occurring Within the Project Site

Species Name	Listing Status	Habitat Requirements	Observed	Potential to Occur	Factual Basis for Potential
Arizona pholistoma (*Pholistoma auritum* var. *arizonicum*)	CRPR: **2B.3** County: None	Annual herb that occurs in Mojave desert scrub, preferring shaded slopes and deep canyons. Blooms: Mar Elevation: 275-835 m (900-2,740 ft)	No	**Unlikely**	No suitable habitat occurs onsite.

Species Name	Listing Status	Habitat Requirements	Observed	Potential to Occur	Factual Basis for Potential
Borrego bedstraw (*Galium angustifolium ssp. borregoense*)	CRPR: **1B.3** County: **List A**	Perennial herb that occurs in rocky areas of Sonoran desert scrub. Blooms: Mar (May) Elevation: 250-1,250 m (1,150-4,100 ft)	No	**Unlikely**	No suitable habitat occurs onsite.
Chaparral Ragwort (*Senecio aphanactis*)	CRPR: **2B.2** County: **List B**	An annual herb that occurs in sometimes alkaline, Chaparral, Cismontane Woodland & Coastal Scrub communities. Blooms: Jan-Apr (May) Elevation: 15-800 m (50- 2,625 ft)	No	**Unlikely**	Although there is a historical occurrence within 2 miles, no suitable habitat occurs onsite.
Cove's cassia (*Senna covesii*)	CRPR: **2B.2** County: **List B**	A perennial herb usually found in Creosote Bush Scrub. Blooms: Mar-Jun Elevation: 225-1,295 m (710- 4,250 ft)	No	**Unlikely**	No suitable habitat occurs onsite and as a perennial herb in bloom it would have been observed if present during the surveys.
Curly herissantia (*Herissantia crispa*)	CRPR: **2B.3** County: **List B**	An annual or perennial herb usually found in Creosote Bush Scrub and Sonoran desert scrub. Blooms: (Apr) Aug-Sep Elevation: 700-725 m (2,295-2,380 ft)	No	**Unlikely**	No suitable habitat occurs onsite and as a perennial herb it would have been observed if present during the surveys.

Species Name	Listing Status	Habitat Requirements	Observed	Potential to Occur	Factual Basis for Potential
Desert beauty (*Linanthus bellus*)	CRPR: **2B.1** County: **List B**	An annual herb occurring in sandy areas of chaparral habitat. Blooms: Apr-May Elevation: 1,000-1,400m (3,280-4,595 ft)	No	**Unlikely**	No suitable habitat occurs on site and elevation on site is too low for this species.
Desert larkspur (*Delphinium parishii subglobosum*)	CRPR: 4.3 County: **List D**	A perennial herb that is usually found in Creosote Bush Scrub, Sonoran desert scrub, Chaparral, and Pinyon-Juniper Woodland communities. Blooms: Mar-Jun Elevation: 600-1,800 m (1,970-5,905 ft)	No	**Unlikely**	No suitable habitat occurs onsite and as a perennial herb in bloom it would have been observed if present during the surveys.
Desert monkey flower (*Diplaucus aridus*, also *Mimulus aridus*)	CRPR: 4.3 County: **List D**	A perennial evergreen shrub that is usually found in rocky Chaparral, Sonoran desert scrub, and occasionally in wetland habitats. Blooms: Apr-Jul Elevation: 750-1,200 m (2,460 – 3,935 ft)	No	**Unlikely**	No suitable habitat occurs onsite and as a perennial shrub it would have been observed if present during the surveys.
Desert spike-moss (*Selaginella eremophila*)	CRPR: 2B.2 County: **List B**	Perennial herb found in gravelly or rocky areas of chaparral and Sonoran desert scrub habitats. Bloom: (May)Jun(Jul) Elevation: 200-1,295 m (655-4,250 ft)	No	**Unlikely**	No suitable habitat occurs onsite.

Species Name	Listing Status	Habitat Requirements	Observed	Potential to Occur	Factual Basis for Potential
Fremont's mahonia (*Berberis higginsiae*)	CRPR: 3.2 County: **List C**	A shrub that is usually found in Chaparral and woodland communities. Blooms: Mar-Apr Elevation: 800-1000 m (2,625- 3,495 ft)	No	**Unlikely**	No suitable habitat occurs onsite and as a perennial shrub it would have been observed if present during the surveys.
Hairy Stickleaf (*Mentzelia hirsutissima*)	CRPR: **2B.3** County: **List B**	An annual herb occurring in washes, alluvial fans, or rocky slopes of Sonoran desert scrub or creosote bush scrub. Blooms: Mar-May Elevation: 0-700m (0-2,295 ft)	No	**Unlikely**	No suitable habitat occurs onsite and elevation on site is too high for this species.
Jacumba milk vetch *(Astragalus douglasii var. perstrictus)*	CRPR: **1B.2** County: **List A**	A perennial herb that is found in rocky areas of foothill woodland, chaparral, and valley grassland communities. Blooms: Apr-Jun Elevation: 900-1,370 m 2,955-4,495 ft	No	**Unlikely**	There are three historical occurrences within 2 miles, however as a perennial herb in bloom it would have been observed if present during the surveys.
Jacumba Mountains linanthus (Linanthus maculatus ssp. emaculatus)	CRPR: **1B.1** County: None	Annual herb occurring in washes, flats, decomposed granitic, and sandy areas of desert dunes (edges) and Sonoran desert scrub. Blooms: (Mar)Apr(May) Elevation: 395-585 m 1,295- 1,920 feet)	No	**Unlikely**	No historical occurrence within 2 miles, no suitable habitat occurs on site, and elevation of site is too high for this species.

Species Name	Listing Status	Habitat Requirements	Observed	Potential to Occur	Factual Basis for Potential
Mexican hulsea (*Hulsea Mexicana*)	CRPR: **2B.3** County: **List B**	Annual or perennial herb that occurs in disturbed or burned areas of chaparral habitat. Blooms: Apr-Jun Elevation: 1,200 m (3,935 ft)	No	**Unlikely**	No historical occurrence within 2 miles and no suitable habitat occurs on site.
Mount Laguna aster (*Dieteria asteroides* var. *lagunensis*)	CRPR: **2B.1** County: **List B**	A perennial herb that is found in Yellow Pine Forest and Foothill Woodland communities. Blooms: (May) Jul-Aug Elevation: 790-2400 m (2,590-7,875 ft)	No	**Unlikely**	Historical occurrences within two miles are from the 1940s. Furthermore, no suitable habitat occurs onsite and as a perennial herb it would have been observed, if present, during the surveys.
Mountain springs bush lupine (*Lupinus albifrons var. medius*)	CRPR: **1B.3** County: **List A**	A shrub often found in desert washes, creosote bush scrub and pinyon/juniper woodlands. Blooms: Mar-May Elevation: 425-1,370 m (1,395-4,495 ft)	No	**Unlikely**	Historical occurrence within 2 miles is from the 1924. Furthermore, there is no suitable habitat occurs onsite and as a perennial shrub it would have been observed, if present, during the surveys.

Species Name	Listing Status	Habitat Requirements	Observed	Potential to Occur	Factual Basis for Potential
Palmer's grappling hook (*Harpagonella palmeri*)	CRPR: 4.2 County: **List D**	An annual herb that prefers clay soils in dry, semi-barren areas within Chaparral, Coastal Scrub, and Valley & Foothill Grassland communities. Blooms: Mar-May Elevation: 20-955 m (65-3,135 ft)	No	**Unlikely**	No historical occurrences within 2 miles and no suitable habitat occurs onsite.
Parry's tetracoccus (*Tetracoccus dioicus*)	CRPR: **1B.2** County: **List A**	A perennial deciduous shrub found on the dry slopes of coastal sage scrub and chaparral habitats. Blooms: Apr-May Elevation: 165-1000 m (540-3,280 ft)	No	**Unlikely**	No historical occurrence within 2 miles. No suitable habitat occurs onsite and as a perennial shrub it would have been observed if present during the surveys.
Payson's jewelflower (*Caulanthus simulans*)	CRPR: 4.2 County: **List D**	An annual herb that is usually found in granitic and sandy soils of coastal sage scrub and chaparral habitats. Blooms: Mar-May Elevation: 90-2,200 m (295-7,220 ft)	No	**Unlikely**	No historical occurrences within 2 miles and no suitable habitat occurs onsite.
Pygmy lotus (*Lotus haydonii* or *Acmispon haydonii*)	CRPR: **1B.3** County: **List A**	A perennial herb that is usually found in Creosote Bush Scrub, Pinyon-Juniper Woodland communities. Blooms: Jan-Jun Elevation: 520-1,200 m (1,705-3,935 ft)	No	**Unlikely**	No suitable habitat occurs onsite and as a perennial herb in bloom it would have been observed if present during the surveys.

Species Name	Listing Status	Habitat Requirements	Observed	Potential to Occur	Factual Basis for Potential
San Jacinto Mountains bedstraw (*Galium angustifolium ssp. jacinticum*)	CRPR: **1B.3** County: **List A**	A perennial herb found in lower montane coniferous forest. Blooms: Jun-Aug Elevation: 1,350– 2,100 m (4,430 – 6,890 ft)	No	**Unlikely**	No suitable habitat occurs onsite and site elevation is too low for this species.
Single leaf basket bush (*Rhus trilobata simplicifolia, also called Rhus aromatica simplicifolia*)	CRPR: **2B.3** County: **List B**	A perennial deciduous shrub that is usually found in Chaparral and Pinyon-Juniper Woodland communities, and occasionally in wetlands. Blooms: Mar-Apr Elevation: 1,220 -1,370 m (4,005- 4,495 ft)	No	**Unlikely**	No suitable habitat occurs onsite and as a perennial shrub it would have been observed if present during the surveys.
Slender leaved ipomopsis (*Ipomopsis tenuifolia*)	CRPR: **2B.3** County: **List B**	A perennial herb that is usually found in Creosote Bush Scrub, Chaparral, and Pinyon-Juniper Woodland. Blooms: Mar-May Elevation: 100-1,200 m (330- 3,935 ft)	No	**Unlikely**	Although there is historical occurrence within 2 miles, no suitable habitat occurs onsite.
Southern jewelflower (*Streptanthus campestris*)	CRPR: **1B.3** County: **List A**	A perennial herb that occurs in rocky areas of chaparral, lower montane coniferous forest, and pinyon and juniper woodland. Bloom: (Apr)May-Jul Elevation: 900-2,300 m (2,9550-7,545 ft)	No	**Unlikely**	No historical occurrence within 2 miles and no suitable habitat occurs onsite.

Species Name	Listing Status	Habitat Requirements	Observed	Potential to Occur	Factual Basis for Potential
Sticky geraea (*Geraea viscida*)	CRPR: **2B.2** County: **List B**	A perennial herb that is usually found in Chaparral or disturbed habitat. Blooms: May-Jun Elevation: 450—1,700m (1,475- 5,580 ft)	No	**Unlikely**	Some suitable habitat occurs onsite along the disturbed road edge, but as a perennial herb in bloom it would have been observed if present during the surveys.
Tecate Tarplant (*Deinandra floribunda*)	CRPR: **1B.2** County: **List A**	An annual herb typically occurring in chaparral and coastal scrub communities. Blooms: Aug-Oct Elevation: 70-1220 m (230 – 4,005 ft)	No	**Unlikely**	Although there is a historical occurrence within 2 miles, no suitable habitat occurs onsite.
Thurber's beardtongue (*Penstemon thurberi*)	CRPR: 4.2 County: **List D**	A perennial herb that is usually found in creosote bush scrub, chaparral, pinyon-juniper woodland and Joshua Tree woodland communities. Blooms: May-Jul Elevation: 500-1,220 m (1,640- 4,005 ft)	No	**Unlikely**	No suitable habitat occurs onsite and as a perennial herb in bloom it would have been observed if present during the surveys.
Utah vine milkweed (*Cynanchum utahense* also known as *Funastrum utahense*)	CRPR: 4.2 County: **List D**	A perennial herb that is usually found in Creosote Bush Scrub, Sonoran desert scrub, and Mojave desert scrub. Blooms: Apr-Jun Elevation: 100-1,435 m (330- 4,710 ft)	No	**Unlikely**	No suitable habitat occurs onsite and as a perennial herb in bloom it would have been observed if present during the surveys.

5.0 PROJECT IMPACTS

The proposed Project includes the construction of a new 8,500 square-foot fire station and associated facilities on an approximately 2.77-acre portion of a 5-acre property consisting of non-native grassland habitat north of Old Highway 80. No off-site impacts will occur since the Project will utilize access from the existing Old Highway 80, and any required fire fuel management will be accommodated on-site, or where it would extend off-site, the land is already developed or maintained for adjacent land use, such as maintained paved and/or dirt roads. Applicable mitigation measures are proposed to reduce impacts to sensitive biological resources to a less than significant level in conformance with the *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements* (County 2010b).

5.1 Significance of Project Impacts

The following discussion describes the Project's potential to directly, indirectly and cumulatively impact sensitive biological resources during development, and provides analyses of significance for each potential impact in conformance with the *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements* (County 2010b).

Direct Impacts

Direct impacts include those involving the loss, alteration and/or disturbance of plant communities, and consequently, the flora and fauna of the affected area. Direct impacts also include the destruction of individual plants and/or wildlife. Direct impacts may adversely affect regional populations of certain species or result in isolated populations, reducing genetic diversity and range-wide population stability; conversely, in some cases direct impacts may also have intended or unintended positive effects.

Indirect Impacts

Indirect impacts include a variety of effects related to areas or habitats that are not directly removed by Project development, such as loss of foraging habitat, increased ambient noise, artificial light, introduced predators (e.g., domestic cats, dogs and other non-native animals), competition with exotic plants and animals, and increased human presence and associated disturbances (e.g., trash, green waste, physical intrusion). Indirect impacts may include long- and/or short-term daily activities associated with project build-out, such as increased traffic, permanent barriers or fences, buildings, exotic seed-bearing ornamental plantings, irrigated landscapes and human presence, among others. These types of impacts are known as edge effects and over time, may result in some encroachment on native plants by exotic plants, altered behavioral wildlife patterns, reduced wildlife diversity, and decreased wildlife abundance in habitats adjacent to a given project site. However, as is the case with direct impacts, indirect impacts may also have intended or unintended positive effects for certain species.

Cumulative Impacts

Cumulative impacts are defined by the collective impacts of two or more projects, that when considered individually are minimal, but over time may become collectively significant.

Thresholds of Significance

Environmental impacts relative to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California to:

> *"Prevent the elimination of fish or wildlife species due to man's activities, insure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."*

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to CEQA Guidelines, Section 15064.7 (Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects (California State Assembly 2018). A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources, CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

> *"The project has the potential to: substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species..."*

Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed project.

Appendix G of the State CEQA guidelines indicate that a project may be deemed to have a significant effect on the environment if the project is likely to:

> ***a)*** *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*
>
> ***b)*** *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*

c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*

d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.*

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

5.2 Direct Impacts to Mapped Habitat Types

Table 5 identifies the potential impacts on existing habitat/vegetation communities as a result of the proposed Project. Project-related impacts to the mapped habitat type is restricted to non-native grassland habitat only. Significant direct impacts to non-native grassland habitat would be mitigated to a level below significance with the purchase of off-site mitigation credits from a County-approved mitigation bank and implementation of mitigation measures (see Section 6.0 Mitigation, below) before, during and after construction. As shown in Table 5, the Project proponent would be required to mitigate at a 0.5:1 ratio for the loss of non-native grassland habitat, which would require the preservation of 1.275 acres offsite. In the event that occupied BUOW burrows are identified during pre-construction take avoidance surveys, the ratio for loss would be increased to 1:1 for a total of 2.55 acres preserved offsite. Mitigation is not required for the loss of 0.22 acres of disturbed habitat, as this is not considered a sensitive habitat (County of San Diego 2010).

Table 5. Potential Impacts

Habitat/ Vegetation Community	Existing (acres)	Impacts Onsite (acres)	Impacts Offsite (acres)	Mitigation Ratio	Mitigation Required (acres)	Preserved onsite (acres)	Offsite Mitigation (acres)
Non-native Grassland	2.55	2.55	0	0.5:1	1.275	0	1.275
Total	2.55	2.55	0	0.5:1	1.275	0	1.275

5.3 Direct Impacts to Jurisdictional Wetlands and Non-wetland Waters

Jurisdictional resources, including wetlands and non-wetland waters regulated by USACE, RWQCB and CDFW, were not identified within the Project site. Development of the Project site would not result in direct impacts to any jurisdictional resources.

5.4 Direct Impacts to Special Status Wildlife Species

A total of 30 special status wildlife species were evaluated during the literature review and field survey (Table 3). Eight special status species were found to have moderate to high potential to occur based on the presence of historical records within two miles of the Project site and low- to high-quality suitable habitat; burrowing owl (moderate), Cooper's hawk (moderate-foraging only), prairie falcon (moderate-foraging only), turkey vulture (high-foraging only), American badger (moderate), greater western mastiff bat (moderate-foraging only), tricolored blackbird (high-foraging only), and pocketed free-tail bat (moderate- foraging only). Protocol presence/absence surveys were conducted for Quino checkerspot butterfly and burrowing owl in 2024. Results of the surveys determined that both species were absent from the Project site and subsequently recognized as unlikely to occur. None-the-less, burrowing owls are known to migrate through the area at different times of the year; therefore, take avoidance surveys (MM-BIO 2) are recommended to ensure potential direct impacts, such as loss of individuals, to the species are less than significant. Given that protocol surveys for Quino checkerspot butterfly determined that the species is absent from the Project site, no specific mitigation measures or avoidance measures are required.

The field survey identified suitable habitat and substrate for migratory birds protected under the Migratory Bird Treaty Act (MBTA) and CDFW Codes 3503 and 3503.5, including the special status avian species identified above. Permanent direct impacts to migratory and special status birds as a result of the Project may include foraging habitat loss, nesting habitat removal, roosting site loss and/or loss of individuals. Through implementation of pre-construction nesting bird surveys (MM-BIO 1), take avoidance burrowing owl surveys (MM-BIO 2), and biological monitoring (MM-BIO 3) detailed in Section 6 below, potential direct impacts to protected avian species are less than significant.

In addition to protected avian species, the field survey identified suitable habitat for special status mammal, reptile, and amphibian species on the Project site. Permanent direct impacts to these vertebrate species as a result of the Project may include habitat loss, burrow site loss and/or loss of individuals. Through implementation of biological monitoring (MM-BIO 3), potential direct impacts to protected mammal, reptile, and amphibian species are less than significant.

5.5 Direct Impacts to Special Status Plant Species

Although the literature review revealed 28 special status plant species occurring in the vicinity of the Project site, none were observed during the field surveys. Furthermore, no suitable habitat for these special status plant species occurs on the Project site and/or those with suitable habitat are perennial species that would have been identified during the field survey if present. Historical agricultural use and grading and lack of connectivity to natural source populations likely preclude special status plant species, including narrow endemics, from occurring within the Project site. Based on these findings, Project-related direct impacts to special status plants are considered less than significant.

5.6 Indirect Impacts to Mapped Habitat Types

No sensitive vegetation communities occur within or immediately adjacent to the Project site. Non-native grassland is not considered a sensitive vegetation community due to it not including populations of sensitive species (i.e. Group A plants, Group I wildlife species, state- and federally-listed species), is not critical to a balanced ecosystem, nor is it not part of a functioning wildlife corridor. Even though non-native grassland is not a sensitive vegetation community, its removal may result in a change in stormwater discharge hydrology downstream of the Project due to a net increase of impervious surfaces. It is assumed that the Project will be designed in accordance with National Pollution Discharge Elimination System (NPDES) regulations thus not resulting in any long-term indirect adverse impacts.

5.7 Indirect Impacts to Jurisdictional Wetlands and Non-wetland Waters

Jurisdictional resources, including wetlands and non-wetland waters regulated by USACE, RWQCB and CDFW, were not identified within the Project site or the surrounding area. The north-south running stormwater conveyance ditch west of the Project is not likely a regulated feature; regardless, Project-specific Best Management Practices (such as a stormwater pollution prevention plan) will be implemented to prevent indirect impacts to this feature and/or other jurisdictional resources.

5.8 Indirect Impacts to Special Status Wildlife Species

The indirect impacts detailed for Mapped Habitat Types above are equally applicable to special status wildlife species. In addition to these impacts, construction-related noise, artificial lighting, and attracting pests and/or predators to the Project site may also affect wildlife species by disrupting normal behaviors such as foraging and breeding. The field survey identified suitable habitat and substrate for migratory birds protected under the MBTA and CDFW Codes 3503 and 3503.5, as well as suitable habitat for numerous other special status mammal, reptile, insect, and amphibian species. Through implementation of mitigation measures outlined below indirect impacts to special status wildlife are considered less than significant.

5.9 Indirect Impacts to Special Status Plant Species

Although the literature review revealed 28 special status plant species occurring in the vicinity of the Project site, none were observed during the field surveys. Furthermore, no suitable habitat for these special status plant species occurs on the Project site and/or those with suitable habitat are perennial species that would have been identified during the field survey if present. No populations of special status plant species are known to occur immediately adjacent to the Project site where they could be subjected to fugitive dust and/or encroachment upon by invasive and/or exotic landscape ornamental species; therefore, indirect impacts to special status plant species are considered less than significant.

5.10 Cumulative Impacts

Though non-native grassland habitat would be directly impacted through the construction of the Project, with the mitigation measures proposed herein to be implemented, and the purchase of off-site mitigation credits from a County-approved mitigation site, direct impacts to this habitat would be considered less than significant under the East County MSCP. The Project does not propose to have additional direct or indirect impacts to sensitive habitats, plants, or wildlife. Therefore, there are no cumulative impacts to sensitive habitats, plants, or wildlife. Depending on a wide variety of factors (e.g., project sizes, locations, existing conditions, connectivity, etc.), impacts to non-native grassland habitat may be considered potentially significant when assessing cumulative impacts; however, the small size of this Project in relation to the regional context renders cumulative impacts insignificant for this Project. At least two other projects in the vicinity of the Project are known currently: JVR Energy Park Project and Jacumba Solar Energy Project. Both projects contain sensitive resources not found on the Project site and neither of the other proposed projects contain Non-native Grassland habitat. JVR Energy Park does contain Fallow Agriculture land that may (at times) function similarly to Non-native Grassland. Each of the projects require their own specific mitigation to reduce impacts to less than significant levels. Even with the development of all three projects, the area would largely remain undeveloped and rural allowing for mostly contiguous habitat that allows continued wildlife movement. As currently designed, the Project would not contribute to potential cumulative impacts associated with nearby similar projects.

6.0 MITIGATION

The proposed Project will result in the loss of non-native grassland habitat. Mitigation credits will need to be purchased to offset the impacts to the non-native grassland habitat at a ratio of 0.5:1, as stipulated in Table 5 of the County of San Diego Guidelines for Determining Significance for Biological

Resources (County of San Diego 2010). Several special-status species have a low to high potential for occurrence on the Project site and in order to reduce any potential impacts to below a level of significance to comply with CEQA, the following mitigation measures are recommended for implementation:

- **MM-BIO 1: Nesting Birds**. Vegetation removal should be conducted outside of the nesting bird season between September 1st and January 31st. If vegetation removal is required during the nesting bird season (February 1st to August 31st), a pre-construction avoidance survey for MBTA and CDFW-protected nesting birds must be conducted within 100 feet of areas proposed for vegetation removal and/or initial grading activities; additionally, the survey shall be extended to 500 feet for raptors and be included from January 1 to July 15. The survey shall be conducted by a qualified biologist(s), defined as someone with familiarity with avian species in the region and at least five years of experience conducting nesting bird surveys, within seven days (i.e.,168 hours) of vegetation removal and/or initial groundbreaking activities. If active, protected nests are observed within the survey area(s), a qualified biologist will determine appropriate minimum disturbance buffers or other adaptive mitigation techniques (e.g., biological monitoring of active nests during construction-related activities, staggered work schedules, altered work locations, sound walls, noise abatement, etc.) and work with the contractor to ensure that direct and indirect impacts to all protected nesting birds are avoided until such nests are no longer active. If the results of the survey are negative, the Project will proceed without any further surveys or monitoring as long as there Is not a significant lapse (i.e., greater than seven days) in Project activity. If more than seven days of inactivity occurs, a new nesting bird survey will be required prior to reconvening work on the Project.

- **MM-BIO 2: Burrowing Owl Surveys.** Within 14 days of initiating ground disturbance and/or construction activities, conduct a pre-construction take avoidance survey for burrowing owl per guidelines specified in the Staff Report on Burrowing Owl Mitigation (2012). In addition, within 24 hours of initiating ground disturbance and/or construction activities, conduct a final pre-construction take avoidance survey. Surveys shall include areas within the Project footprint and a surrounding 500-foot (150-meter) buffer. The survey shall consist of walking parallel transects and noting any fresh burrowing owl sign or presence. The results of the take avoidance survey shall be provided to CDFW. If more than 14 days pass between the take avoidance survey and initiation of Project construction, additional take avoidance survey may be required by the qualified biologist, which will depend on what actions have been implemented to deter burrowing owls from moving into the Project footprint and buffer area.

- **MM-BIO 3: Biological Monitoring**. A biological monitor shall be present during all initial vegetation clearing, grubbing, and rough grading activities to relocate wildlife out of harm's way, including but not limited to protected birds (including tricolored blackbird and turkey vulture) and American badger. Biological monitoring will ensure the Project remains in compliance with any mitigation, monitoring, and compliance reporting program, as well as industry standard Best Management Practices (BMP) such as fugitive dust control, on-site vehicle speed limits, Stormwater Pollution Prevention Plan (SWPPP) implementation, and conditions related to biological resource protection set forth by the County of San Diego and/or regulatory agencies.

- **MM-BIO 4: Off-site Mitigation.** To off-set the loss of Non-native Grassland habitat on the Project site, off-site mitigation credits shall be purchased from a County-approved mitigation bank. The Project proponent will purchase 1.275-acres of Non-native Grassland Habitat credits. If BUOW are identified

during pre-construction take avoidance surveys, the mitigation ratio will increase to 1:1 requiring the purchase of 2.55 acres of Non-native Grassland Habitat credits.

7.0 CONCLUSION & RECOMMENDATIONS

Blackhawk Environmental conducted a literature review for the Project site resulting in a list of 30 sensitive wildlife species and 28 sensitive plant species to evaluate during the ensuing habitat assessment and field survey. No sensitive plant communities and no aquatic resources were identified within the survey area during the literature review.

The habitat assessment determined that of the 30 special status wildlife species evaluated, eight were determined to have a moderate or high potential for occurrence, three were determined to have a low potential for occurrence and 19 were considered unlikely to occur. Protocol presence/absence surveys for Quino checkerspot butterfly and burrowing owl were conducted in 2024. Results of the surveys determined that both species were absent from the Project site and subsequently recognized as unlikely to occur. None-the-less, burrowing owls are known to migrate through the area at different times of the year; therefore, take avoidance surveys (MM-BIO 2) are recommended to ensure potential direct impacts, such as loss of individuals, to the species are less than significant. Biological monitoring (MM-BIO 3) will ensure the Project remains in compliance with any mitigation, monitoring, and compliance reporting program, as well as industry standard Best Management Practices (BMP) such as fugitive dust control, on-site vehicle speed limits, Stormwater Pollution Prevention Plan (SWPPP) implementation, and conditions related to biological resource protection set forth by the County of San Diego and/or regulatory agencies.

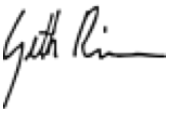
The field survey also determined that all 28 of the sensitive plant species evaluated were considered unlikely to occur in the Project site due to the lack of suitable habitat and/or those with suitable habitat are perennial species that would have been identified during the field survey if present.

No aquatic resources were identified within the survey area during the field survey.

Though non-native grassland habitat would be directly impacted through the construction of the Project, the purchase of 1.275 acres of off-site mitigation credits from a County-approved mitigation site in accordance with MM-BIO 4 will offset these impacts, reducing them to less than significant levels.

If there are any questions or concerns regarding the findings of this report, please contact me at 619-972-7932 or seth@blackhawkenv.com.

Sincerely,



Seth Reimers
Senior Biologist

ATTACHMENTS
A: Figures
B: Photo Pages
C: Plant Species Observed List
D: Wildlife Species Observed List

8.0 REFERENCES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors.
2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley, CA.

Blackhawk Environmental, Inc (Blackhawk)
2022 *Jacumba Fire Station Project Biological Resources Letter Report, Jacumba, San Diego County, California.*

Calflora
2024 Information on California plants for education, research and conservation. [web application]. Berkeley, California: The Calflora Database [a non-profit organization]. Available: http://www.calflora.org/. Accessed March, 2024.

California Department of Fish and Wildlife (CDFW)
2024 California Natural Diversity Database (CNDDB). RareFind Version 3.1.0. Database Query for the *Jacumba* California, USGS 7.5-minute quadrangles. Wildlife and Habitat Data Analysis Branch. Version dated April 1, 2024.

California Native Plant Society (CNPS)
2024 Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Accessed Juy, 2022 from: http://www.cnps.org/inventory.

County of San Diego
2010 Guidelines for Determining Significance: Biological Resources. Department of Planning and Land Use. Department of Public Works. Version dated September 15, 2010.

Oberbauer, Thomas, Meghan Kelly, and Jeremy Buegge.
2008 Draft Vegetation Communities of San Diego County. Based on "*Preliminary Descriptions of the Terrestrial Natural Communities of California*", Robert F. Holland, Ph.D., October 1986.

US Geological Service.
2011 7.5-minute quadrangle: *Jacumba, California*.

2024 National Hydrography Dataset (NHD). https://www.usgs.gov/national-hydrography/national-hydrography-dataset.

USFWS

2024a Information for Planning and Consultation (IPaC). https://ipac.ecosphere.fws.gov.

2024b U.S. FWS Threatened & Endangered Species Active Critical Habitat Report. https://ecos.fws.gov/ecp/report/table/critical-habitat.html

2024c National Wetlands Inventory (NWI). https://www.fws.gov/wetlands/.

ATTACHMENT A

Figures

Blackhawk Environmental

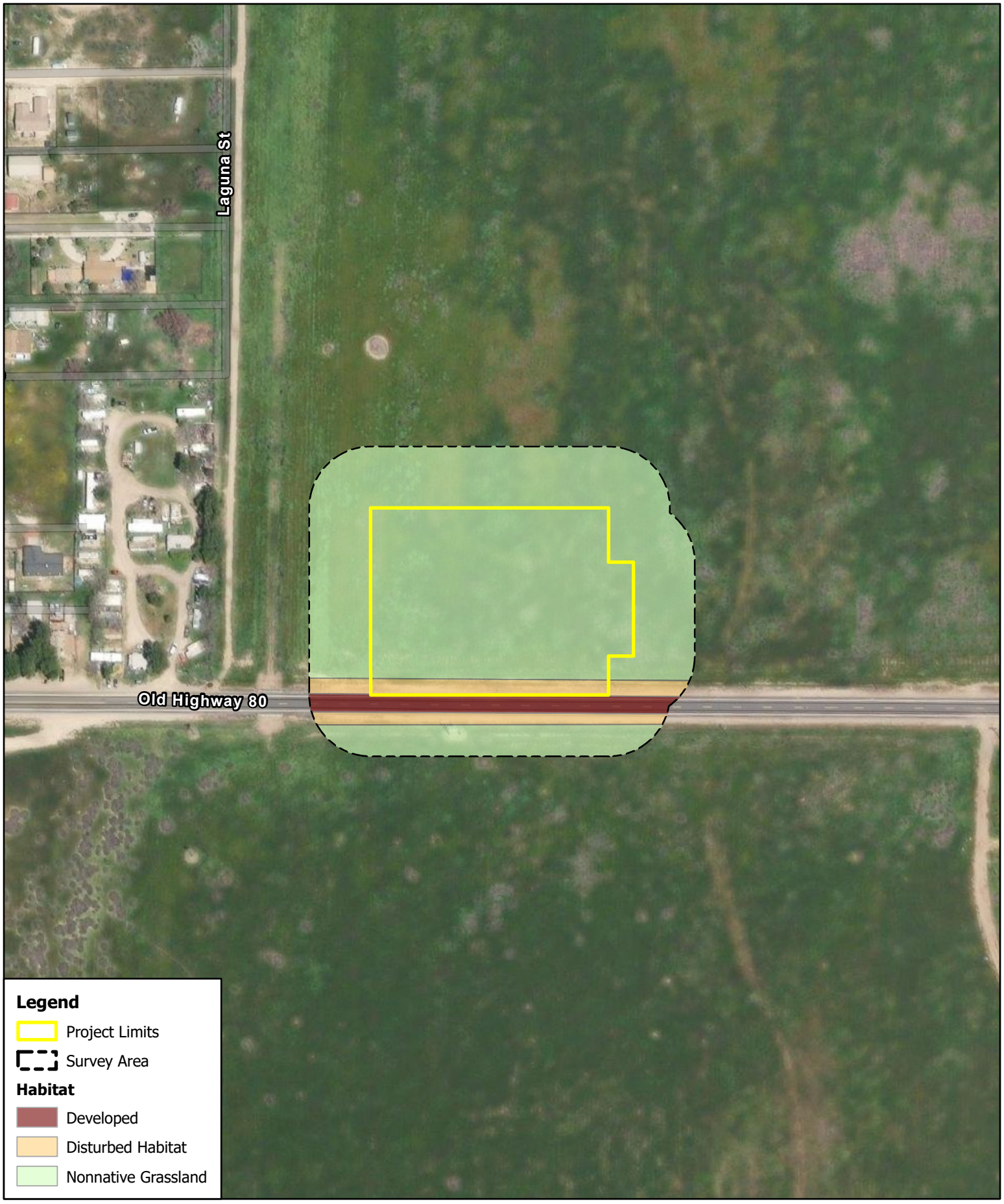


Figure 4

Biological Resources

Jacumba Fire Station Project

Blackhawk Environmental

8/29/2024

ATTACHMENT B

Photo Pages

Blackhawk Environmental

Photo Point 1: Northwest-facing view of non-native grassland within the Survey Area from the southeastern corner of the Survey Area.

Photo Point 2: West-facing view of non-native grassland and disturbed habitat along the southern boundary of the Survey Area south of Old Highway 80.

Photo Point 3: West-facing view of non-native grassland within the Survey Area, taken from the east boundary of the Survey Area.

Photo Point 4: East-facing view of disturbed and non-native grassland habitats along the Project site southern boundary north of Old Highway 80.

Photo Point 5: Northeast-facing view of non-native grassland within Survey Area, taken from southwestern corner of Survey Area boundary.

Photo Point 6: Southwest-facing view of non-native grassland within Survey Area, taken from northeastern corner of Survey Area boundary.

ATTACHMENT C

Plant Species Observed

Blackhawk Environmental

OBSERVED WILDLIFE SPECIES LIST

AVES	BIRDS
COLUMBIDAE	**Pigeons and Doves**
Patagioenas fasciata	band-tailed pigeon
* *Streptopelia decaocto*	Eurasian-collared dove
CORVIDAE	**Crows & Jays**
Aphelocoma californica	California scrub-jay
Corvus corax	common raven
FRINGILLIDAE	**Finches and Allies**
Haemorhous mexicanus	house finch
GALLIDAE	**New World Quail**
Callipepla californica	California quail
ICTERIDAE	**New World Blackbirds & Orioles**
Sturnella neglecta	western meadowlark
PARULIDAE	**New World Warblers**
Setophaga coronate	yellow-rumped warbler
PASSERELLIDAE	**New World Sparrows and Towhees**
Amphispiza bilineata	black-throated sparrow
Chondestes grammacus	lark sparrow
Zonotrichia leucophrys	white-crowned sparrow
PASSERIDAE	**Old World Sparrows**
* *Passer domesticus*	house sparrow
SITTIDAE	**Nuthatches**
Sitta canadensis	red-breasted nuthatch
STURNIDAE	**Starlings and Mynas**
* *Sturnus vulgaris*	European starling

MAMMALIA	MAMMALS
LEPORIDAE	**Rabbits and Hares**
** *Lepus californicus*	San Diego black-tailed jackrabbit
Sylvilagus audobonii	desert cottontail
CANIDAE	**Dogs**
Canis familiaris	domestic dog
Canis latrans	coyote (scat)
GEOMYIDAE	**Gophers**
Thomomys bottae	Botta's pocket gopher (burrows)
SCIURIDAE	**Squirrels**
Otospermophilus beecheyi	California ground squirrel

*Non-native
***Sensitive species*

ATTACHMENT D

Wildlife Species Observed

Blackhawk Environmental

OBSERVED WILDLIFE SPECIES LIST

AVES	BIRDS
COLUMBIDAE	**Pigeons and Doves**
Patagioenas fasciata	band-tailed pigeon
* *Streptopelia decaocto*	Eurasian-collared dove
CORVIDAE	**Crows & Jays**
Aphelocoma californica	California scrub-jay
Corvus corax	common raven
FRINGILLIDAE	**Finches and Allies**
Haemorhous mexicanus	house finch
GALLIDAE	**New World Quail**
Callipepla californica	California quail
ICTERIDAE	**New World Blackbirds & Orioles**
Sturnella neglecta	western meadowlark
PARULIDAE	**New World Warblers**
Setophaga coronate	yellow-rumped warbler
PASSERELLIDAE	**New World Sparrows and Towhees**
Amphispiza bilineata	black-throated sparrow
Chondestes grammacus	lark sparrow
Zonotrichia leucophrys	white-crowned sparrow
PASSERIDAE	**Old World Sparrows**
* *Passer domesticus*	house sparrow
SITTIDAE	**Nuthatches**
Sitta canadensis	red-breasted nuthatch
STURNIDAE	**Starlings and Mynas**
* *Sturnus vulgaris*	European starling

MAMMALIA	MAMMALS
LEPORIDAE	**Rabbits and Hares**
** *Lepus californicus*	San Diego black-tailed jackrabbit
Sylvilagus audobonii	desert cottontail
CANIDAE	**Dogs**
Canis familiaris	domestic dog
Canis latrans	coyote (scat)
GEOMYIDAE	**Gophers**
Thomomys bottae	Botta's pocket gopher (burrows)
SCIURIDAE	**Squirrels**
Otospermophilus beecheyi	California ground squirrel

*Non-native
***Sensitive species*

Appendix A2

Quino Checkerspot Butterfly Survey Results 45-Day Report

May 2024

BLACKHAWK Environmental

1720 Midvale Drive
San Diego, CA, 92105
Phone: 619.972.7932
Phone: 619.972.8714
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May 20, 2024

Ms. Stacey Love
Recovery Permit Coordinator
USFWS Carlsbad Office
2177 Salk Ave.
Carlsbad, CA 92008

Quino Checkerspot Butterfly Survey Results 45-Day Report
County of San Diego Jacumba Fire Station #43 Project
San Diego County, California

Dear Ms. Love:

Blackhawk Environmental Inc. biologists Seth Reimers (ES 80703A-3), Ryan Quilley (ES 92462A-3), Lorena Bernal (ES 14749C-4), and Dustin Janeke (ES 045153-5) conducted United States Fish & Wildlife Service (USFWS)-protocol Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) surveys at the proposed County of San Diego Jacumba Fire Station #43 Project (Project) in the unincorporated community of Jacumba Hot Springs, San Diego County, California. This report includes project location & background, survey methods, results and conclusion sections.

PROJECT LOCATION & BACKGROUND

The Project covers approximately 5.01 acres within the unincorporated community of Jacumba Hot Springs in the Mountain Empire area of southeastern San Diego County (USGS 2021), located approximately one kilometer west of the Jacumba Airport and immediately east of Laguna Street, north of Old Highway 80 (Attachment A, Figure 1). The Survey Area included the 5.01-acre Project site, plus a 100-foot buffer along the rectangular-shaped parcel. The Project site is immediately bounded by fallow agricultural fields to the north and east, Old Highway 80 to the south, and rural residential residences to the west of the Survey Area. The Project site itself includes primarily fallow agricultural fields (Attachment A: Figures 1 and 2).

The Survey Area excluded fully developed areas (i.e., paved portions of Old Highway 80) but included all other land cover types (Figure 2). Topography of the survey area was predominantly flat, with furrows associated with historical row-crop cultivation throughout the Project site. Habitat was heavily dominated by weedy herbs, including London rocket (*Sisymbrium irio*), red-stemmed filaree (*Erodium cicutarium*), and short podded mustard (*Hirschfeldia incana*). Several fourwing saltbush (*Atriplex canescens*) shrubs were widely scattered in the Survey Area. Nonnative grasses in the Survey Area included foxtail barley (*Hordeum muirinum*), Brome grasses (*Bromus* spp.), and oat grass (*Avena* sp.). Shrub cover averaged about 2 percent overall.

The proposed Project includes a new fire station, parking lot and associated facilities of the fire station.

SURVEY METHODS

Blackhawk Environmental Senior Biologist Seth Reimers conducted a QCB habitat assessment on February 23, 2024, prior to the first survey. Following the assessment, the developed roadway of Old Highway 80 was excluded from the survey area, but all other habitats were included for protocol-level surveys. A total of 12 surveys were completed between February 23, 2024 and May 13, 2024. All surveys and nectar source documentation for this Project were completed by Blackhawk Environmental biologists Ryan Quilley (RQ), Seth Reimers (SR), Lorena Bernal (LB), or Dustin Janeke (DJ) (Table 1). Survey methods followed the latest USFWS QCB protocol (USFWS December 15, 2014).

The first survey on February 23 and each ensuing survey included a patterned search of the entire Survey Area with 100 percent visual coverage of all areas. All butterfly species and the number of each species observed during each survey were recorded, as well as suitable QCB nectar sources. All QCB host plant species and locations, if observed, were noted for later mapping. Following the initial assessment, QCB presence/absence surveys were conducted in suitable habitats generally once per week until the survey cycle was completed.

Protocol surveys were conducted during suitable weather conditions, generally in the late morning/early afternoon hours (Table 1). If weather conditions were too cool, rainy and/or windy to facilitate protocol level QCB surveys during a survey week, surveys were conducted during the following week, with no less than four days between surveys. The surveys were conducted by carefully walking slowly through QCB-suitable habitats while looking for QCB adults; care was taken on each step to examine the ground before setting foot to minimize or avoid the chance of accidentally steeping on larvae or eggs. Biologists visually searched for QCB during surveys, using binoculars as appropriate to view the Survey Area and identify butterfly species. All field data were recorded in the field, then transferred to data sheets in the Wildnote electronic application for inclusion in this report (Attachment B). All butterfly taxonomy used during QCB surveys referenced Kojiro Shiraiwa's 2010 book, *Butterflies of San Diego County*. Weather data were recorded in the field using digital anemometers and thermometers and are included in the survey conditions presented in Table 1.

Table 1. Survey Conditions

Date	Personnel	Start/End Times	Start/End Temperature (F°)	Start/End Wind Speed (mph)	Start/End Cloud Cover (%)	Start/End Precipitation
2/23/24	SR	1100-1200	63/63	8/6	10/10	none
3/1/24	DJ	1122-1237	70/69	9/11	0/0	none
3/8/24	SR	1230-1337	63/64	3/5	20/20	none
3/17/24	DJ	1505-1609	61/64	4/5	30/45	none
3/22/24	LB	1055-1200	70/73	4/5	85/65	none
3/28/24	DJ	1116-1242	68/69	6/10	70/70	none
4/3/24	DJ	1117-1243	70/75	2/2	0/0	none
4/12/24	RQ	1132-1235	74/81	13/12	0/0	none
4/17/24	DJ	1023-1142	78/81	6/3	1/2	none

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4/24/24	DJ	0943-1102	69/72	6/11	0/0	none
5/1/24	DJ	1233-1351	81/83	4/5	0/0	none
5/8/24	DJ	1039-1155	70/74	9/9	0/0	none

SURVEY RESULTS

No QCB adults or larvae or larval host plants were observed. Eight potentially suitable nectar sources were found in the survey area, but butterfly diversity and numbers were low. Most surveys yielded five or fewer flowering species. Butterfly diversity was dominated by white butterflies (Family Pieridae), with cabbage white (*Pieris rapae*) and checkered white (*Pontia protodice*) butterflies the most abundant throughout the survey.

Observed butterfly species included:

- Checkered white (*Pontia protodice*)
- Cabbage white (*Pieris rapae*)
- Sara orangetip (*Anthocharis sara sara*)
- California marble (*Euchloe hyantis*)
- Orange sulphur (*Colias eurytheme*)
- Harford's sulphur (*Colias harfordii*)
- Painted lady (*Vanessa cardui*)
- West coast lady (*Vanessa annabella*)
- Western pygmy blue (*Brephidium exilis exilis*)

Observed potential QCB nectar sources included:

- Goldfields (*Lasthenia californica*)
- London rocket (*Sisymbrium irio*)
- Common fiddleneck (*Amsinckia intermedia*)
- Redstem filaree (*Erodium cicutarium*)
- Short podded mustard (*Hirschfeldia incana*)
- Tumble mustard (*Sisymbrium altisissimum*)
- Common mustard (Brassica rapa)
- Herb sophia (Descurainia sophia)

Vegetation in the survey area consisted primarily of nonnative grassland dominated by multiple mustard species (*Sisymbrium* species) and foxtail barley (*Hordeum murinum*). Several large scattered fourwing saltbush (*Atriplex canescens*) were also present in the survey area. Additional vegetation communities included a disturbed road edge dominated by short podded mustard and a developed roadway (Old Hwy 80) which was not surveyed. Representative photographs of the Survey Area are presented in Attachment C.

.

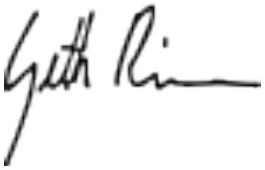
CONCLUSION

The QCB surveys were completed accordingly with USFWS protocol. No larval host plant patches were documented and no QCB were observed; therefore, QCB presence is not anticipated at this location. No specific QCB management recommendations are made in this report.

I certify that the information in this survey report and attached exhibits fully and accurately represents my work for the Jacumba Fire Station #43 Project QCB Surveys.

For questions on this report, please call 619-972-7932 or e-mail me at seth@blackhawkenv.com.

Sincerely,



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Dustin Janeke
Blackhawk Environmental, Inc.
Principal Biologist
USFWS Permit ES 045153-5

Seth Reimers
Blackhawk Environmental, Inc.
Senior Biologist
USFWS Permit ES 80703A-3

Ryan Quilley
Blackhawk Environmental, Inc.
Senior Biologist
USFWS Permit ES 92462A-3

Lorena Bernal
Blackhawk Environmental, Inc.
Senior Biologist
USFWS Permit ES 14749C-4

ATTACHMENTS

A: Figures

B: Wildnote Forms

C: Photo Pages

REFERENCES

Shiraiwa, Kojiro. 2010. *The Butterflies of San Diego County*. Self-published. 73 pgs.

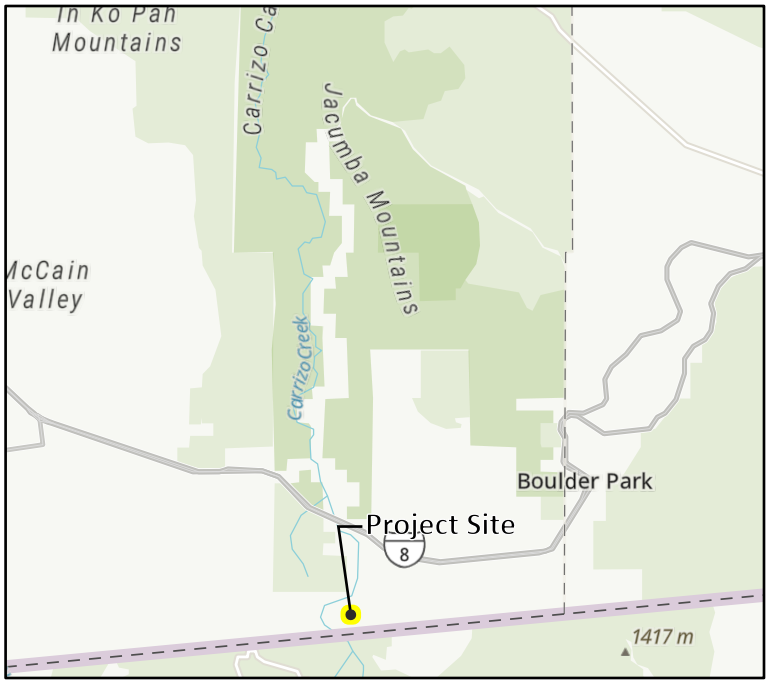
USFWS (United States Fish and Wildlife Service). 2014. *Quino Checkerspot Butterfly Survey Guidelines*. Carlsbad Field Office. Carlsbad, California. 8 pgs.

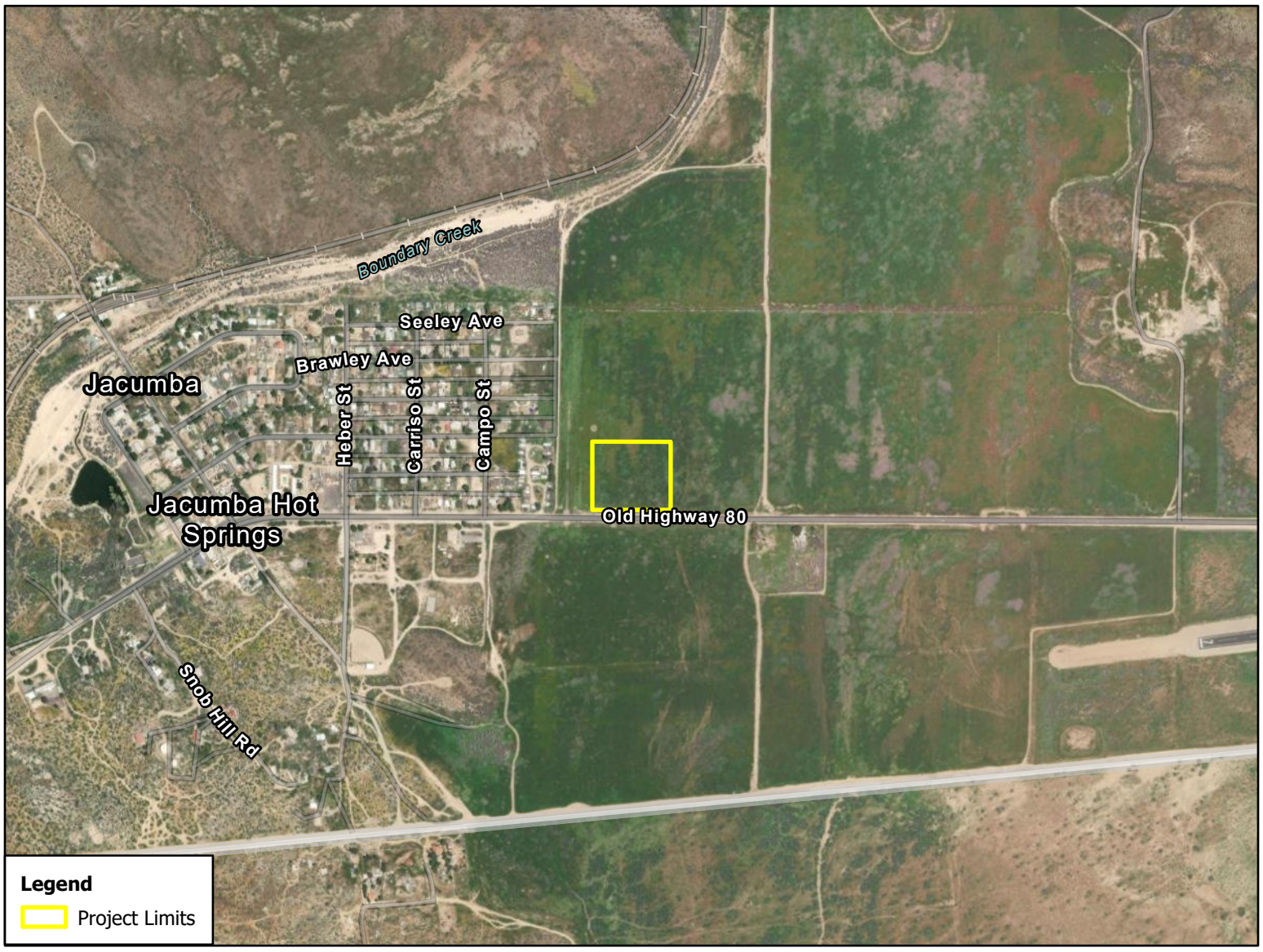
US Geological Survey. *Jacumba OE S quadrangle* [map] 1:24,000. 7.5 Minute Series (Topographic), 2021.

ATTACHMENT A

Figures

Blackhawk Environmental





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Feet

Figure 1

Project Vicinity and Location

Jacumba Fire Station Project

Blackhawk Environmental

5/16/2024

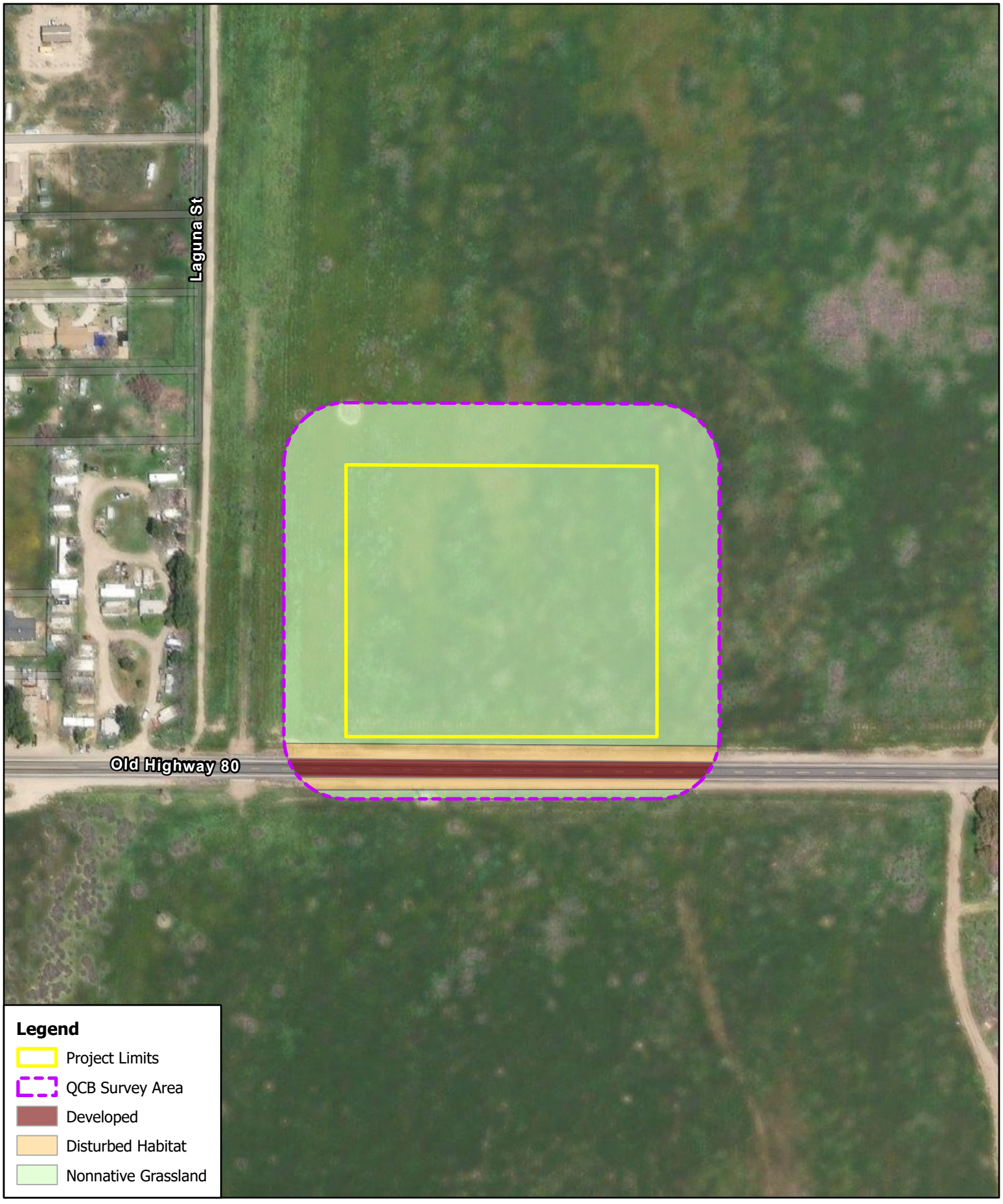


Figure 2

QCB Survey Results

Jacumba Fire Station Project

Blackhawk Environmental

5/16/2024

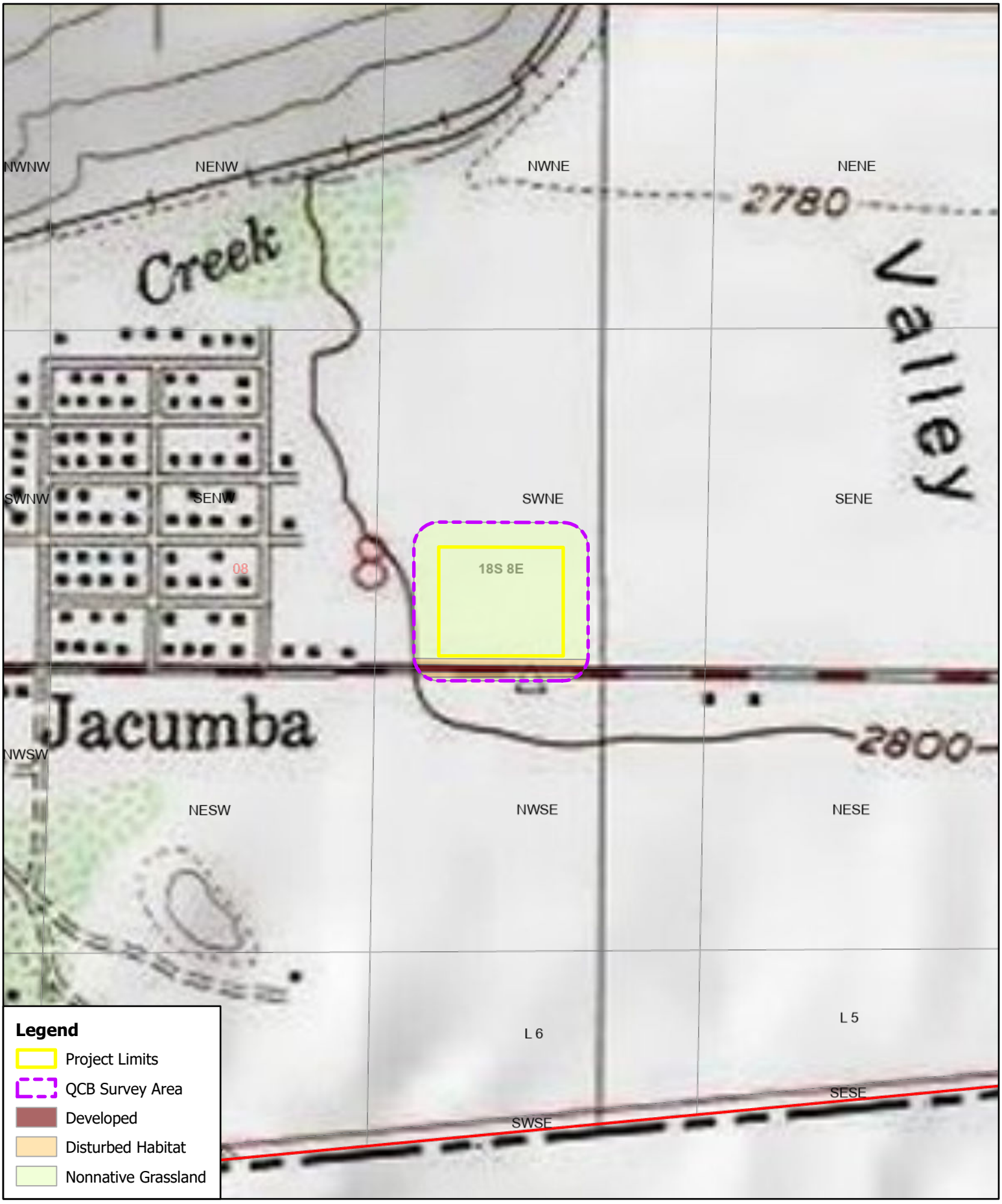


Figure 3

QCB Survey USGS Quad

Jacumba OE S USGS 7.5' Quad, Section 8 Township 18S Range 8E

Jacumba Fire Station Project

Blackhawk Environmental

5/16/2024

ATTACHMENT B

Wildnote Forms

Blackhawk Environmental

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	424443
Survey Date	02/23/2024
User	Seth Reimers

Survey Info

Surveyor Name	Seth Reimers (TE 80703A)
Additional Surveyors/Trainee	
Survey Area	Jacumba Fire Station
Survey Pass Number	1

Survey Conditions

Start Time	11:00 AM
Start Temp	63
Start Wind Speed (avg. mph)	8
Start Cloud Cover (%)	10
End Time	12:00 PM
End Temp	63
End Wind Speed (avg. mph)	6
End Cloud Cover (%)	10

Habitat Notes

Nectar Plants	*Erodium cicutarium* / Coastal heron's bill, Redstem filaree *Sisymbrium irio* / London rocket
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by HORMUR, SISIRI, and EROCIC

Butterfly Species Observed

Butterfly Species Observed	*Pieris rapae* / Cabbage White
Quino Checkerspot, Euphydryas editha quino	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	5 cabbage white butterflies total. No host plant observed.
Photos	None

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	426001
Survey Date	03/01/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	2

Survey Conditions

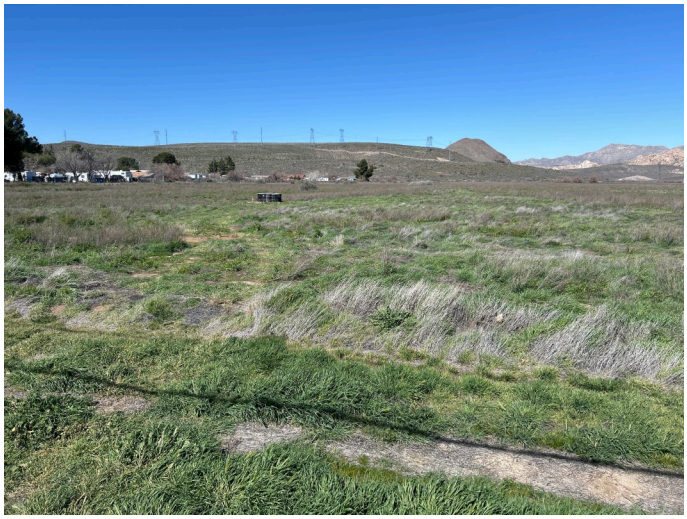
Start Time	11:22 AM
Start Temp	70
Start Wind Speed (avg. mph)	9.2
Start Cloud Cover (%)	0
End Time	12:37 PM
End Temp	69
End Wind Speed (avg. mph)	11
End Cloud Cover (%)	0

Habitat Notes

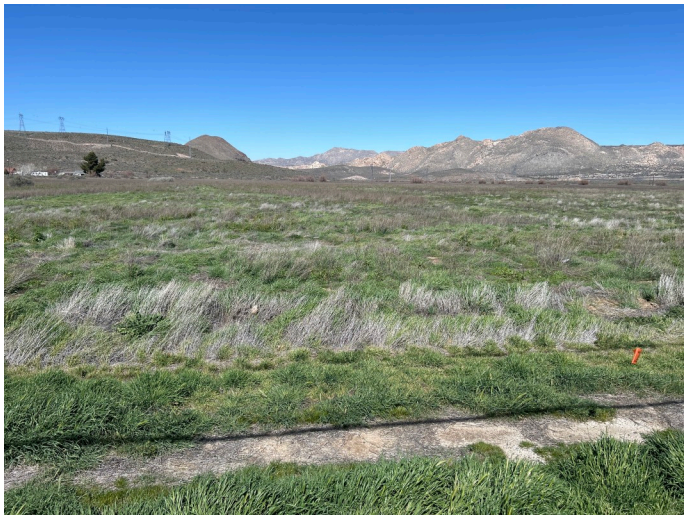
Nectar Plants	*Sisymbrium irio* / London rocket *Erodium cicutarium* / Coastal heron's bill, Redstem filaree
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by SISIRI and EROCIC and HIRINC.

Butterfly Species Observed

Butterfly Species Observed	*Euchloe hyantis lotta* / Desert Pearly Marble *Pieris rapae* / Cabbage White
Quino Checkerspot, Euphydryas editha quino	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	Unk white sp 6 California marble 2 Cabbage white 5
Photos	



View looking northwest across survey area.



View looking northeast across survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	427618
Survey Date	03/08/2024
User	Seth Reimers

Survey Info

Surveyor Name	Seth Reimers (TE 80703A)
Additional Surveyors/Trainee	
Survey Area	Jacumba Fire Station
Survey Pass Number	3

Survey Conditions

Start Time	12:30 PM
Start Temp	63
Start Wind Speed (avg. mph)	3
Start Cloud Cover (%)	20
End Time	01:37 PM
End Temp	64
End Wind Speed (avg. mph)	5
End Cloud Cover (%)	20

Habitat Notes

Nectar Plants	*Sisymbrium irio* / London rocket *Erodium cicutarium* / Coastal heron's bill, Redstem filaree *Sisymbrium altissimum* / Tumble mustard
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	No change from first survey

Butterfly Species Observed

Butterfly Species Observed	*Vanessa cardui* / Painted Lady *Brephidium exila* / Western Pygmy-Blue *Pieris rapae* / Cabbage White
Quino Checkerspot, Euphydryas editha quino	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	4 cabbage white butterflies 1 western pygmy blue butterfly 1 painted lady
Photos	None

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	429370
Survey Date	03/17/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	4

Survey Conditions

Start Time	03:05 PM
Start Temp	61
Start Wind Speed (avg. mph)	3.5
Start Cloud Cover (%)	30
End Time	04:09 PM
End Temp	64
End Wind Speed (avg. mph)	4.9
End Cloud Cover (%)	45

Habitat Notes

Nectar Plants	*Erodium cicutarium* / Coastal heron's bill, Redstem filaree *Hirschfeldia incana* / Mustard *Descurainia sophia* / Herb sophia *Sisymbrium irio* / London rocket *Sisymbrium altissimum* / Tumble mustard
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non native grassland dominated by EROCIC, HIRINC, and SISIRI.

Butterfly Species Observed

Butterfly Species Observed	
Quino Checkerspot Butterfly Observed	No
Additional Notes	No butterflies observed during protocol survey.
Photos	

View looking Northeast across survey area.

View looking Northwest across survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	440196
Survey Date	03/22/2024
User	Lorena Bernal

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Lorena Bernal (TE 14749C)
Survey Area	Jacumba Fire Station
Survey Pass Number	5

Survey Conditions

Start Time	10:55 AM
Start Temp	70
Start Wind Speed (avg. mph)	0-4
Start Cloud Cover (%)	85
End Time	12:00 PM
End Temp	73
End Wind Speed (avg. mph)	1-5
End Cloud Cover (%)	65

Habitat Notes

Nectar Plants	*Erodium cicutarium* / Coastal heron's bill, Redstem filaree *Sisymbrium irio* / London rocket *Sisymbrium altissimum* / Tumble mustard *Hirschfeldia incana* / Mustard
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by EROCIC, SISIRI and SISALT.

Butterfly Species Observed

Butterfly Species Observed	*Pieris rapae* / Cabbage White
Quino Checkerspot, Euphydryas editha quino	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	7 cabbage whites. One unknown blue species.
Photos	None

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	432754
Survey Date	03/28/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	6

Survey Conditions

Start Time	11:16 AM
Start Temp	67.8
Start Wind Speed (avg. mph)	5.8
Start Cloud Cover (%)	70
End Time	12:42 PM
End Temp	69
End Wind Speed (avg. mph)	9.6
End Cloud Cover (%)	70

Habitat Notes

Nectar Plants	*Erodium cicutarium* / Coastal heron's bill, Redstem filaree *Lasthenia californica* / Goldfields *Amsinckia intermedia* / Common fiddleneck *Descurainia sophia* / Herb sophia *Sisymbrium altissimum* / Tumble mustard *Sisymbrium irio* / London rocket *Hirschfeldia incana* / Mustard
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non native grassland dominated by EROCIC, SISIRI, and HIRINC.

Butterfly Species Observed

Butterfly Species Observed	*Pieris rapae* / Cabbage White *Pontia protodice* / Checkered White *Vanessa annabella* / West Coast Lady
Quino Checkerspot, Euphydryas editha quino	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	Clouds are very high and thin, more haze than cloud. Not affecting ground conditions or butterfly activity.

Some butterfly activity. Most of the activity is on the west edge of site.

San Diego gopher snake

Checkered white: 5
Cabbage white: 7
White sp.: 1
West Coast Lady: 2

Photos

View northwest across the survey area.

View northeast across the survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	434078
Survey Date	04/03/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	7

Survey Conditions

Start Time	11:17 AM
Start Temp	70
Start Wind Speed (avg. mph)	1.5
Start Cloud Cover (%)	0
End Time	12:43 PM
End Temp	75
End Wind Speed (avg. mph)	2.4
End Cloud Cover (%)	0

Habitat Notes

Nectar Plants	*Descurainia sophia* / Herb sophia *Erodium cicutarium* / Coastal heron's bill, Redstem filaree *Amsinckia intermedia* / Common fiddleneck *Sisymbrium irio* / London rocket *Lasthenia californica* / Goldfields *Sisymbrium altissimum* / Tumble mustard *Hirschfeldia incana* / Mustard *Brassica rapa* / Common mustard, Turnip, Field mustard
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominted by EROCIC, SISIRI, and HIRINC.

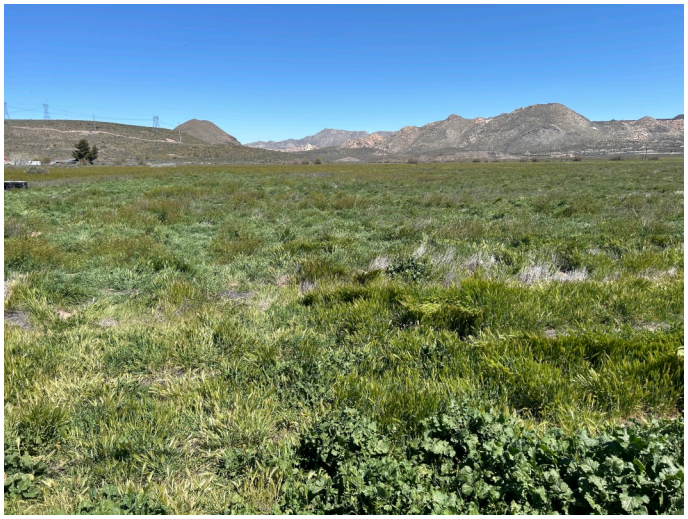
Butterfly Species Observed

Butterfly Species Observed	*Anthocharis sara sara* / Pacific Sara Orangetip *Pontia protodice* / Checkered White *Vanessa annabella* / West Coast Lady
Quino Checkerspot, Euphydryas editha quino	0
Quino Checkerspot Butterfly Observed	No

Additional Notes	Butterflies more common on western half of site. White sp. 6 Blue sp. 1 Sarah's orange tip. 1 Checkered white. 2 West coast lady. 1

Photos

View northwest across the survey area.



View northeast across the survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	436538
Survey Date	04/12/2024
User	Ryan Quilley

Survey Info

Surveyor Name	Ryan Quilley (TE 92462A)
Additional Surveyors/Trainee	
Survey Area	Jacumba Fire Station
Survey Pass Number	8

Survey Conditions

Start Time	11:32 AM
Start Temp	74
Start Wind Speed (avg. mph)	13
Start Cloud Cover (%)	0
End Time	12:35 PM
End Temp	81
End Wind Speed (avg. mph)	12
End Cloud Cover (%)	0

Habitat Notes

Nectar Plants	*Erodium cicutarium* / Coastal heron's bill, Redstem filaree *Sisymbrium irio* / London rocket *Sisymbrium altissimum* / Tumble mustard *Hirschfeldia incana* / Mustard *Amsinckia intermedia* / Common fiddleneck
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by EROCIC, SISIRI, and HIRINC.

Butterfly Species Observed

Butterfly Species Observed	*Pieris rapae* / Cabbage White
Quino Checkerspot, Euphydryas editha quino	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	11 cabbage whites. Approx ground temp 82 (start), 89 (end)
Photos	None

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	437858
Survey Date	04/17/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	9

Survey Conditions

Start Time	10:23 AM
Start Temp	78
Start Wind Speed (avg. mph)	6
Start Cloud Cover (%)	1
End Time	11:42 AM
End Temp	81
End Wind Speed (avg. mph)	3
End Cloud Cover (%)	2

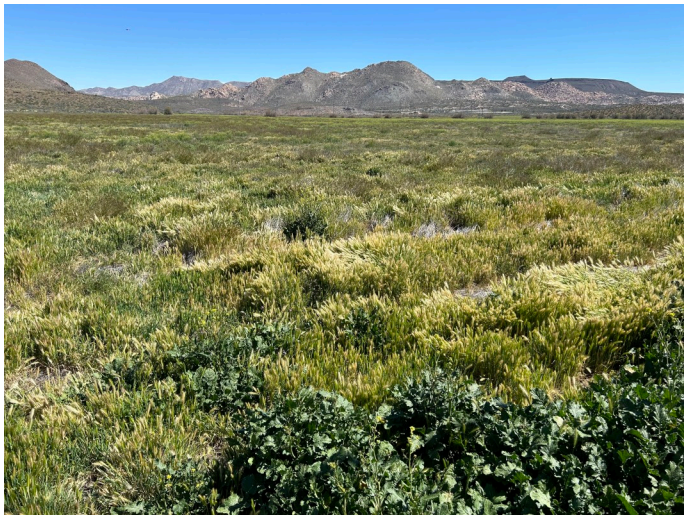
Habitat Notes

Nectar Plants	*Brassica rapa* / Common mustard, Turnip, Field mustard *Erodium cicutarium* / Coastal heron's bill, Redstem filaree *Hirschfeldia incana* / Mustard *Sisymbrium altissimum* / Tumble mustard *Sisymbrium irio* / London rocket
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by EROCIC, SISIRI, and HIRINC.

Butterfly Species Observed

Butterfly Species Observed	*Colias eurytheme* / Orange Sulphur *Pieris rapae* / Cabbage White *Pontia protodice* / Checkered White
Quino Checkerspot, Euphydryas editha quino	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	Checkered white. 11 Cabbage white. 2 Orange Sulphur 2 White sp. 8

Photos



View northeast across the survey area.

View northwest across the survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	440478
Survey Date	04/24/2024
User	Dustin Janeke

Survey Info

Surveyor Name	
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	10

Survey Conditions

Start Time	09:43 AM
Start Temp	69
Start Wind Speed (avg. mph)	6
Start Cloud Cover (%)	0
End Time	11:02 AM
End Temp	72
End Wind Speed (avg. mph)	11
End Cloud Cover (%)	0

Habitat Notes

Nectar Plants	*Hirschfeldia incana* / Mustard *Sisymbrium altissimum* / Tumble mustard *Sisymbrium irio* / London rocket *Erodium cicutarium* / Coastal heron's bill, Redstem filaree *Brassica rapa* / Common mustard, Turnip, Field mustard
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by EROCIC, SISIRI, and HIRINC.

Butterfly Species Observed

Butterfly Species Observed	*Pontia protodice* / Checkered White *Pieris rapae* / Cabbage White
Quino Checkerspot, Euphydryas editha quino	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	London rocket (SISIRI) and tumble mustard (SISALT) are almost finished flowering. Filaree (EROCOC) is nearing the end of bloom. Short-podded mustard (HIRINC) is still in substantial bloom. Checkered white. 6

Cabbage white. 2
White sp. 6

Photos

View northwest across the survey area.

View northeast across the survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	443277
Survey Date	05/01/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	11

Survey Conditions

Start Time	12:33 PM
Start Temp	81
Start Wind Speed (avg. mph)	4
Start Cloud Cover (%)	0
End Time	01:51 PM
End Temp	83
End Wind Speed (avg. mph)	5
End Cloud Cover (%)	0

Habitat Notes

Nectar Plants	*Amsinckia intermedia* / Common fiddleneck *Hirschfeldia incana* / Mustard *Sisymbrium irio* / London rocket *Erodium cicutarium* / Coastal heron's bill, Redstem filaree
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by EROCIC, SISIRI, and HIRINC.

Butterfly Species Observed

Butterfly Species Observed	*Colias harfordii* / Harford's Sulphur *Pontia protodice* / Checkered White
Quino Checkerspot, Euphydryas editha quino	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	London rocket is almost completely in seed. Shortpodded mustard is most significant nectar source, mostly along the south edge along the road margin. Checkered white. 8 Hartford's Sulphur 1 White sp. 6

Photos

View northwest across the survey area.

View northeast across the survey area.

Quino Checkerspot Butterfly Protocol Survey - Jacumba Fire Station V1

Project	Jacumba Fire Station - 2024
ID	445781
Survey Date	05/08/2024
User	Dustin Janeke

Survey Info

Surveyor Name	Other Permitted Personnel
Additional Surveyors/Trainee	Dustin Janeke
Survey Area	Jacumba Fire Station
Survey Pass Number	12

Survey Conditions

Start Time	10:39 AM
Start Temp	70
Start Wind Speed (avg. mph)	9
Start Cloud Cover (%)	0
End Time	11:55 AM
End Temp	74
End Wind Speed (avg. mph)	9
End Cloud Cover (%)	0

Habitat Notes

Nectar Plants	*Sisymbrium irio* / London rocket *Sisymbrium altissimum* / Tumble mustard *Hirschfeldia incana* / Mustard *Erodium cicutarium* / Coastal heron's bill, Redstem filaree
Host Plants Observed	
Vegetation Communities Surveyed (inc. dominant ssp)	Non-native grassland dominated by HIRINC, SISIRI and EROCIC.

Butterfly Species Observed

Butterfly Species Observed	*Pieris rapae* / Cabbage White *Pontia protodice* / Checkered White
Quino Checkerspot, Euphydryas editha quino	0
Quino Checkerspot Butterfly Observed	No
Additional Notes	90% of plants past bloom. Short podded mustard (HIRINC) on north road edge is most substantial bloom left.
Photos	

View east along Old Hwy 80 of north road edge.

View Northwest across survey area.

View northeast across survey area.

ATTACHMENT C

Photo Pages

Blackhawk Environmental

Photograph 1: Northeast-facing view of the Survey Area during Survey 4. Photograph taken from the northern edge of Old Hwy. 80 showing the Survey Area dominated by *Erodium cicutarium*, *Sisymbrium irio,* and non-native grasses.

Photograph 2. Northwest-facing view of the Survey Area during Survey 4. Photograph taken from the northern edge of Old Hwy. 80 showing the Survey Area dominated by *Erodium cicutarium*, *Sisymbrium irio,* and non-native grasses.

Photograph 3. Northeast-facing view of the Survey Area during Survey 12. Photograph taken from the northern edge of Old Hwy. 80 showing the Survey Area with senescent *Erodium cicutarium*, *Sisymbrium irio and nonnative grasses. Hirschfeldia incana* was the only available nectar source by the last survey.

Photograph 4: Northwest-facing view of the Survey Area during Survey 12. Photograph taken from the northern edge of Old Hwy. 80 showing the Survey Area with senescent *Erodium cicutarium*, *Sisymbrium irio,* and non-native grasses. The Survey Area lacked significant areas of bare ground and most of the site was covered in thick thatch.

Appendix A3

Habitat Assessment and Burrowing Owl Focused Survey Results

June 2024

BLACKHAWK Environmental

1720 Midvale Drive
San Diego, CA, 92105
Phone: 619.972.7932
Phone: 619.972.8714
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June 21, 2024

Tristan Evert
Ascent Environmental, Inc.
1230 Columbia Street, Suite 440
San Diego, CA 92101-8517

Subject: Habitat Assessment and Burrowing Owl Focused Survey Results for the Jacumba Fire Station #43 Project

Dear Mr. Evert,

This letter report details the results of the 2024 breeding season surveys for burrowing owl (*Athene cunicularia*) conducted within the new proposed location for the County of San Diego Department of General Services Fire Authority - Jacumba Fire Station #43 Project site (Project Site). The Project Site is located in the unincorporated community of Jacumba, immediately north of Old Highway 80, east of Laguna Street, and approximately 0.36 miles north of the international border fence that separates the United States from Mexico (Attachment A, Figure 1). The 5.0-acre Project Site occurs in Section 9, Township 18 South, Range 8 East, of the U.S. Geological Survey (USGS) 2021 7.5-minute topographic map, *Jacumba* quadrangle (USGS 2021).

Blackhawk Environmental, Inc. (Blackhawk) biologists conducted burrowing owl focused surveys in suitable habitat in accordance with the guidelines developed by the California Department of Fish and Wildlife (CDFW 2012). Breeding season surveys were conducted to determine the presence or absence of the species within the Project Site and a 150-meter buffer. **No burrowing owls or their sign were detected.** A discussion of the results of the conducted surveys is provided below.

Burrowing Owl

The burrowing owl is a CDFW Species of Special Concern (SSC) that primarily breeds in the western United States and northern Mexico. Additional populations exist year-round in Florida, Cuba, and some Caribbean islands. As a year-round resident in San Diego County, breeding burrowing owls remain in only five primary areas in San Diego County, including Otay Mesa, Imperial Beach, Naval Air Station North Island, Warner Valley, and Borrego Valley (Unitt 2004). The species occurs in numerous habitat types, and preferred habitats are largely open with scattered, low-lying vegetation and/or bare ground prevalent over wide areas. Unlike other owl species, the burrowing owl is diurnally active, with peaks of activity during crepuscular hours; however, it is also nocturnally active and can be active anytime over a 24-hour period. It consumes a variety of prey items, including reptiles, birds, small rodents, amphibians, and bats, but prefers large arthropods (Haug et al. 1993). Also unique to this owl species, it is a subterranean dweller. It usually does not dig its own burrows but prefers to utilize and/or modify existing openings in the ground created by other animals or humans as shelter and nesting sites.

The breeding season in California extends from the beginning of February through the end of August. Up to 10 eggs are laid in a shallow nest lined with grass, cough pellets, trash, excrement and other items inside a selected burrow, pipe, culvert, nest box or other subterranean cavity. The female incubates for 21 to 30 days, and both parents feed fledglings until they can fend for themselves. The young then disperse to available habitats with suitable burrow sites in the summer and fall months.

Survey Methods

Blackhawk biologists Hayley Milner, Seth Reimers, Desiree Johnson, and Tawni Gotbaum conducted a habitat assessment and burrowing owl focused surveys in accordance with the guidelines developed by the CDFW (CDFW 2012). Prior to conducting focused surveys, a literature review was conducted that included analysis of California Natural Diversity Database (CNDDB) records out to two miles from the Project Site. One record, from 1994, of a single burrowing owl was identified during the database query (CDFW 2024), greater than 1 mile east of the Project Site.

The current surveys for this Project included a habitat assessment and four breeding season burrowing owl surveys. For the purposes of this report, the "Survey Area" includes the Project's proposed ground disturbance footprint (Project Site) and a 150-meter buffer (Figure 2). Biologists walked a maximum of 20-meter-wide belt transects within the Survey Area to provide 100-percent visual coverage of the Survey Area. Transects were spaced as close as 10 meters, depending on vegetative density and topography. While walking the transects, biologists specifically searched for burrowing owl, suitable burrowing owl burrows, and/or burrowing owl sign (i.e., cough pellets, whitewash, feathers, tracks, nest decorations). Biologists paused at least every 100 meters, as appropriate, to scan for burrowing owls using binoculars and/or the naked eye. In addition, the biologists listened for burrowing owl calls. All burrowing owl-relevant data and wildlife species were recorded in the field notes of the biologists. All observed burrowing owl-suitable burrows and habitats are shown on Figure 2. Survey conditions for each survey pass are presented in Table 1.

Vegetation community classifications in this report follow Oberbauer et al. (2008), which is based on Holland (1986). CDFW guidelines call for the use of Sawyer et al. (2009); however, Sawyer et al. (2009) does not contain a vegetation classification equivalent for disturbed land, which occurs on-site.

Table 1: Survey Conditions							
Date	**Survey Type**	**Personnel**	**Start/End Times**	**Start/End Temperature (F°)**	**Start/End Wind Speed (mph)**	**Start/End Cloud Cover (%)**	**Start/End Precipitation**
3/13/24	Habitat Assessment and Survey #1	Seth Reimers Hayley Milner	0650-1100	48/51	3-7/4-8	80/65	0/0
4/18/24	Survey #2	Hayley Milner Desiree Johnson	0628-0814	55/58	0-1/0-1	15/55	0/0
5/24/24	Survey #3	Hayley Milner Desiree Johnson	0625-0805	54/56	0-1/0-1	90/80	0/0
6/18/24	Survey #4	Desiree Johnson Tawni Gotbaum	0630-0800	61/69	0-1/0-2	0/0	0/0

Existing Conditions

The Project Site is bounded by Old Highway 80 to the south and undeveloped land to the north, west, and east (see Figure 2). The parcel is relatively flat but contains small berms associated with previous grading running north-south throughout the entirety of the Project Site but are particularly evident within the western portion of the Project Site. Within the Survey Area, a stormwater conveyance channel runs north-south near the western boundary of the Project Site where it eventually flows south under Old Highway 80. Only one soil type occurs in the Survey Area: Reiff fine sandy loam, 0 to 2 percent slopes (U.S. Department of Agriculture 1973).

Habitat Assessment Results

A burrowing owl habitat assessment was conducted on March 13, 2024 within the Survey Area to evaluate the suitability of the habitat for this species. The Survey Area supports four land cover/habitat types: non-native grassland, urban/developed, disturbed, and four-wing saltbush scrub. The entirety of the non-native grassland and saltbush scrub habitats within the Survey Area were determined to be suitable for burrowing owls and were therefore included in the focused surveys. Developed areas associated with Old Highway 80 were determined unsuitable for burrowing owl and were therefore excluded from the focused surveys. Developed and disturbed areas associated with the trailer park to the west of Laguna Street were largely excluded as well due to the inaccessibility and unsuitability of the areas, with the exception of a single open lot consisting of non-native grassland within the northwest corner of the Survey Area that was surveyed through binoculars. Descriptions for each of the four land cover/habitat types are detailed below.

Non-native Grassland

Non-native grassland habitat was dominated by London rocket (*Sisymbrium irio*), red-stem filaree (*Erodium cicutarium*), wall barley (*Hordeum murinum*), short-pod mustard (*Hirschfeldia incana*), and wild oat (*Avena* sp.). The entirety of the Survey Area was comprised of herbaceous coverage, with the only shrub coverage consisting of a lone fourwing saltbush in the northwest corner. Herbaceous coverage was between 85 to 100 percent.

Disturbed

Disturbed habitat characterized the Old Highway 80 road shoulder and consisted of mostly bare ground with sparse non-native herbaceous species such as short-pod mustard and red-stem filaree.

Developed

Developed land consisted of the pavement of Old Highway 80 and the maintained bare ground shoulder bordering Old Highway 80 on the north and south sides. Additional developed land included other paved and dirt roads and developments associated with the trailer park west of the Project site.

Saltbush Scrub

Saltbush Scrub habitat occurs as small patches within the southwestern and southeastern corners of the Survey Area and is dominated by fourwing saltbush (*Atriplex canescens*) with an herbaceous layer dominated by London rocket, red-stem filaree, and short-pod mustard. Total shrub cover within this habitat type ranges between 10 and 50 percent with an average height of 2.5 feet.

Suitable burrows were detected throughout the Survey Area during the habitat assessment; however, no whitewash, feathers, pellets, or bones were observed within or adjacent to these burrows.

Focused Burrowing Owl Survey Results

Focused burrowing owl surveys were conducted on four separate dates: March 13, April 18, May 24, and June 18, 2024. All four surveys were conducted between morning civil twilight and 8:30 a.m. Belt transects were walked through all suitable habitat identified within the Survey Area. No burrowing owl or sign of active burrows used by burrowing owls were detected at the time the surveys were completed. Suitable burrows were found mostly concentrated within the western half of the Survey Area. The focused burrowing owl surveys resulted in 21 unoccupied suitable burrowing owl burrows and zero suitable burrowing owl burrow complexes within Survey Area; five unoccupied suitable burrowing owl burrows were found within the Project site itself. **No burrowing owls or burrowing owl signs were observed within the Project site and/or Survey Area** (Figure 2).

Burrows ranged in size from 10 to 30 centimeters in diameter and all suitable burrows appeared to be former California ground squirrel (*Otospermophilus beecheyi*) and white-tailed antelope squirrel (*Ammospermophilus leucurus*) burrows. About half of the burrows were located on flat terrain within

openings of non-native grassland, while the other half were located along the banks of the stormwater conveyance channel immediately west of the Project Site.

Conclusion and Mitigation Requirements

Although there is moderate potential for this species to occur based on one historical record, located greater than 1 mile east of the Project Site and the presence of suitable habitat and burrows on-site, no burrowing owl, active burrows, or burrowing owl signs were observed during the surveys. None-the-less, burrowing owls are known to migrate through the area at different times of the year; therefore, two pre-construction Take-Avoidance surveys are recommended to ensure potential direct impacts, such as loss of individuals, to the species are less than significant. The first survey shall be conducted no more than 14 days prior to the initiation of ground disturbing and/or vegetation clearing activities. The second survey shall be conducted within 24 hours of initial ground disturbing and/or vegetation clearing activities. These surveys will include all areas where suitable habitat is present within the Survey Area (CDFW 2012).

If you have any questions concerning this letter report, feel free to contact me anytime at hayley@blackhawkenv.com or 585-739-9864.

Sincerely,

Hayley Milner
Staff Biologist

References

California Department of Fish and Wildlife (CDFW)
2024 California Natural Diversity Database (CNDDB). RareFind Version 3.1.0. Database Query for the *Jacumba* California, USGS 7.5-minute quadrangles. Wildlife and Habitat Data Analysis Branch. Version dated March 3, 2024.
2012 Staff Report on Burrowing Owl Mitigation. March.

Haug, E.A., B.A. Millsap, and M.S. Martell
1993 Burrowing Owl. *The Birds of North America, No. 61*. Edited by A. Poole and F. Gill.

Holland, R.F.
1986 Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, California Department of Fish and Game. October.

Oberbaur, T., M. Kelly, and J. Buegge
2008 Draft Vegetation Communities of San Diego County. March. Based on Preliminary Descriptions of the Terrestrial Natural Communities of California, Robert F. Holland, Ph.D., October 1986.

Sawyer, J.O., T. Keeler-Wolf, and J. Evens
2009 *A Manual of California Vegetation*, 2nd ed. California Native Plant Society. Sacramento.

U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS)
1973 Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed [March 2024].

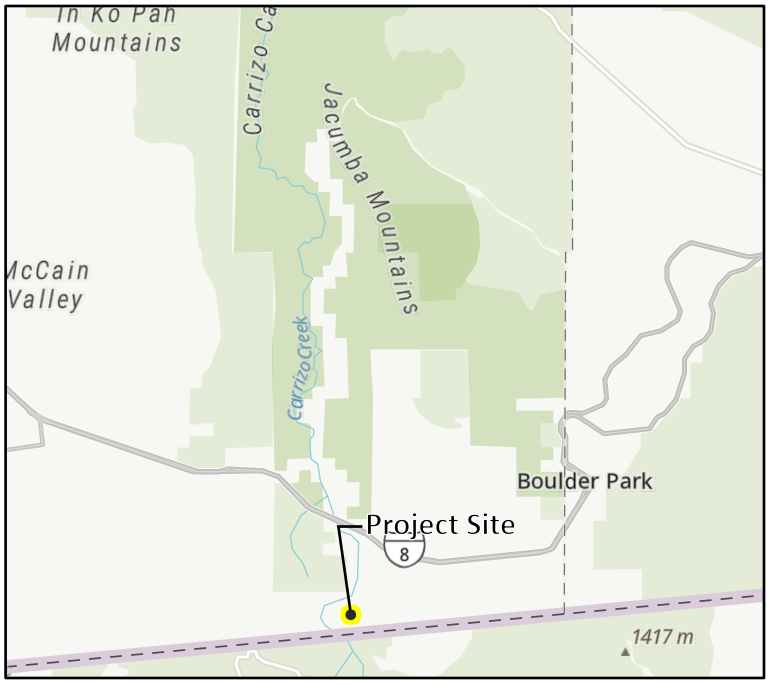
U.S. Geological Survey (USGS)
2021 7.5 Minute Topographic Quadrangle Map for *Jacumba*, California.

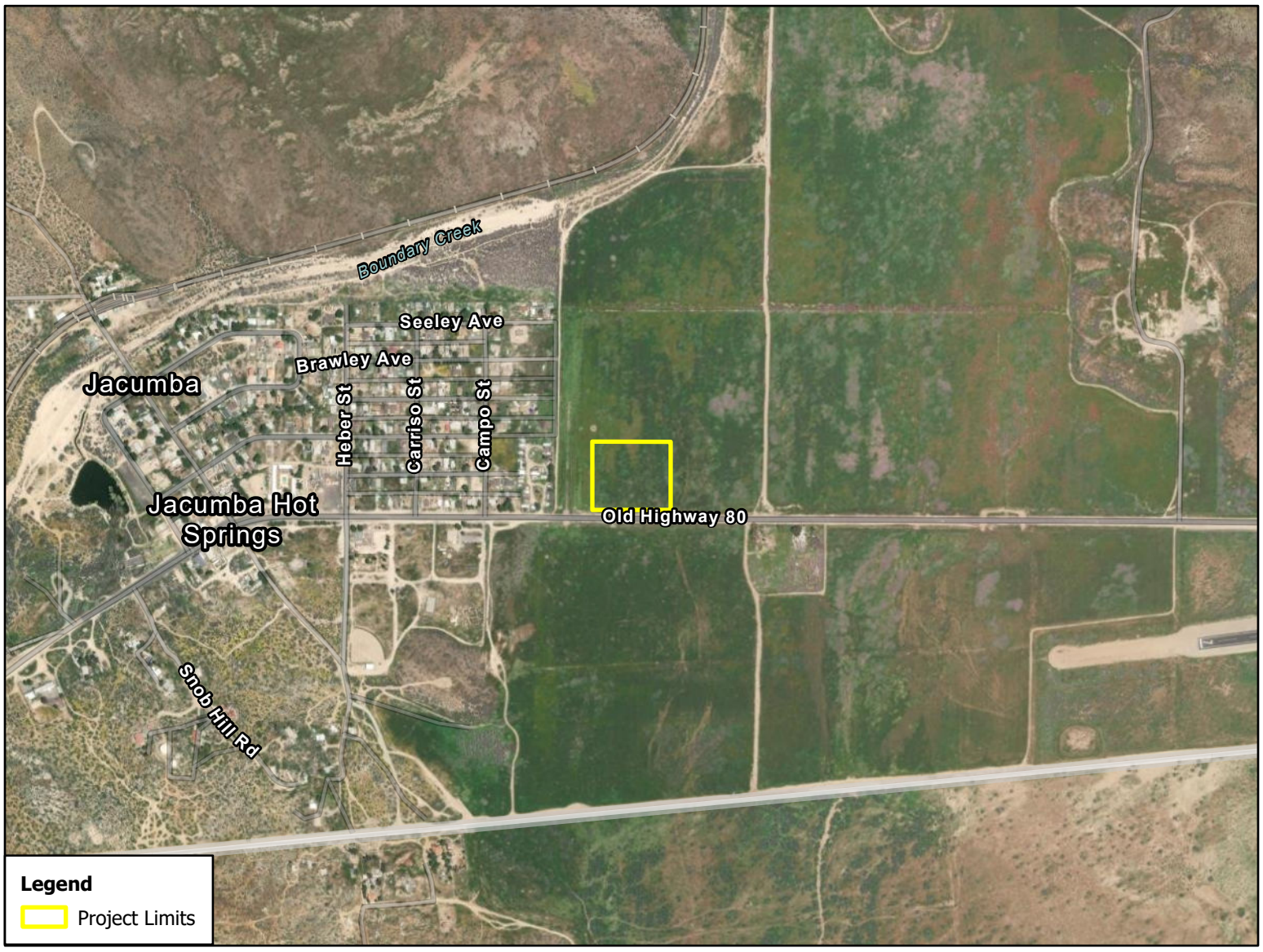
Unitt, Philip
2004 San Diego County Bird Atlas. October.

ATTACHMENT A

Figures

Blackhawk Environmental





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Feet

Figure 1

Project Vicinity and Location

Jacumba Fire Station Project

Blackhawk Environmental

5/29/2024

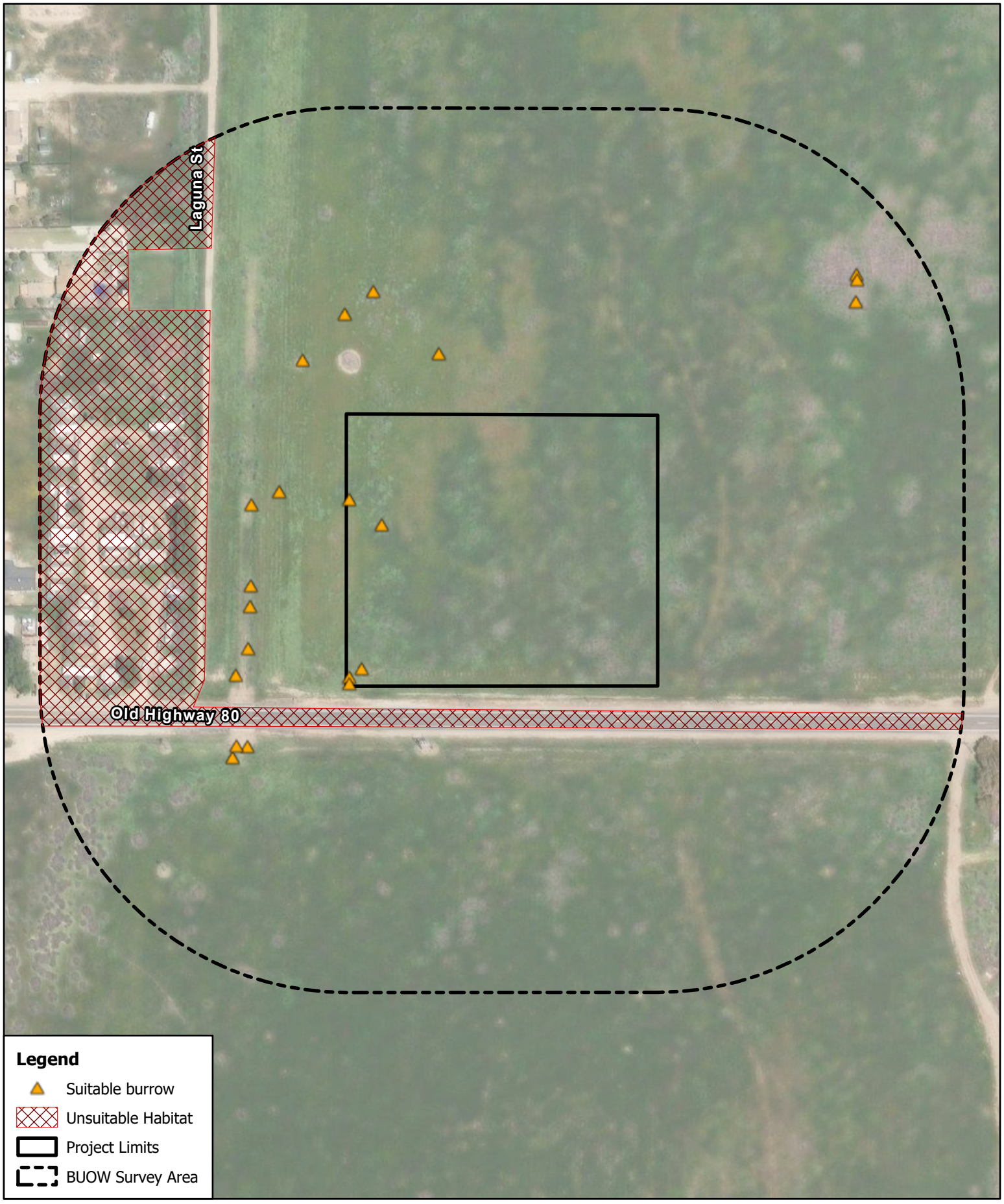

Figure 2

Burrowing Owl Survey Results

Jacumba Fire Station Project

Blackhawk Environmental

6/20/2024

ATTACHMENT B

Photo Pages

Blackhawk Environmental

Photograph 1: Southwest-facing view of the Survey Area consisting of non-native grassland, taken from the northeast corner of the Survey Area.

Photograph 2: Southeast-facing view of the Survey Area consisting of non-native grassland, taken from the northwest corner of the Survey Area.

Photograph 3: East-facing view of disturbed and non-native grassland habitats along the southern boundary of the Project Site north of Old Highway 80.

Photograph 4: Southeast-facing view of saltbush scrub habitat within the southwestern corner of the Survey Area.

Photograph 5: Southwest-facing view of the Survey Area consisting of non-native grassland and disturbed habitat south of Old Highway 80.

Photograph 6: North-facing view of the stormwater conveyance channel that runs north-south immediately west of the Project Site.

Photograph 7: North-facing view of a suitable burrow located within the northeast corner of the Survey Area.

Photograph 8: South-facing view of a suitable burrow located in the southwestern corner of the Project Site.

Photograph 9: South-facing view of a suitable burrow located along the bank at the southern end of the stormwater conveyance channel.

Photograph 10: Representative photograph of a potential suitable burrow with spiderwebs in front of entrance, indicating inactivity.