

Biological Assessment Report

Rancho 30 LLC

Indoor Cultivation Facility

Adelanto, California

APNs: 312801102, 312801103, 312801104

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ABOUT BLOOM BIOLOGICAL, INC,

For more than 45 years, Bloom Biological, Inc. (BBI) has provided biological consulting services for large and small clients. Our resume of services includes raptor and endangered species research, biological monitoring, impact assessment, permitting, conservation planning and geospatial analysis. Our innovative approach has provided solutions to complex problems for clients and projects throughout a range of industries including alternative energy, residential development, and the public sector. Collectively, the management and staff of BBI hold permits or memoranda of understanding for participating in the conservation and recovery of more than a dozen endangered or threatened species, as well as several other special-status species, in California and the western United States. Over the years, BBI has established an impeccable relationship with the resource agencies, project proponents, and environmental organizations by skillfully balancing the needs and objectives of land planning, resource conservation, and the public interest. In addition to our work in California and the western United States, BBI biologists have worked in Alaska, Central and South America, Europe, Southern Asia, and the western Pacific. BBI is a certified Small Business Enterprise and Woman-owned Business Enterprise.

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1.0 EXECUTIVE SUMMARY

Bloom Biological, Inc. (BBI) was retained by Phil Martin & Associates in March of 2023 to conduct a Biological Assessment of the proposed indoor cultivation facility, Rancho 30 LLC (Project) located at APN 312801102, 312801103, 312801104 on 30.81 acres of vacant desert land southwest of the intersection of Rancho Rd. and Raccoon Ave. in Adelanto, San Bernardino County, California. This Biological Assessment is prepared in order to summarize the biological data for the proposed Project, document the project's potential biological impacts, and provide recommendations for reducing, avoiding, and/or mitigating those potential impacts.

The Project was assessed for the presence/absence of several species designated as Species of Special Concern (SSC) by the California Department of Fish and Wildlife (CDFW), threatened or endangered under the California Endangered Species Act (CESA) or federal Endangered Species Act (ESA), or protected by city or county ordinance. The presence/absence and the potential for the following species to occur onsite was assessed through literature review and field survey: Mojave desert tortoise (*Gopherus agassizii*), Mohave ground squirrel (*Xerospermophilus mohavensis*), Burrowing Owl (*Athene cunicularia*), Joshua tree (*Yucca brevifolia*), Swainson's Hawk (*Buteo swainsoni*), LeConte's Thrasher (*Toxostoma lecontei*), Loggerhead Shrike (*Lanius ludovicianus*), and beaver dam breadroot (*Pediomelum castoreum*).

Biological surveys were conducted between 9 April and 8 July 2023, for a total of 21 survey days. The project site is comprised of one vegetation community: creosote bush-white bursage (*Larea tridentata-Ambrosia dumosa*) shrubland alliance. An unnamed dirt road passes through the eastern region of the site and the site is moderately disturbed. Field surveys followed the requirements provided in the applicable species-specific protocols developed by the U.S. Fish and Wildlife Service (USFWS) and CDFW.

Mojave desert tortoise, Mohave ground squirrel, and Burrowing Owl were found to be absent from the survey area. Thirty-four (34) Joshua trees are present throughout the project site in a scattered distribution. Of the 34 trees, 16 are less than 1 m in height, 15 are greater than or equal to 1 m and less than 5 m in height, and 3 are 5 m or taller. One Loggerhead Shrike was observed onsite but did not appear to be nesting within the project boundary. Habitat suitability for Swainson's Hawk, LeConte's Thrasher, and beaver dam breadroot is low and these species are unlikely to occur in the vicinity of the Project. Nesting birds were observed within 500 ft of the Project. No wetland or water resources are present onsite.

Recommendations for reducing, avoiding, and/or mitigating potential project impacts to Joshua trees, Mojave desert tortoise, Burrowing Owl, nesting birds, and water resources are provided in Section 5.0 of this document. Mitigation for Joshua tree removal will require consultation with CDFW and may include payment of an in-lieu mitigation fee for each Joshua tree removed from the site. Recommendations for reducing or avoiding potential impacts to offsite water resources via runoff into the storm drain network involves implementation of stormwater Best Management Practices. Potential impacts of this project are reduced to less than significant with the recommendations provided herein.

2.0 PROJECT OVERVIEW

2.1 Project Information

The proposed Project consists of the construction of an indoor cultivation facility (Rancho 30 LLC) on three vacant parcels consisting of a combined 30.81 acres (1,342,154.1 square feet) located southwest of the intersection of Rancho Rd and Raccoon Ave in Adelanto, California. The Project proposes an indoor cultivation operation with ten 30,000 square foot cultivation buildings and ten 10,000 square foot warehouse buildings. The Project will be developed in phases depending upon the market. Phase 1 proposes two 30,000 square foot cultivation buildings and one 10,000 square foot warehouse building. The Project is scheduled to start construction in the fourth quarter of 2025.

2.2 Project Location

The proposed Project is located on three parcels [APN: 3128-011-02-0000 (11.09 acres), 3128-011-03-0000 (10.28 acres), and 3128-011-04-000 (9.48 acres)] of approximately 30.85-acres of undeveloped, vacant land bordered by Rancho Rd. to the north, Racoon Ave. to the east, vacant land to the south, and Mesa Lind Dr. to the west. The project is located in the southwestern portion of San Bernardino County, in the geographic sub-region of the southwestern Mojave Desert, township and range Township 5 North and Range 5 West. The City of Adelanto is accessible via Interstate 15 (I-15), U.S. Highway 395 (US-395), State Route 18 (SR-18), and Historic Route 66 (National Trails Highway). Photographs of the project site taken during the 2023 biological surveys are provided in Appendix A. Figure 1 shows the location of the Project relative to the state and county.



Figure 1. Location of the Project Relative to the State (Left) and County (Right).

2.3 Site History

The project site consists of a vacant lot with moderate disturbance in the form of a dirt road, utility infrastructure, unofficial walking paths, off-road vehicle use, trash and refuse dumping, and sign of feral dog presence. There is no known previous development at the site with the exception of the utility transmission lines and towers. Figure 2 shows the site in 1985 in relatively the same condition as it is today (Figure 3).



Figure 2. Historic Aerial Imagery of the Project Site (Google Earth, October 1995).



Figure 3. Recent Aerial Imagery of the Project Site (Google Earth, May 2023).

2.4 Topography

The project site is largely flat with elevations ranging from approximately 2,945 to 2,960 ft (898 to 902 m) above mean sea level (amsl) with a slight overall slope towards Rancho Rd. to the north. Lands surrounding the project site consist of similar topography (flat and slightly sloping to the north). Please refer to Appendix B for a topographic map of the site.

2.5 Soil Types

Soils present onsite consist of Cajon sand with 0 to 2 percent slopes and Helendale-Bryman loamy sands with 2 to 5 percent slopes (NRCS 2022) (Appendix C). The Cajon soil series is comprised of very deep well drained soils formed predominantly from granitic rocks. They are present on alluvial fans, fan aprons, fan skirts, inset fans, and river terraces. Average annual precipitation where Cajon series are present is roughly 6 inches and the mean annual temperature is about 65°F. Vegetation typically found in Cajon sand consists of creosote bush, spiny hopsage, and Mormon-tea (Soil Survey Staff 2022). Similarly, Helendale soils are characterized as typically dry, very well drained soils formed from granitoid rocks in alluvial fans and terraces, fan remnants, and fan piedmonts. Mean annual precipitation where Helendale soils occur is approximately 5 inches and mean annual temperatures are roughly 62.5°F. Creosote bush, burrobush, and fiddleneck are typically found in Helendale loamy sand (Soil Survey Staff 2022).

2.6 Land Use & Surrounding Development

The project site and surrounding parcels are zoned for Industrial Use. To the north of the site, across Rancho Rd. is a biotech manufacturing firm and to the northeast is the U.S. Department of Homeland Security, Adelanto Immigrations and Customs Enforcement (ICE) Processing Center. Between the biotech manufacturing firm and the ICE Processing Center, to the east of Raccoon Ave. is a large, graded area (220 m x 360 m) surrounded by concrete drainage channels. This area appears to be under development; however, construction seems to have been paused. A water utility storage yard is located along the western boundary of the site and recently constructed warehouses are present to the east across Raccoon Ave. Vacant land divided by numerous dirt roads extends south from the site 3.5 miles to SR-18. The Adelanto Power Conversion Station is located 270 m southeast of the site. The San Bernardino County, High Desert Detention Center, along with numerous industrial businesses are located to the southwest.

3.0 BIOLOGICAL SITE ASSESSMENT METHODS

3.1 Literature and Database Review

Prior to performing the biological inventory of the site, a review of all pertinent literature was conducted, and the CDFW California Natural Diversity Database (CNDDDB) and USFWS Information for Planning and Consultation (IPaC) were queried for the presence of sensitive species and habitats and to compile all relevant information pertaining to wetland and riparian resources. For the purpose of this report, sensitive species and habitats include rare, threatened, or endangered species that are designated or are candidates for listing under State or Federal Law, California Native Plant Society “1B” or “2” listed species, those species identified as state “fully protected species” or “species of special concern”, and any other species for which there is compelling evidence of rarity. The literature and database review for sensitive species and habitats was conducted for the following USGS quadrants: Adelanto (3411754), Victorville (3411753), Shadow Mountains SE (3411755), Shadow Mountains (3411765), Victorville NW (3411764), Helendale (3411763), Phelan (3411745), Baldy Mesa (3411744), Hesperia (3411743) (CDFW 2023). These results were refined to include only observations within 5-miles of the Project. The USFWS National Wetlands Inventory (NWI) was reviewed to compile all relevant information pertaining to wetland and riparian features in the vicinity of the project site (USFWS 2009).

3.2 Biological Surveys

BBI biologists Rainey Barton and Kerry Ross conducted a biological survey of the project site on 9 April 2023, from approximately 0630 to 1700 hours to inventory all biological resources. The entire project site and all areas within 500 ft were walked, pausing frequently to listen, observe, and document all species, species sign, and habitats in detail. All trees, vegetation, and potential nesting substrates within 500 ft line-of-sight were examined up close and

at a distance, searching for any indications of nesting birds such as nest structure, bird activity in the tree, or whitewash below the tree.

Habitat assessments and focused surveys were conducted for the following species: Joshua tree, Burrowing Owl, Mojave desert tortoise, and Mohave ground squirrel. Habitat assessment and focused survey dates are provided in Table 1. Additionally, the site was assessed for the presence of the following sensitive species through a combination of literature review and site surveys: Swainson’s Hawk, LeConte’s Thrasher, Loggerhead Shrike, and beaver dam breadroot.

Table 1. Habitat Assessment and Focused Survey Dates

Species	Habitat Assessment Date	Focused Survey Date(s)
Joshua tree	4/9/2023	4/9/2023
Burrowing Owl	4/9/2023	4/10/2023, 5/1/2023, 6/9/2023, 7/8/2023
Mojave desert tortoise	4/9/2023	5/2/2023
Mohave ground squirrel	4/15/2023	4/15-4/19/2023, 5/21-5/25/2023, 6/20-6/24/2023

3.2.1 Joshua Trees & Botanical Inventory

A botanical inventory of the project site was conducted on 9 April 2023. All plant species encountered were identified to the lowest allowable taxonomic level and recorded. Naming of native plant species with a California Rare Plant Rank (CRPR) follows the CNPS online *Inventory of Rare and Endangered Plants* (2023). For plant species without a CRPR, naming follows the *Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California* (Jepson Flora Project 2023). A Joshua tree survey and inventory of the site was conducted on 9 April 2023 in order to inventory all Joshua trees present onsite. A pedestrian survey of the project site was conducted, walking along predetermined transect lines spaced at 15 m, allowing for visual detection of Joshua trees of all heights. Surveyors walked parallel transects, pausing at each Joshua tree encountered to record measurements and note the health of the tree. Measurements of tree height, diameter at 4.5 ft above ground level (also known as Diameter at Breast Height; DBH), and overall tree health were recorded for all Joshua trees observed onsite. Each Joshua tree stem or trunk arising from the ground is considered an individual tree, regardless of proximity to any other Joshua tree stem of trunk [WJTCA, Section 1927.4 (b)]. The location of each Joshua tree was mapped utilizing the ArcGIS Field Maps app paired with a Bad Elf® GPS Pro+ with up to 2.5-meter accuracy.

3.2.2 Burrowing Owl Surveys

A habitat assessment was conducted to assess the project site for potential Burrowing Owl presence and habitat on 9 April 2023. The habitat assessment included a survey of the entire project site and all areas of potential habitat within 500 ft of the site. The results of the assessment concluded that focused surveys for Burrowing Owl presence/absence were required for the site. The surveys for Burrowing Owl were conducted following the protocol detailed in CDFW’s *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). Breeding season surveys for Burrowing Owl were conducted, consisting of four survey visits with at least one site visit between 15 February and 15 April, and three survey visits at least three weeks apart between 15 April and 15 July. Focused surveys were conducted on 10 April, 1 May, 9 June, and 8 July. Straight-line transects spaced at 10 m apart were walked during each survey visit, covering the entire project site and accessible areas within 500 ft. Surveyors paused every 100 ft and at the beginning and end of each transect to scan for Burrowing Owls. Areas within 500 ft which were inaccessible were surveyed from a distance with binoculars and spotting scope. Surveys were conducted when weather conditions were suitable (wind speed <12 km/hr., cloud cover <75%, temperatures >20°C) and rescheduled when conditions were forecasted to be adverse. Surveys were timed to occur between morning civil twilight and 1000 hours and two hours before sunset until evening civil twilight.

3.2.3 Desert Tortoise Surveys

The Project was assessed for the presence/absence and abundance of desert tortoise utilizing the survey protocol provided in the USFWS *Desert Tortoise (Mojave Population) Field Manual* (USFWS 2009) and updated in 2019 (USFWS 2019). An assessment of the action area [defined as the project site and all areas within 500 ft] was conducted on 9 April 2023 and consisted of a complete survey of the action area. The results of the assessment concluded that a focused survey for desert tortoise presence/absence was needed for the site. The focused survey was conducted on 2 May and consisted of 100% survey coverage of the action area during one of the desert tortoise's most active periods (April through May) when weather conditions were suitable for tortoise activity (temperature >40°C). Thirty-foot-wide (10 m) belt transects were walked, pausing frequently to inspect all burrows and potential signs of desert tortoise. As the Project site is less than 165 acres (67 hectares), it is considered a small project, and determining presence of desert tortoise was based primarily on sign (rather than live animals), requiring that surveyors diligently observe and describe sign.

3.2.4 Mohave Ground Squirrel Surveys

A habitat assessment of the property was conducted on 15 April 2023 allowing 100% visual coverage of the site with biological resources and potential constraints to focused surveys identified. As a result of the reconnaissance level survey, it was determined that suitable habitat for the Mojave ground squirrel was present and focused trapping surveys should be conducted to determine presence/absence of the species within the Project site. Mohave ground squirrel surveys were conducted in accordance with CDFW guidelines (CDFG 2003). Surveys consisted of five consecutive days of live-trapping during three predefined sessions (Session 1: 15 March – 30 April; Session 2: 1-31 May; Session 3: 15 June – 15 July). The small size and irregularly shaped project footprint prevented the installation of a 10 x 10 or 4 x 25 trapping array. To fully install 100 Sherman live traps, a 6 x 15 array with an additional 10 traps paralleling the southern parcel boundary spaced between 25 and 35 m from adjacent trap stations were installed. Each survey session consisted of 100 live-traps, baited with 4-way horse feed, and shaded to prevent heat stress. Traps were checked no less frequently than every four hours, when temperatures were between 40° to 90°F.

Additionally, three Browning Strike Force HD ProX model game cameras were deployed within the Mohave ground squirrel focused survey grid. Cameras were mounted to a t-post using zip-ties at a vertical height of 3.3 ft, oriented true north, with a downward pitch angle of approximately 53° to cover PVC baits placed approximately 4.9 ft north of the camera. Cameras were installed and operated concurrently with the focused surveys, programmed to collect a three burst image collection 24 hours per day, with a trigger recovery delay of 1 second.

3.2.5 Jurisdictional Waters/Wetlands Investigation

Although a formal wetlands delineation was not conducted during the field survey, the project site and surrounding area was evaluated for the potential to support jurisdictional waters regulated under the federal Clean Water Act, California Fish and Game Code, and Porter-Cologne Water Quality Act. This included a field survey of the project site and a review of the USFWS NWI.

4.0 RESULTS

4.1 Flora

The results of the botanical survey detected 23 species of plants present within the Project site (Appendix D). The dominant species onsite include creosote bush, white-bursage, old man schismus (*Schismus barbatus*), and brome (*Bromus* sp.). Vegetation onsite has been moderately disturbed by anthropogenic sources including foot traffic, off-road vehicle use, utility infrastructure maintenance, trash and refuse dumping, and invasion of non-native species with species cover greater for non-natives. Thirty-four (34) Joshua trees were observed onsite of varying ages and health. No beaver dam breadroot was detected.

4.1.1 Creosote Bush – White Bursage Shrubland

With the exception of the dirt roadway which passes through the project site, the shoulder of Rancho Rd., and the dirt roadway to the east of the project site (3.82 acres), the entire remainder of the site consists of creosote bush-white bursage shrubland alliance (26.99 acres) (Figure 4; Table 2). This plant community is most commonly found in well-drained soils of washes and rills, alluvial fans, bajadas, valleys, basins, upland slopes, mesas, and erosional highlands. Stands of taller creosote bush and shorter white bursage makeup the major vegetation type of California’s hot deserts, covering 67% of the central Mojave Desert and 70% of the Colorado and Sonoran deserts in the state (Sawyer et al. 2009, Thomas et al. 2004, Shreve 1942). The presence of mustard (*Brassica tournefortii*), *Bromus* spp, and *Schismus* spp., as seen within the project site, has greatly increased fire frequency and led to the degradation and destruction of many hectares of this alliance (Sawyer et al. 2009).

Table 2. Vegetation Community Acreage within the Project Site.

Vegetation Community	Area Onsite (acres)
Creosote bush-white bursage shrubland	26.99
Developed/disturbed (dirt roadway)	3.82



Figure 4. Vegetation Communities within the Project Site

4.1.2 Joshua Trees

Joshua trees are found throughout the Mojave Desert typically at elevations between 1,200 to 5,400 ft (366 to 1646 m) amsl. Contrary to their name, Joshua trees are in fact arborescent succulents; while resembling trees in their growth and appearance, they are not trees. This species has been documented to reach 300 years of age (Gilliland et al. 2006) and provides valuable habitat for many birds, mammals, and insects. Along with many other species, Joshua trees are experiencing the negative impacts of climate change, urbanization, and increased fire frequency and have experienced a significant contraction to their range. It is forecasted that widespread population losses may continue to occur in response to climate change (Cole et al. 2011). In examining the potential impacts of climate change on this species, St. Clair and Hoines (2018) found increased reproduction, but decreased establishment success as a result of increasing temperatures.

In response to the losses of Joshua trees, a petition was filed with the California Fish and Game Commission (“Commission”) to provide protection for Joshua trees under the California Endangered Species Act (CESA). A formal vote on the listing of the species as endangered or threatened under CESA has yet to occur, thus Joshua tree retains its candidacy status for listing. In July 2023 the Western Joshua Tree Conservation Act (WJTCA) was passed to conserve western Joshua trees and their habitat. The WJTCA prohibits the importation, export, take, possession, purchase, or sale of any western Joshua tree in California unless authorized by CDFW. Additionally, the WJTCA authorizes CDFW to issue permits for incidental take of Joshua trees if the permittee meets certain conditions. Permittees may pay fees in lieu of conducting mitigation activities which will contribute to the Western Joshua Tree Conservation Fund.

There are 34 Joshua trees present in scattered density throughout the project site (Appendix E). Per CDFW permitting and mitigation requirements, Joshua trees present onsite have been divided into the following categories: Category A (height ≥ 5 m), Category B (height ≥ 1 m and < 5 m), and Category C (height < 1 m) (Table 1). There are 3 Category A, 15 Category B, and 16 Category C Joshua trees. Of the 34 trees, 5 are dead, 7 are in poor condition, 15 are moderately healthy, and 7 are healthy. For more detailed information pertaining to Joshua trees onsite, as well as photographs of each individual tree, please refer to the *Rancho 30 LLC, Joshua Tree Survey & Inventory Report* included as Appendix E.

Table 3. Height Classification of Joshua Trees Onsite.

	Category A (height ≥ 5 m)	Category B (height ≥ 1 m and < 5 m)	Category C (height < 1 m)
Quantity of Joshua trees	3	15	16

4.1.3 Beaver Dam Breadroot

Beaver dam breadroot is found in creosote bush scrub and Joshua tree woodland in open areas and along roadcuts in the Mojave Desert region of San Bernardino County. This species blooms between April and May and is found in regions lower than 5,741 ft (1,750 m) above mean sea level (amsl) (Baldwin et al. 2012). There is only one known occurrence of this species within 5 miles of the project site. This occurrence is located 4.9 miles to the north near Fremont Wash where one plant was observed in 2009 (CDFW 2023).

Beaver dam breadroot was not found within the project site during the survey on 9 April 2023 nor during any of the subsequent focused surveys and is not expected to be impacted by the proposed Project.

4.2 Fauna

Wildlife detected on and adjacent to the project site consists of 20 bird, 4 mammal, 3 reptile, and 5 insect species (Appendix D). Most notably, there are an abundance of small mammal burrows present at the base of creosote and white bursage bushes onsite and nests belonging to Horned Lark (*Eremophila alpestris*) and Verdin (*Auriparus*

flaviceps) were observed. Additionally, an active Red-tailed Hawk (*Buteo jamaicensis*) nest was observed 490 ft to the east of the project site. This nest was located in one of two adjacent utility transmission towers, with an active Common Raven (*Corvus corax*) nest present in the neighboring tower.

4.2.1 Mojave Desert Tortoise

The Mojave population of desert tortoise includes tortoises north and west of the Colorado River in California, Arizona, Utah, and Nevada. They occupy a variety of habitats including sandy flats, rocky foothills, alluvial fans, washes, and canyons in areas of sparse vegetation, but are most commonly found on valley bottoms and bajadas in the Mojave Desert (Germano et al. 1994). Peak activity occurs between March through June and September through October when temperatures are above 75°F. This species is strictly herbivorous and consumes a variety of herbs, grasses, cacti, and wildflowers. The Mojave Desert is rich in winter annuals which are an important food source as well as perennial grasses, with woody perennials and cacti being an important late-season and drought source of food (Germano et al. 1994). In California, this species most frequently occurs in creosote scrub, cactus scrub, shadscale scrub, and Joshua tree woodland with soil friable enough for digging burrows and firm enough that the burrows will not collapse with the upper parts of bajadas and alluvial fans generally being too rocky for burrow construction (Luckenbach 1981). The highest density of desert tortoises in the Mojave Desert is found in the Fremont Valley near California City, California, where relatively uniform creosote is present in light gravel to sandy soil (Luckenbach 1981). Mojave desert tortoises were listed by the USFWS as “threatened” in April 1990 (USFWS 1990) and are now also protected as a “threatened” species under the CESA.

A review of the California Department of Fish and Wildlife’s (CDFW) California Natural Diversity Database for desert tortoise presence in the vicinity of the project returned one (1) result. This record is 4.2 miles southeast of the Project where multiple desert tortoises and burrows were observed in 1990, 2003, and 2007 (CDFW 2023).

No desert tortoise, desert tortoise sign, or burrows were observed within the Survey Area. While there were many small mammal burrows onsite, likely belonging to white-tailed antelope squirrels (*Ammospermophilus leucurus*), none were of the shape conducive to desert tortoise presence and when inspected no desert tortoises were observed within the burrows. There were two larger burrows within the Survey Area, 338 ft from the site. These burrows appeared to have been initially dug by squirrels and excavated by either coyote or dogs and no sign of use by desert tortoise was found. All burrows were inspected for the presence of desert tortoise individuals and sign (i.e., scat, tracks, eggshell fragments, bones, shells, etc.) and none had any indication of use by desert tortoise. No sign of desert tortoise presence was detected within the project site or within 500 ft.

For more detailed information pertaining to the analysis of Mojave desert tortoise presence onsite, please refer to the *Rancho 30 LLC, Mojave Desert Tortoise Survey Report* included as Appendix F.

4.2.2 Mohave Ground Squirrel

Mohave ground squirrel are small, diurnal squirrels endemic to the western Mojave desert, occupying portions of Los Angeles, Kern, Inyo, and San Bernardino Counties (Best 1995); with a historic distribution estimated at approximately 7,812 square miles from the eastern slopes of the Transverse and Sierra Nevada mountain ranges in the west to the Mojave River in the east, and from Owens Lake in the north to Palmdale in the south (Best 1995, Leitner 2008). This species occupies desert scrub habitat associations with creosote bush, white bursage, and saltbush (*Atriplex* spp.) dominant or co-dominant at lower elevations and Joshua tree and blackbrush (*Coleogyne ramosissima*) communities at elevations >1,500 m amsl (Grinnell 1933, Ingles 1965, Best 1995). Mohave ground squirrels exhibit a seasonal activity pattern (late February to July) followed by an extended period of below ground dormancy annually (Bartholomew and Hudson 1960, Best 1995). During the active period, MGS forage heavily to accumulate sufficient fat stores to both reproduce and survive aestivation and hibernation (Best 1995). Despite the need to approximately double their body mass, MGS are a trap shy species with a low detection probability. Mohave ground squirrel were listed as a “threatened” species under CESA in 1984.

No Mohave ground squirrels were identified as a result of focused surveys or camera trapping surveys of the project site. Mammalian species captured included only the white-tailed antelope squirrel (*Ammospermophilus leucurus*). The nearest known occurrence of Mohave ground squirrel is located 0.6 mi southeast of the Project, where one juvenile was captured during protocol trapping in 2011. Since then, the site has been developed as a solar installation. Additional occurrences of Mohave ground squirrel are located 3.2 mi northwest (observed in 2005) and 5 mi north of the Project (observed in 2004) (CDFW 2023).

For more detailed information pertaining to the analysis of Mohave ground squirrel presence onsite, please refer to the *CDFW Mohave Ground Squirrel (Xerospermophilus mohavensis) Guideline Survey Report: Proposed Rancho 30 LLC Project* (Randel Wildlife Consulting 2023) included as Appendix G.

4.2.3 Burrowing Owl

Burrowing Owls are unique among North American owls, active day and night, nesting in underground burrows, and typically nesting in small groups. In the breeding range, suitable habitat consists of open, treeless areas, within grassland, steppe, and desert biomes, generally in gently-sloping areas characterized by low, sparse vegetation, and well drained soils (James et al. 1991, Clayton and Schmutz 1999). Areas with high human activity such as golf courses, cemeteries, road-sides, airports, and fairgrounds are often used for nesting as well as agricultural fields and vacant urban lots. The presence of potential nest burrows is a critical requirement for this species, and they are often found alongside high densities of burrowing mammals such as prairie dogs (Poulin et al. 2020). In California, burrows are most often dug by California ground squirrel (*Otospermophilus beecheyi*) and round-tailed ground squirrel (*Xerospermophilus tereticaudus*). They will also utilize holes dug by badger (*Taxidea taxus*), coyote (*Canis latrans*), and fox (*Vulpes* sp.). Rock cavities, debris piles, culverts, and pipes are also used for nesting and roosting (Rosenberg et al. 1998). Adult male Burrowing Owls home range has been documented to comprise between 280 to 600 acres with size depending on the habitat type (Gervais et al. 2008). In California, the breeding season typically occurs between 1 February and 31 August with the peak of the breeding season between 15 April and 15 July, when most Burrowing Owls have active nests (CDFW 2012). Burrowing Owls are a CDFW Species of Special Concern and a USFWS Bird of Conservation Concern.

A review of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database for Burrowing Owl presence in the vicinity of the project returned thirteen (13) results, distributed to the southeast, east, and northeast of the Project. The records nearest to the Project are 2.9 miles to the northeast (nested in 2007) and 3.2 miles to the southeast (nested in 2005 and 2006). The most recently active burrow within 5 miles of the Project was active in 2009 and is located 4.6 miles to the southeast (CDFW 2023).

No Burrowing Owls, Burrowing Owl sign, or suitable burrows were observed within the Study Area. While there were many small mammal burrows onsite, likely belonging to white-tailed antelope squirrels (*Ammospermophilus leucurus*), nearly all were too small to allow for Burrowing Owl occupancy. There were two burrows within the survey area, 338 ft from the site, of large enough size for Burrowing Owl. These burrows appeared to have been initially dug by squirrels and excavated by either coyote or dogs and no sign of use by Burrowing Owls was found. All burrows were inspected for the presence of Burrowing Owls (i.e., whitewash, pellets, prey remains, etc.) and none had any indication of use by Burrowing Owl. No sign of Burrowing Owl presence was detected within the project site or within 500 ft.

For more detailed information pertaining to the analysis of Burrowing Owl presence onsite, please refer to the *Rancho 30 LLC, Burrowing Owl Survey Report* included as Appendix H.

4.2.4 Swainson's Hawk

Swainson's Hawk are relatively large-bodied hawks which have a long history of nesting in the deserts of the southwest including in the vicinity of Adelanto and Victorville (Bloom 1980). However, the statewide population experienced a catastrophic decline between 1930 and 1979 due to undocumented causes, leading to their listing as "threatened" under the CESA. While the Central Valley population has recovered and the Antelope Valley population appears to be increasing, areas such as Adelanto and Victorville do not appear to have rebounded. There have been no documented Swainson's Hawk nests in the vicinity of Adelanto since 1946, when two eggs were collected from a nest with the location noted as, "10 miles north of Adelanto" (CDFW 2023). The nearest documented nest to the Project is 2.4 miles to the northeast where eggs were collected from a nest in 1939 (CDFW 2023). Swainson's Hawks are known to nest in a variety of native and non-native trees including Joshua trees in the Mojave Desert region as documented by several nest sites in the Antelope Valley (Bloom et al. 2023).

While potential nesting and foraging habitat in the form of scattered Joshua trees and creosote bush-white bursage shrubland is present within the Project and vicinity, the level of existing human disturbance is not conducive to Swainson's Hawk use. The potential for Swainson's Hawks to nest or forage in the vicinity is extremely low. No Swainson's Hawk nests were observed within 500 ft of the project site and more focused surveys for nests at greater distances from the site are not recommended due to the level of human disturbance in the vicinity.

4.2.5 LeConte's Thrasher

LeConte's Thrashers are an uncommon, non-migratory, resident of the deserts of the southwestern U.S. and northwestern Mexico (Sheppard 2020). They primarily feed on insects excavated from beneath desert vegetation litter and will chase grasshoppers or pick insects from vegetation when available. Their typical habitat consists of sparsely vegetated desert flats, dunes, alluvial fans, or gently rolling hills often with saltbush or shadscale (*Atriplex* spp.) and/or cholla cactus (*Cylindropuntia* spp.). This species is rarely found in habitats consisting entirely of creosote. LeConte's Thrashers are a CDFW Species of Special Concern and a USFWS Bird of Conservation Concern.

This species was not detected within or in the vicinity of the project site. While there is some potential habitat for this species, the dominance of creosote bush is likely a deterrent. This species is not expected to occur onsite.

4.2.6 Loggerhead Shrike

Loggerhead Shrikes occupy a variety of habitat types largely characterized by open county and short vegetation, including pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, agricultural fields, riparian areas, and open woodlands. In the southwestern desert region, this species is non-migratory, typically living in pairs on permanent territories (Yosef 2020). Loggerhead Shrikes prefer nesting in trees with cover and thorns for increased protection from predators (Porter et al. 1975) and when trees or shrubs are lacking, they will also build nests in brush piles, Russian thistle, or "hardwood debris" (Siegel 1980, Wood 1993). This species begins nesting as early as February. Loggerhead Shrike feed opportunistically on arthropods, amphibians, small to medium-sized reptiles, small mammals, and birds, favoring fence lines, utility lines, and utility poles for perching. This species is considered a CDFW Species of Special Concern.

An individual Loggerhead Shrike was observed within the project site during nearly all of the survey dates. While onsite, the individual was not observed exhibiting any nesting specific behavior. They appeared to be foraging onsite, perching occasionally on Joshua trees, and stooping for prey. While there were no nests belonging to this species detected onsite, it is likely that there is a nest territory nearby which was active this season.

4.2.7 Nesting Birds

Verdin, Horned Lark, Red-tailed Hawk, and Common Raven were observed nesting in the vicinity of the project site.

The Verdin were observed nesting in one of only several cholla onsite, along the western border of the Project, within the project boundary. There are several Verdin nests present in this cholla and at least two appeared to have been rebuilt during the 2023 nesting season. The Verdin were first observed in the vicinity of the cholla exhibiting territorial behavior during the survey on 9 April. They continued to be present in the vicinity of the nest throughout the entire duration of the surveys, observed near the nests during the final survey on 8 July. While nest success was not documented for this species, it is clear that this site has been used by this nesting pair for at least several years as indicated by multiple nests present in the cactus.

The Horned Lark nest was observed at the base of a creosote bush in the central region of the project site on 21 May. Four hatchlings were observed on 25 May. Nest success was not documented for this species. There were many other Horned Lark present onsite, and it is possible that there were additional nests present which went undetected within the denser creosote bush onsite.

Red-tailed Hawks were observed nesting in a utility tower 558 ft southeast of the project site. Two adults were present at the nest on 9 April, with one (presumed female) in an incubation posture and the second (presumed male) defending the territory from the Common Ravens nesting in the adjacent tower. Both adults were again observed on 10 April, with one adult present on the nest and the second adult foraging in the vicinity. During the survey on 1 May, no adults were observed, and the nest appeared to have failed.

Common Ravens nested in a utility tower 596 ft east of the project site, with two adults present on 9 April. Both adults remained on the nest territory through 8 July. However, no nestlings or fledglings were observed. It is likely that this nesting attempt failed prior to hatching young or shortly after.

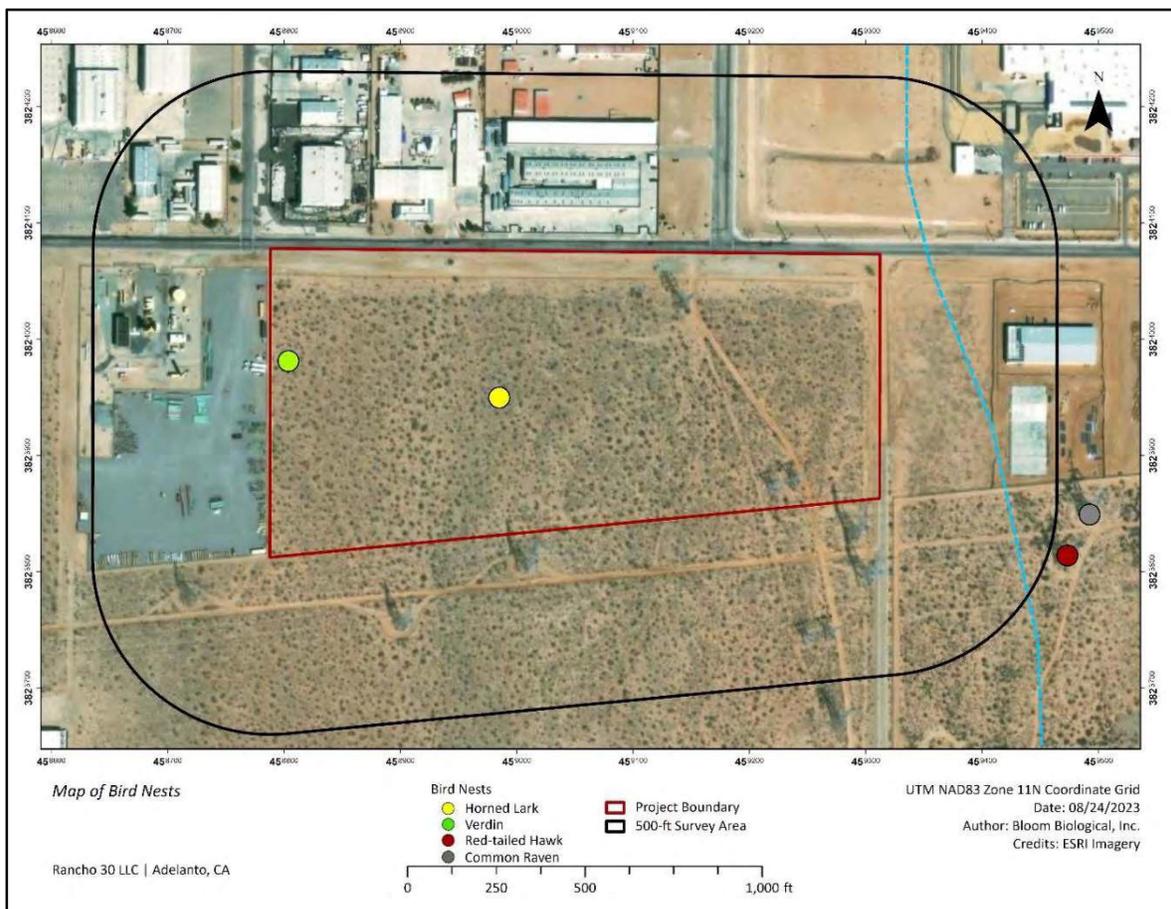


Figure 5. Bird Nests in the Vicinity of the Project Site.

4.2.8 Wildlife Corridors and Habitat Linkages

The project site was analyzed for sign of and potential for wildlife movement and corridors. While wildlife is known to utilize and move through the site, it does not constitute a wildlife corridor. There is an unofficial dirt walking path that crosses the site from north to south. During several survey visits, a man was observed walking this path during the morning hours traveling from the businesses north of Rancho Rd., south across the project site, then returning to the businesses utilizing the path. This walking path appears to be a result of this individual's morning exercise routine. Vegetation onsite is conducive to the free movement of wildlife through the site and there are signs of rodent paths leading to burrows. Additionally, scat and digging of burrows observed onsite indicates that coyotes (*Canis latrans*) forage and pass through the site. It is expected that other mammals may occasionally pass through the site such as raccoons, skunks, and rabbits. However, the site is not characteristic of a wildlife corridor. Existing industrial development to the north, east, and west has limited wildlife use of the site. While construction of the Project would prohibit wildlife use of the site, it would concentrate development into a centralized area, leaving vast regions of undeveloped desert to the west and smaller regions of undeveloped desert to the north, south, and east. Additionally, undeveloped parcels immediately east and 500 ft to the west of the site would allow for wildlife travel from north to south through this region.

4.3 Water Resources

The Project falls within the southwestern region of the Mojave Watershed (HUC 18090208). This watershed encompasses roughly 4,500 square miles of land surrounding the Mojave River spanning from the Providence Mountains within the Mojave National Preserve in the east, west to the San Bernardino and Los Angeles County boundary, and from the Tiefert Mountains in the north near Fort Irwin, south to the San Bernardino National Forest. The Project is approximately 12.5 miles west of the Mojave River. A review of the USFWS NWI and the NHD as well as a survey of onsite conditions returned no results of the presence of water resources present onsite. An ephemeral stream/river shown in the NHD is present 50 m to the east of the site (Figure 6). It is likely that this stream/river was present historically; however, the development to the north of Rancho Rd has channelized this once ephemeral stream, redirecting it into the storm drain network, prior to crossing Rancho Rd. The project site does not contain any wetland features or water resources.

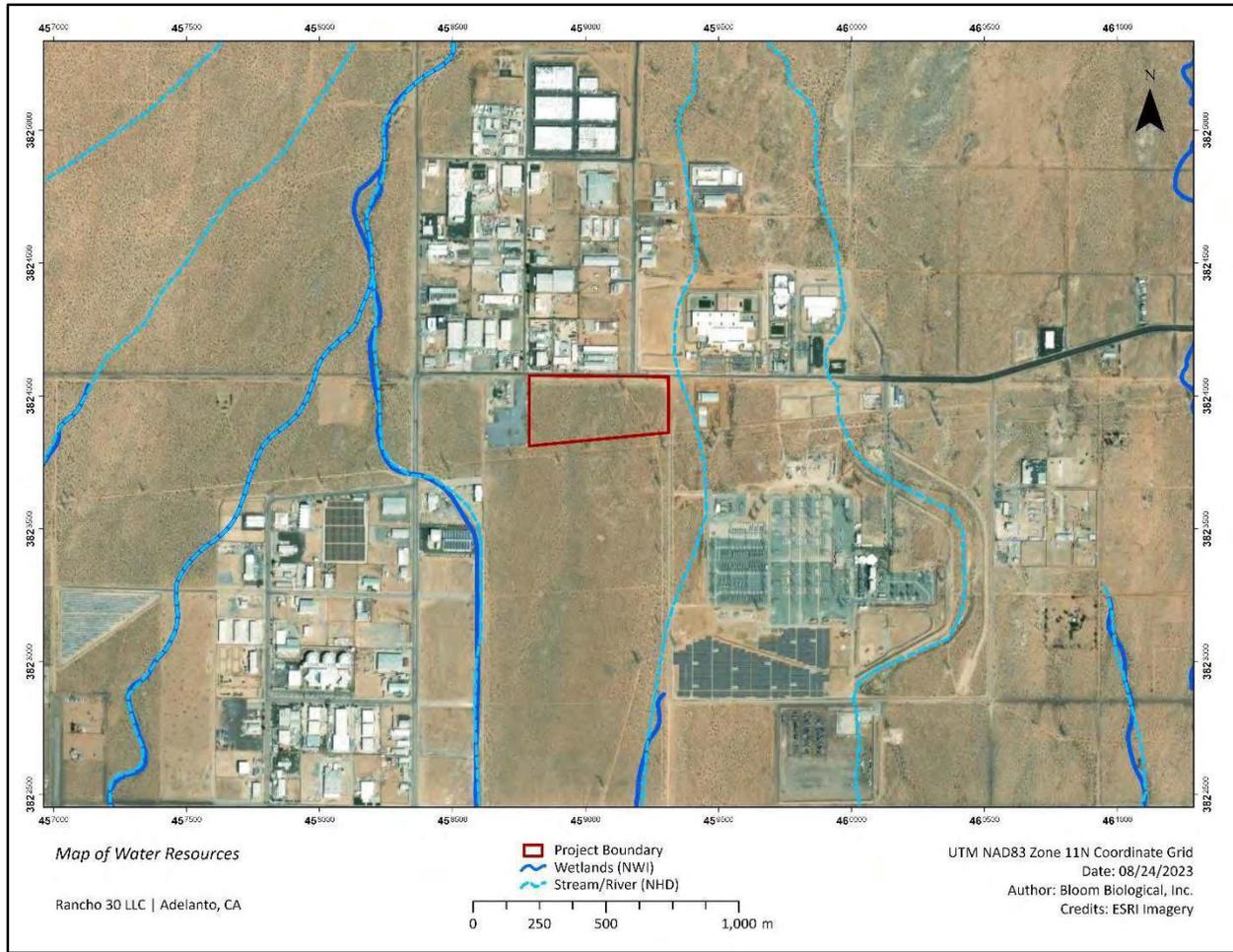


Figure 6. Water Resources in the Vicinity of the Project Site.

5.0 IMPACTS & MITIGATION RECOMMENDATIONS

5.1 Joshua Trees

5.1.1 Joshua Tree Impact

The Project will involve permanent impacts to Joshua trees via the removal of all 34 plants and will prevent the growth of Joshua tree seedlings through grading and paving of the parcels. This removal constitutes “take” as defined by Fish and Game Code and requires mitigation.

5.1.2 Joshua Tree Mitigation

Prior to construction, the Project proponent is required to obtain an Incidental Take Permit (ITP) through CDFW for the take of 34 Joshua trees. Per Section 1927.4 of the WJTCA, CDFW may authorize, by permit, the taking of a western Joshua tree if all of the following conditions are met:

- (1) The permittee submits to CDFW for its approval a census of all western Joshua trees on the project site, including photographs, that categorize the trees according to the following size classes:
 - a. Less than one meter in height.
 - b. One meter or greater but less than five meters in height.
 - c. Five meters or greater in height.
- (2) The permittee avoids and minimizes impacts to, and the taking of, the western Joshua tree to the maximum extent practicable. Minimization may include trimming, encroachment on root systems, relocation, or other actions that result in detrimental but nonlethal impacts to western Joshua tree.
- (3) The permittee mitigates all impacts to, and taking of, the western Joshua tree. In lieu of completing the mitigation on its own, the permittee may elect to pay mitigation fees.
- (4) CDFW may require the permittee to relocate one or more of the western Joshua trees.

The City of Adelanto falls within an area of the WJTCA which qualifies for reduced Mitigation Fees for impacts to western Joshua trees (Fish and Wildlife Code, Section 1927). The reduced Mitigation Fees are as follows [Fish and Wildlife Code, Section 1927.3 (d)]:

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

Each western Joshua tree stem or trunk arising from the ground shall be considered an individual tree requiring mitigation, regardless of proximity to any other western Joshua tree stem or trunk [WJTCA, Section 1927.4 (b)]. Mitigation is required of all trees, regardless of whether they are dead or alive. It is recommended that specific Joshua tree mitigation measures or determination of in-lieu fees be addressed through consultation with CDFW. However, the following provides an estimation of potential costs associated with in-lieu mitigation (Table 2):

Table 4. Joshua Tree In-Lieu Mitigation Fee Estimate

	Category A (height <1 m)	Category B (height ≥1 m and <5 m)	Category C (height ≥5 m)	Total
Quantity of Joshua trees	3	15	16	34
Fee per tree “taken”	\$1,000	\$200	\$150	--
Subtotal	\$3,000	\$3,000	\$2,400	\$8,400

5.2 Mojave Desert Tortoise

5.2.1 Mojave Desert Tortoise Impact

As the results of the focused survey did not detect the presence of Mojave desert tortoise onsite, there is a low potential for desert tortoise to be impacted by the Project. However, suitable desert tortoise habitat is present within and surrounding the Project. Therefore, there is a potential for desert tortoise to occur onsite.

5.2.2 Mojave Desert Tortoise Mitigation

Prior to the initiation of construction activities (i.e., grubbing, clearing, staging, digging), a preconstruction survey for desert tortoise is recommended following the USFWS guidelines for *Preparing for any Action that may occur Within the Range of the Mojave Desert Tortoise (Gopherus agassizii)* (USFWS 2019). This would consist of one complete (100% coverage) survey of the action area prior to the initiation of construction at any time of year. The survey should be conducted within 7 days prior to construction beginning by a City Approved Biologist (described in Section 5.7). If desert tortoise is found on the project site during preconstruction surveys, construction will be halted until the tortoise has left the area on its own and is no longer in danger. If the tortoise does not leave on its own, translocation of desert tortoise should only be conducted with necessary federal ESA and state CESA permitting, and via an approved translocation plan pursuant to the above permits.

Prior to the start of construction or any ground disturbance, a qualified biologist should prepare a Desert Tortoise Translocation Plan (DTRP) to be administered during the construction and operation of the project. The DTRP should be submitted to the City of Adelanto for review and approval and shall be updated and utilized for translocation and monitoring after construction. The DTRP should include, but not be limited to the following:

- Discussion on temporary construction fencing (if any),
- Description of clearance surveys of permanent exclusion areas,
- Transportation and release procedures,
- Construction schedule,
- Translocation/relocation areas,
- Monitoring and reporting.

A biological monitor should be present onsite daily during construction to monitor for the presence of desert tortoise. If desert tortoise is found on the Project during the construction phase, all work shall cease in the vicinity of the animal. Work shall proceed only after the animal is allowed to leave the area and is no longer at risk, or the animal is relocated by the biologist after approval from CDFW and USFWS. In both cases, the approved biologist shall contact USFWS and CDFW and shall consult regarding any additional necessary avoidance, minimization, or mitigation measures.

If desert tortoise is found on the project site during the operation and maintenance phase of the Project, all ground-disturbing operations and maintenance activities should cease in the vicinity of the animal. CDFW and USFWS shall be contacted and consulted regarding potential relocation of the animal and any additional necessary avoidance, minimization, or mitigation measures. Work shall not resume in the vicinity of the animal until the relevant agencies have responded and all recommended measures are taken. A report shall be prepared by the Project proponent to document the activities of desert tortoise within the site; all fence construction, modification, and repair efforts; and compliance with other measures recommended by the agencies. This report should be submitted to the agency representatives and the City.

5.3 Burrowing Owl

5.3.1 Burrowing Owl Impact

As the results of the focused survey confirmed the absence of Burrowing Owls from the Survey Area, there is a low potential for Burrowing Owl to be impacted by the Project. However, suitable Burrowing Owl habitat is present onsite and within the immediate vicinity. Therefore, there is a potential for Burrowing Owl to occur onsite or within the surrounding habitat.

5.3.2 Burrowing Owl Mitigation

Prior to the initiation of construction activities ((i.e., grubbing, clearing, staging, digging), a “take avoidance survey” should be conducted by a City Approved Biologist for the project site and surrounding 500 ft radius utilizing the methodology provided in CDFW’s 2012 *Staff Report on Burrowing Owl Mitigation*. This survey should be conducted no less than 14 days prior to initiation of ground disturbance activities. Should no Burrowing Owls be detected during the initial “take avoidance survey” the survey should be repeated within 24 hours prior to ground disturbance. Should Burrowing Owls be detected, avoidance and minimization measures should be developed through the monitoring of the owls by the City Approved Biologist. If Burrowing Owls are detected, no ground disturbing activities should occur except in accordance with the CDFW 2012 Staff Report or with written authorization by CDFW staff. Burrowing Owls shall not be excluded from burrows unless or until a Burrowing Owl Exclusion Plan is developed by the City Approved Biologist and approved by the applicable local CDFW office and submitted to the City. The plan should follow the requirements of the CDFW 2012 Staff Report.

5.4 Mohave Ground Squirrel

5.4.1 Mohave Ground Squirrel Impact

As no Mohave ground squirrel were detected during the focused surveys, this Project has a low potential to impact Mohave ground squirrel. However, as suitable Mohave ground squirrel habitat is present within and surrounding the Project, there is a potential for this species to occur onsite.

5.4.2 Mohave Ground Squirrel Mitigation

The City Approved Biologist shall be present onsite during the initiation of construction activities (i.e., grubbing, clearing, staging, digging) and daily during all construction to monitor for the presence of Mohave ground squirrel. If Mohave ground squirrel is found on the project site during construction, construction will be halted until the ground squirrel has left the area on its own and is no longer in danger. If the ground squirrel does not leave on its own, translocation of ground squirrels should only be conducted by an approved biologist with necessary permitting and with the approval of CDFW.

5.5 Nesting Birds

5.5.1 Nesting Bird Impact

As bird nests and nesting bird habitat are present onsite, this project has a potential to impact nesting birds if construction occurs during nesting bird season (February 1 through September 1). Disrupting active bird nests represents a potential violation of Section 3503 of the California Fish and Game Code. Thus, clearing and grading of the site during nesting bird season could potentially result in a significant adverse effect upon nesting birds.

5.5.2 Nesting Bird Mitigation

In order to avoid impacts to nesting birds it is recommended that the following mitigation measures be employed:

- Any necessary clearing and removal of vegetation for project development should be conducted outside of the typical nesting season for birds.
- If vegetation removal must be conducted during the nesting bird season (February 1 through September 1), a biologist should first conduct a survey to determine whether any birds are nesting in the area.
- The survey should occur within 7-days prior to beginning work and include a search for nesting raptors within 500 feet line-of-sight of the project and all other bird nests within or adjacent to the project site.
- If any active nests are found, a “no disturbance” buffer should be implemented by the biologist and no activity should occur within the buffer until after all young have fledged from the nest. Exceptions may be made to the buffer distance if a biological monitor is present onsite when work is occurring.

5.6 Water Resources

5.6.1 Water Resources Impact

No riparian, riverine, or wetland resources were observed within the project site. However, as runoff is conveyed from this project site into the storm drain network there is a potential for impacts in the form of stormwater and non-stormwater pollution.

5.6.2 Water Resources Mitigation

The following recommendations are provided for mitigating potential impacts to water resources:

- Stormwater Best Management Practices – During the project, proper stormwater Best Management Practices (BMPs) should be followed to preserve native vegetation, reduce disturbed soil areas, and establish proper spill covers, sediment and erosion control, material storage, and waste management. Erosion prevention BMPs which may be implemented include, but are not limited to, straw wattle, sandbags, and silt fencing. More information on stormwater BMPs can be found at the following website:

5.7 Additional Recommendations

5.7.1 City Approved Biologist

- The Project should secure a City Approved Biologist prior to the initiation of construction activities. The Project proponent should provide written evidence to the City that they have retained a biologist(s) who meet the qualifications of an Authorized Biologist as defined by USFWS, with additional approval from CDFW (for state-listed species) to oversee compliance with the protection measures for desert tortoise and other special status species.
- The City Approved Biologist should be onsite daily during all ground disturbing activities throughout the construction phase.
- The City Approved Biologist shall have the right to halt all activities that are in violation of the desert tortoise or other special-status species protection measures.
- Construction activity may also be monitored by biological monitors under the lead biologist’s supervision to ensure compliance with mitigation measures.

5.7.2 Night Lighting

- As cannabis cultivation often requires the use of artificial lighting or mixed-lighting techniques in order to increase yields, it is recommended that light not be visible outside of any structure used for cannabis cultivation. Implementation of this measure would ensure that impacts to nocturnal wildlife would be less than significant.
- Eliminate all nonessential lighting from cannabis sites and avoid or limit the use of artificial light during the hours of dawn and dusk.
- Ensure that lighting for cultivation activities and security purposes is shielded, cast downward, and does not spill over onto other properties, offsite, or upward into the night sky.
- Use LED lighting with a correlated color temperature of 3,000 Kelvins or less.

5.7.3 Vehicle Travel

- During construction-related activities, motor vehicles should be limited to the use of maintained roads, designated routes, and areas identified as being permanently or temporarily affected by construction within the Project footprint. Motor vehicle speeds should not exceed 15 mph.

5.7.4 Trapped Animal Prevention

- All holes, trenches, pits, or other steep-sided excavations that may pose a threat to animals should either be constructed with escape ramps (earthen or wooden) or securely covered when unattended to prevent trapping.
- At the start and end of each workday and just before backfilling, all excavations should be inspected for trapped animals.
- All animals found trapped should be provided an exit to leave on their own accord.
- Any animals which do not leave on their own shall be removed by the City Approved Biologist.
- All pipes or other construction materials should be inspected for trapped wildlife prior to moving or installing.

5.7.5 Trash Disposal

- Trash and food items should be contained in closed containers and removed daily to reduce attracting predators and to avoid entrapping wildlife.

6.0 CONCLUSION

This project was analyzed following rigorous scientific standards by BBI biologists. It is our professional opinion that this project will have no significant impact on biological resources with the implementation of the above recommended mitigation measures.

CERTIFICATION

I certify that the information in this report and attached appendices fully and accurately represents the work of BBI. If you have any questions or require additional information, please feel free to contact us at (949) 272-0905 ext. 103 or raineybarton@bloombiological.com.

BLOOM BIOLOGICAL, INC.



Rainey Barton
Project Manager & Biologist

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APPENDICES

Appendix A. Site Photographs



Photo 1. Southwest corner of the Project Site facing north (04/09/2023).



Photo 2. Southwest corner of the Project Site facing east (04/09/2023).



Photo 3. Southeast corner of the Project Site facing northwest (04/09/2023).



Photo 4. Southeast corner of the Project Site facing west (04/09/2023)



Photo 5. Overview of vegetation present onsite (07/08/2023).



Photo 6. Overview of vegetation present onsite (07/08/2023).



Photo 7. Active Verdin nest present in cholla in the western region of the Project Site (07/08/2023).



Photo 8. Active Verdin nest present in cholla in the western region of the Project Site (07/08/2023).



Photo 9. Active Horned Lark nest onsite (05/25/2023).

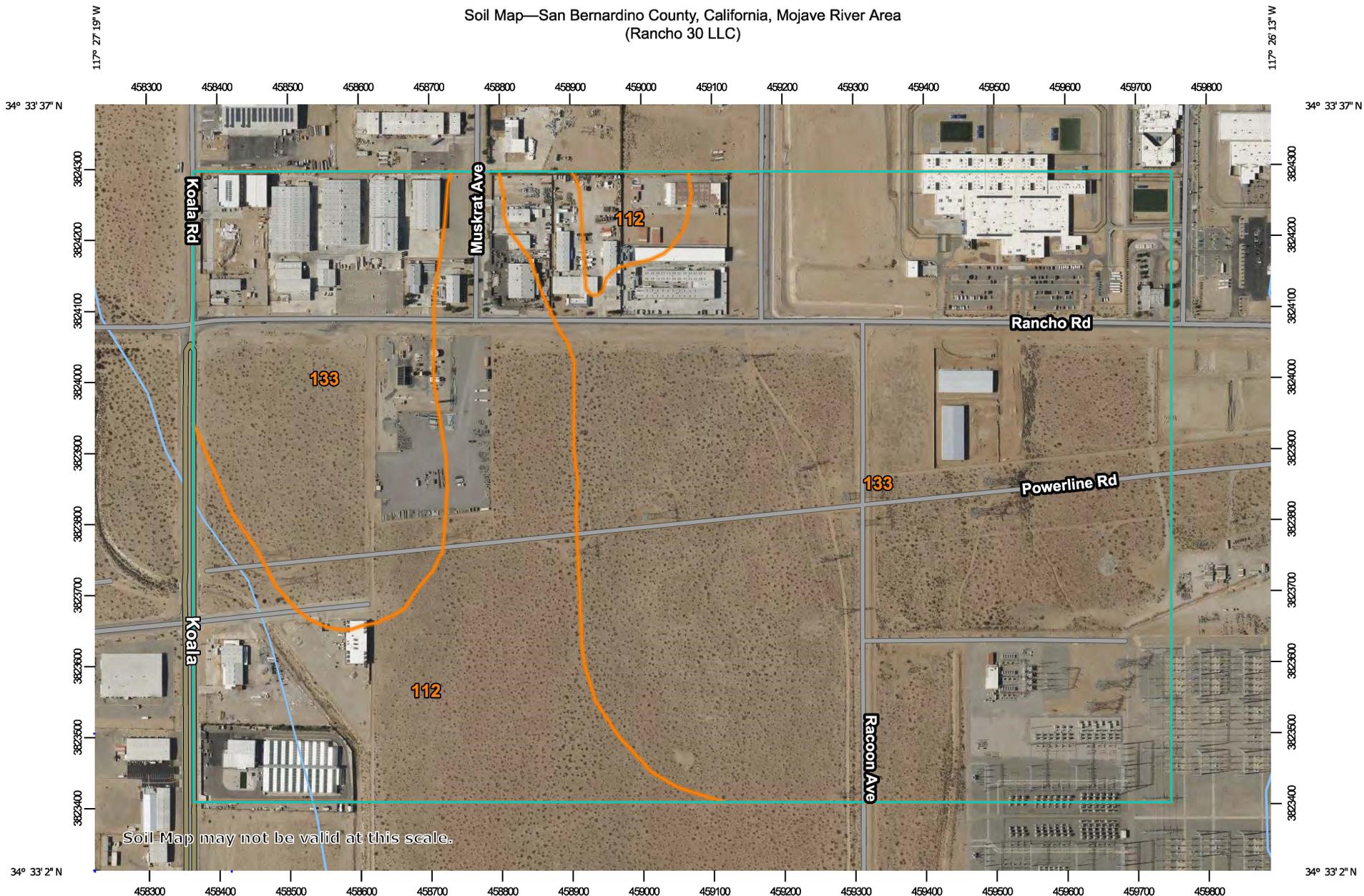
Appendix B. Site Plans

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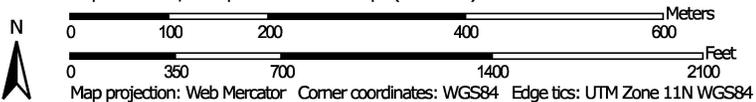
Appendix C. Soil Map

-- Content Appears on Following Page --

Soil Map—San Bernardino County, California, Mojave River Area
(Rancho 30 LLC)



Map Scale: 1:7,610 if printed on A landscape (11" x 8.5") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County, California, Mojave River Area
Survey Area Data: Version 14, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 17, 2022—Jun 12, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
112	CAJON SAND, 0 TO 2 PERCENT SLOPES	74.1	24.3%
133	HELENDALE-BRYMAN LOAMY SANDS, 2 TO 5 PERCENT SLOPES*	230.9	75.7%
Totals for Area of Interest		305.0	100.0%

Appendix D. Floral & Faunal Compendium

FLORAL COMPENDIUM

This compendium lists 23 plant species detected by BBI during the surveys conducted between 9 April and 8 July 2023.

Eudicots	Flowering Plants
Amaranthaceae	Amaranth Family
<i>Salsola tragus</i>	Russian thistle
Asparagaceae	Asparagus Family
<i>Yucca brevifolia</i>	Joshua tree
Asteraceae	Sunflower Family
<i>Ambrosia dumosa</i>	White bursage
<i>Ericameria nauseosa</i>	Rubber rabbitbrush
<i>Lasthenia californica</i>	Goldfields
Boraginaceae	Borage Family
<i>Amsinckia tessellate</i>	Bristly fiddleneck
Brassicaceae	Mustard Family
<i>Brassica tournefortii</i>	Mustard
<i>Descurainia pinnata</i>	Yellow tansy mustard
<i>Sisymbrium altissimum</i>	Tumble mustard
Cactaceae	Cactus Family
<i>Cylindropuntia echinocarpa</i>	Silver cholla
Lamiaceae	Mint Family
<i>Salvia carduacea</i>	Thistle sage
Loasaceae	Dogwood Family
<i>Mentzelia albicaulis</i>	White stemmed blazing star
Onagraceae	Willowherb Family
<i>Camissoniopsis bistorta</i>	California sun cup
<i>Camissoniopsis pallida</i>	Pale yellow sun cup
<i>Chylismia claviformis</i>	Clavate fruited primrose
<i>Eremothera boothii</i>	Booth's desert primrose
<i>Oenothera primiveris</i>	Yellow desert evening primrose
Polemoniaceae	Phlox Family
<i>Gilia stellata</i>	Star gilia
Zygophyllalaceae	Caltrop Family
<i>Larea tridentata</i>	Creosote bush
Monocots	Grasses and Allies
Poaceae	Grass Family
<i>Bromus madritensis</i>	Compact brome
<i>Bromus rubens</i>	Red brome
<i>Bromus spp.</i>	Brome
<i>Schismus barbatus</i>	Old han schismus

FAUNAL COMPENDIUM

This compendium lists 20 bird, 4 mammal, 3 reptile, and 5 insect species detected by BBI during the surveys conducted between 9 April and 7 July 2023.

Birds

Common Name	Scientific Name	Common Name	Scientific Name
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	Turkey Vulture	<i>Cathartes aura</i>
Northern Mockingbird	<i>Mimus polyglottos</i>	Horned Lark	<i>Eremophilus alpestris</i>
Rock Pigeon	<i>Columbia livia</i>	Western Kingbird	<i>Tyrannus verticalis</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>
European Starling	<i>Sternus vulgaris</i>	Mourning Dove	<i>Zenaida macroura</i>
Loggerhead Shrike	<i>Lanius ludovicianus</i>	Say's Phoebe	<i>Sayornis saya</i>
Verdin	<i>Auriparus flaviceps</i>	Yellow-rumped Warbler	<i>Setophaga coronata</i>
Common Raven	<i>Corvus corax</i>	House Finch	<i>Haemorhous mexicanus</i>
Bewick's Wren	<i>Thryomanes bewickii</i>	Bullock's Oriole	<i>Icterus bullockii</i>
Ladder-backed Woodpecker	<i>Dryobates scalaris</i>	Black-throated Sparrow	<i>Amphispiza bilineata</i>

Mammals

Common Name	Scientific Name	Common Name	Scientific Name
White-tailed antelope squirrel	<i>Ammospermophilus leucurus</i>	Domestic dog	<i>Canis lupus familiaris</i>
Fox*	undetermined	Coyote*	<i>Canis latrans</i>

**Only detected by sign (i.e., scat, burrow, print, etc.)

Reptiles

Common Name	Scientific Name	Common Name	Scientific Name
Western whiptail	<i>Aspidoscelis tigris tigris</i>	Western side-blotched lizard	<i>Uta stansburiana elegans</i>
Desert night lizard	<i>Xantusia vigilis</i>	--	--

Insects

Common Name	Scientific Name	Common Name	Scientific Name
Painted lady	<i>Vanessa cardui</i>	Checkered white	<i>Pontia protodice</i>
White-lined sphinx moth	<i>Hyles lineata</i>	Western honeybee	<i>Apis mellifera</i>
Pallid-winged grasshopper	<i>Trimerotropis pallidipennis</i>	--	--

Appendix E. Joshua tree Inventory & Survey Report

-- Content Appears on Following Page --



September 8, 2023

Phil Martin & Associates
2987 NW Fairway Heights Dr.
Bend, OR 97703

[Delivered via email: pmartin@philmartinassociates.com]

SUBJECT: Results of Joshua tree (*Yucca brevifolia*) Survey & Inventory at the Rancho 30 LLC Project Site, Adelanto, San Bernardino County, California

To whom it may concern,

Bloom Biological, Inc. (BBI) was retained to survey and inventory all Joshua trees (*Yucca brevifolia*) present within the Rancho 30 LLC project site in the City of Adelanto, San Bernardino County, California (Figure 1). The survey and inventory were conducted on 9 April and 1 September 2023 with the primary purpose of documenting the presence and size of all Joshua trees onsite. This report provides the results of the survey as well as applicable guidance and regulations pertaining to Joshua tree protections. Based on the results of the field investigations there are 34 Joshua trees within the boundary of the Project (Figure 2). Of the 34 trees, 16 are less than 1 m in height, 15 are greater than or equal to 1 m and less than 5 m in height, and 3 are 5 m or taller.

BACKGROUND & REGULATIONS

Joshua trees are found throughout the Mojave Desert typically at elevations between 1,200 to 5,400 ft. Contrary to their name, Joshua trees are in fact arborescent succulents; while resembling trees in their growth and appearance, they are not trees. This species has been documented to reach 300 years of age (Gilliland et al. 2006) and provides valuable habitat for many birds, mammals, and insects. Along with many other species, Joshua trees are experiencing the negative impacts of climate change, urbanization, and increased fire frequency and have experienced a significant contraction to their range. It is forecasted that widespread population losses may continue to occur in response to climate change (Cole et al. 2011).

In response to the losses of Joshua trees, a petition was filed with the California Fish and Game Commission ("Commission") to provide protection for Joshua trees under the California Endangered Species Act (CESA). A formal vote on the listing of the species as endangered or threatened under CESA has yet to occur, thus Joshua trees retain candidacy status for listing. In July 2023 the Western Joshua Tree Conservation Act (WJTCA) was passed to conserve western Joshua trees and their habitat while supporting California's renewable energy and housing priorities. The WJTCA prohibits the importation, export, take, possession, purchase, or sale of any western Joshua tree in California unless authorized by CDFW. Additionally, the WJTCA authorizes CDFW to issue permits for incidental take of Joshua trees if the permittee meets certain conditions. Permittees may pay fees in lieu of conducting mitigation activities which will contribute to the Western Joshua Tree Conservation Fund, with the purpose of acquiring, conserving, and managing Joshua tree conservation lands and completing other activities to conserve the species. The WJTCA will remain in effect indefinitely or until CDFW submits an updated status review report to the Commission evaluating whether listing the species as endangered or threatened under CESA would be warranted. CDFW must submit this updated status review by January 1, 2033.

Per Section 1927.4 of the WJTCA, CDFW may authorize, by permit, the taking of a western Joshua tree if all of the following conditions are met:

- (1) The permittee submits to CDFW for its approval a census of all western Joshua trees on the project site, including photographs, that categorize the trees according to the following size classes:
 - a. Less than one meter in height.
 - b. One meter or greater but less than five meters in height.
 - c. Five meters or greater in height.
- (2) The permittee avoids and minimizes impacts to, and the taking of, the western Joshua tree to the maximum extent practicable. Minimization may include trimming, encroachment on root systems, relocation, or other actions that result in detrimental but nonlethal impacts to western Joshua tree.
- (3) The permittee mitigates all impacts to, and taking of, the western Joshua tree. In lieu of completing the mitigation on its own, the permittee may elect to pay mitigation fees.
- (4) CDFW may require the permittee to relocate one or more of the western Joshua trees.

SITE DESCRIPTION

The project site consists of three vacant parcels with a combined area of 30.81 acres [APN: 3128-011-02-0000 (11.09 acres), 3128-011-03-0000 (10.28 acres), and 3128-011-04-000 (9.48 acres)] south of the intersection of Rancho Rd and Raccoon Ave in Adelanto, California (Figure 2). Photographs of the project site are provided in Appendix A. The Project site is largely flat and elevations on site range from approximately 2,945 to 2,960 ft above mean sea level (amsl). The property is located in the USGS CA 7.5-minute Adelanto quadrangle. Soils present on site consist of Cajon sand and Helendale-Bryman loamy sands (NRCS 2022). Vegetation consists of creosote bush-white bursage (*Larrea tridentata-Ambrosia dumosa*) shrubland alliance with the following dominant species: creosote bush, white-bursage, old han schismus (*Schismus barbatus*), and brome (*Bromus* sp.) (Jepson Flora Project 2023).



Figure 1. Project Site Aerial Overview (Google Earth, May 2023)

PROJECT DESCRIPTION

The proposed Project consists of the construction of an Indoor Cultivation Facility on three vacant parcels consisting of a combined 30.81 acres (1,342,154.1 square feet) located southwest of the intersection of Rancho Rd. and Raccoon Ave. in Adelanto, California. The project proposes an indoor marijuana operation with ten 30,000 square foot cultivation buildings and ten 10,000 square foot warehouse buildings. The project will be developed in phases depending upon the market. Phase 1 proposes two 30,000 square foot cultivation buildings and one 10,000 square foot warehouse building. The project is scheduled to start construction in the fourth quarter of 2025.

SURVEY METHODS

BBI Biologists Rainey Barton and Kerry Ross conducted the survey and inventory of the site on 9 April 2023 from 0630 to 1700 hours in order to inventory and assess the health of all Joshua trees present onsite. A pedestrian survey of the project site was conducted, walking along predetermined transect lines spaced at 15 m, allowing for visual detection of Joshua trees of all heights. Surveyors walked parallel transects, pausing at each Joshua tree encountered to record measurements and note the health of the tree. Measurements of tree height, diameter at 4.5 ft above ground level [also known as Diameter at Breast Height (DBH)], and overall tree health were recorded for all Joshua trees observed onsite. Each Joshua tree stem or trunk arising from the ground is considered an individual tree, regardless of proximity to any other Joshua tree stem or trunk [WJTCA, Section 1927.4 (b)]. The location of each Joshua tree was mapped utilizing the ArcGIS Field Maps app paired with a Bad Elf® GPS Pro+ with up to 2.5-meter accuracy. The weather consisted of clear skies, light winds, no precipitation, and temperatures between 46° to 86°F. A follow up survey was conducted on 1 September 2023 with the primary purpose of photographing and verifying Joshua tree locations.

SURVEY RESULTS

There are 34 Joshua trees present in scattered density throughout the Project site (Figure 2). Per CDFW permitting and mitigation requirements, the Joshua trees present onsite have been divided into the following categories: Category A (height ≥ 5 m), Category B (height ≥ 1 m and < 5 m), and Category C (height < 1 m) (Table 1). There are 3 Category A, 15 Category B, and 16 Category C Joshua trees. Of the 34 trees, 5 are dead, 7 are in poor condition, 15 are moderately healthy, and 7 are healthy. Photographs of all Joshua trees observed onsite are provided in Appendix B and Joshua tree summary data are provided in Appendix C.

Table 1. Classification of Joshua Trees Onsite by Height.

	Category A (height ≥ 5 m)	Category B (height ≥ 1 m and < 5 m)	Category C (height < 1 m)
Quantity of Joshua trees	3	15	16

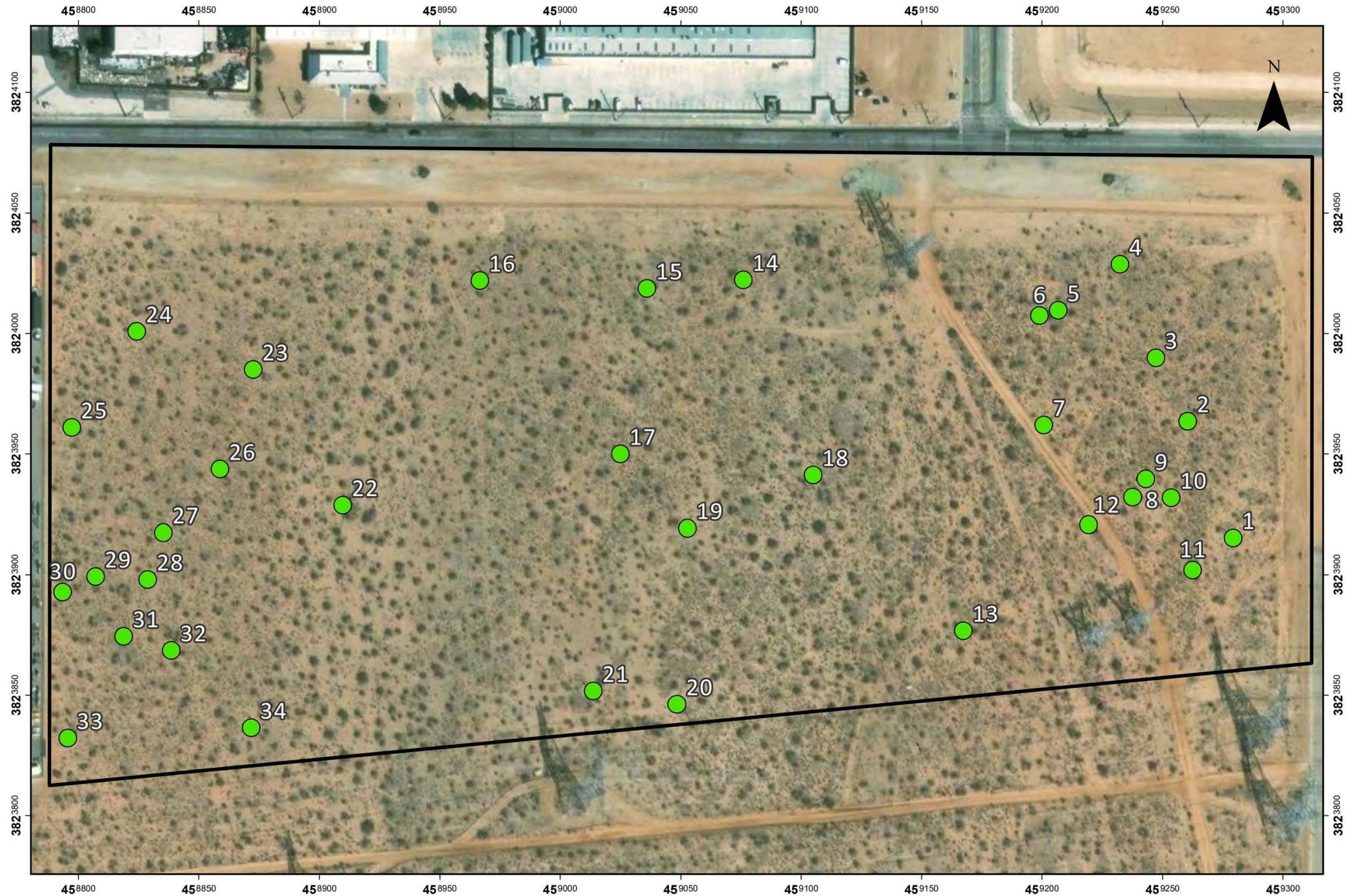
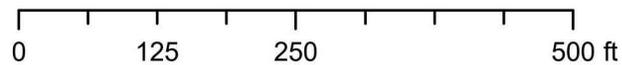


Figure 2. Joshua Trees Present Onsite

● Joshua Tree
 Project Boundary

UTM NAD83 Zone 11N Coordinate Grid
 Date: 09/07/2023
 Author: Bloom Biological, Inc.
 Credits: ESRI Imagery



PROJECT IMPACTS

The Project will involve permanent impacts to Joshua trees via the removal of all 34 plants and will prevent the growth of Joshua tree seedlings through grading and paving of the parcels.

MITIGATION

The City of Adelanto falls within an area of the WJTCA which qualifies for reduced Mitigation Fees for impacts to western Joshua trees (Fish and Wildlife Code, Section 1927). The reduced Mitigation Fees are as follows [Fish and Wildlife Code, Section 1927.3 (d)]:

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

Each western Joshua tree stem or trunk arising from the ground shall be considered an individual tree requiring mitigation, regardless of proximity to any other western Joshua tree stem or trunk [WJTCA, Section 1927.4 (b)]. Mitigation is required of all trees, regardless of whether they are dead or alive. It is recommended that specific Joshua tree mitigation measures or determination of in-lieu fees be addressed through consultation with CDFW. However, the following provides an estimation of potential costs associated with in-lieu mitigation (Table 2):

Table 2. Joshua Tree In-Lieu Mitigation Fee Estimate

	Category A (height <1 m)	Category B (height ≥1 m and <5 m)	Category C (height ≥5 m)	Total
Quantity of Joshua trees	3	15	16	34
Fee per tree "taken"	\$1,000	\$200	\$150	--
Subtotal	\$3,000	\$3,000	\$2,400	\$8,400

CERTIFICATION

I certify that the information in this report and attached appendices fully and accurately represents the work of BBI. If you have any questions or require additional information, please feel free to contact us at (949) 272-0905 ext. 103 or raineybarton@bloombiological.com.

Sincerely,
BLOOM BIOLOGICAL, INC.



Rainey Barton
Project Manager / Biologist

LITERATURE CITED

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APPENDIX A. PROJECT SITE PHOTOGRAPHS



Photo 1. Southwest corner of Project Site facing north (04/09/2023).



Photo 2. Southwest corner of Project Site facing east (04/09/2023).

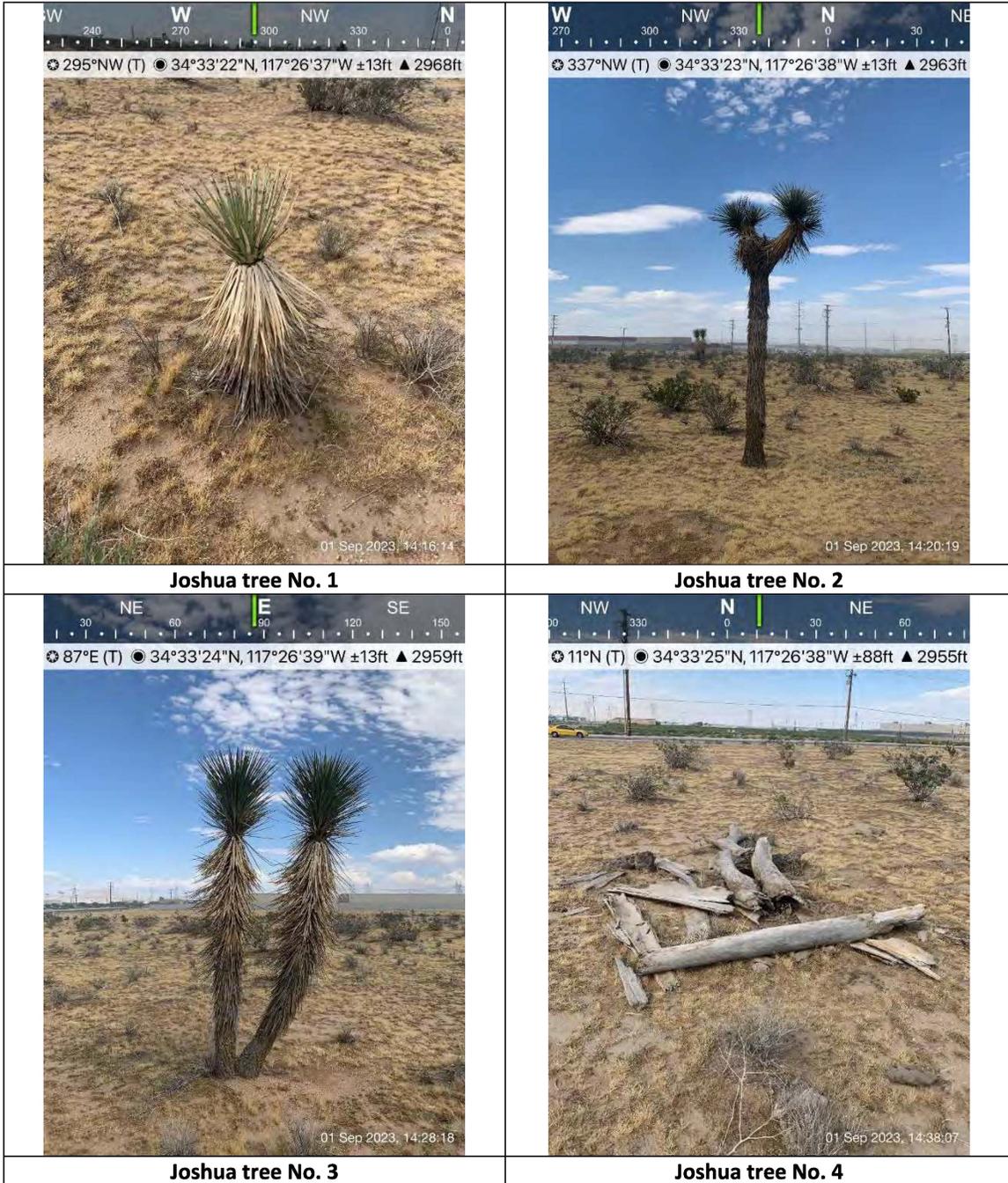


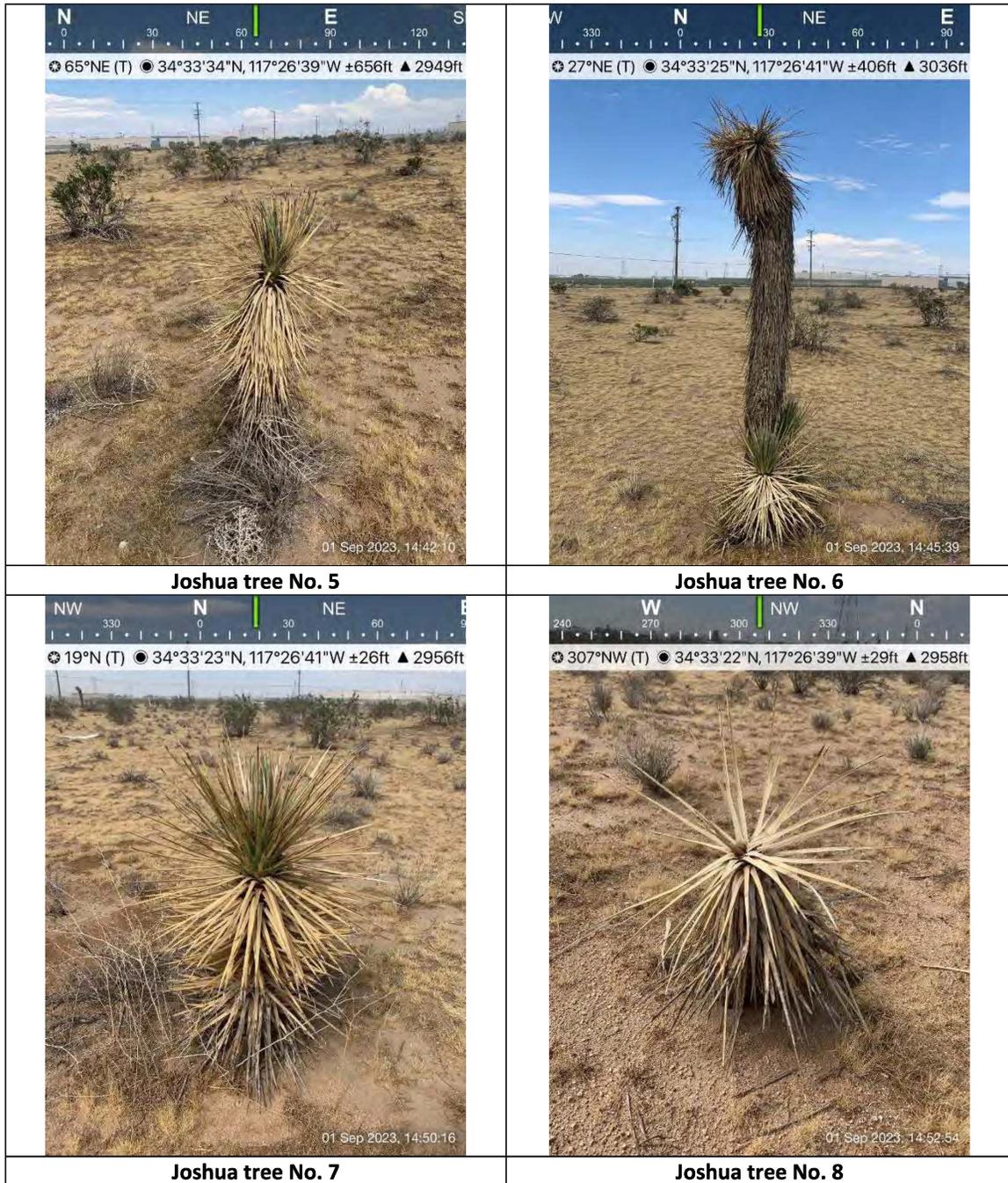
Photo 3. Southeast corner of Project Site facing northwest (04/09/2023).

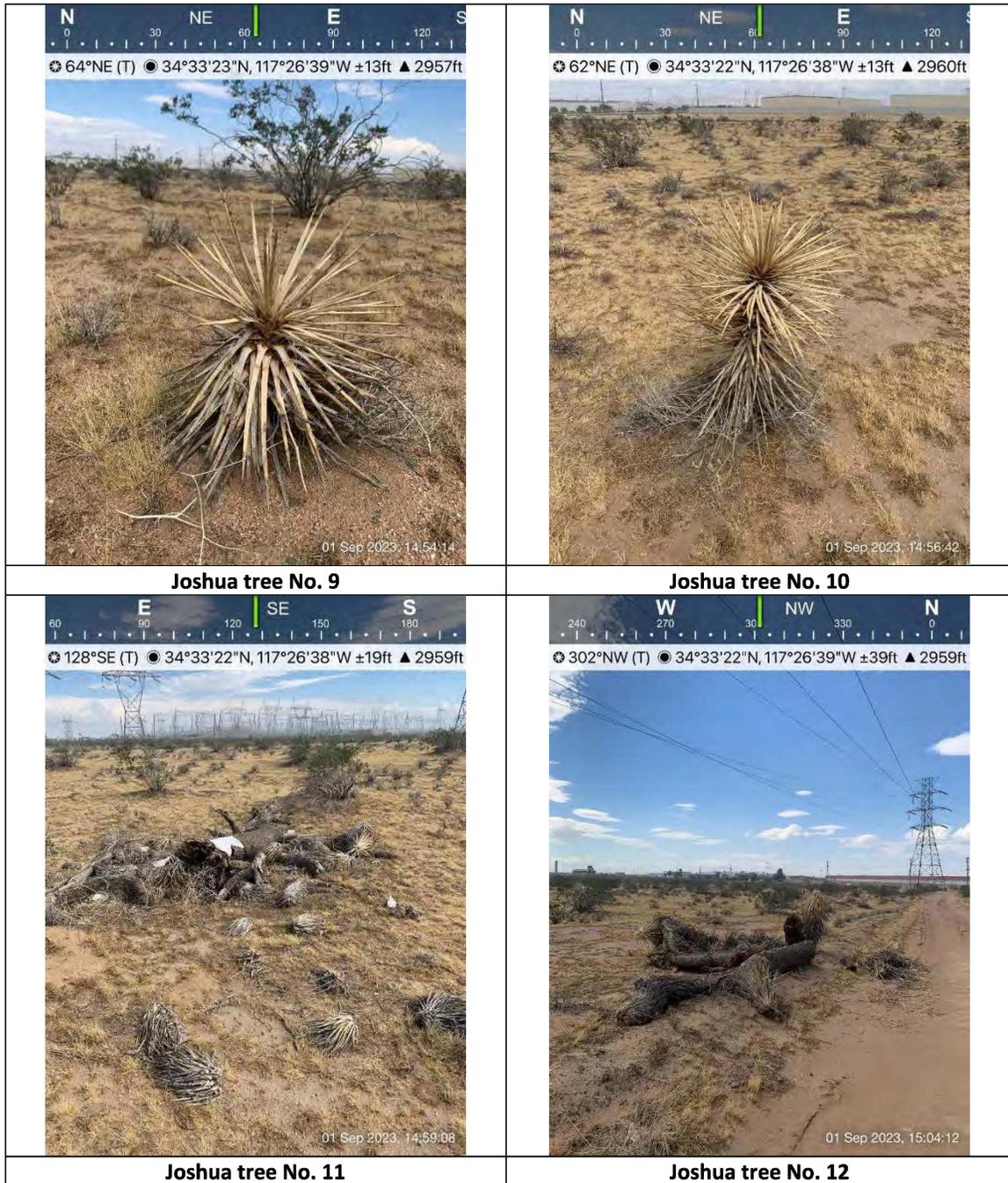


Photo 4. Southeast corner of Project Site facing west (04/09/2023).

APPENDIX B. JOSHUA TREE PHOTOGRAPHS



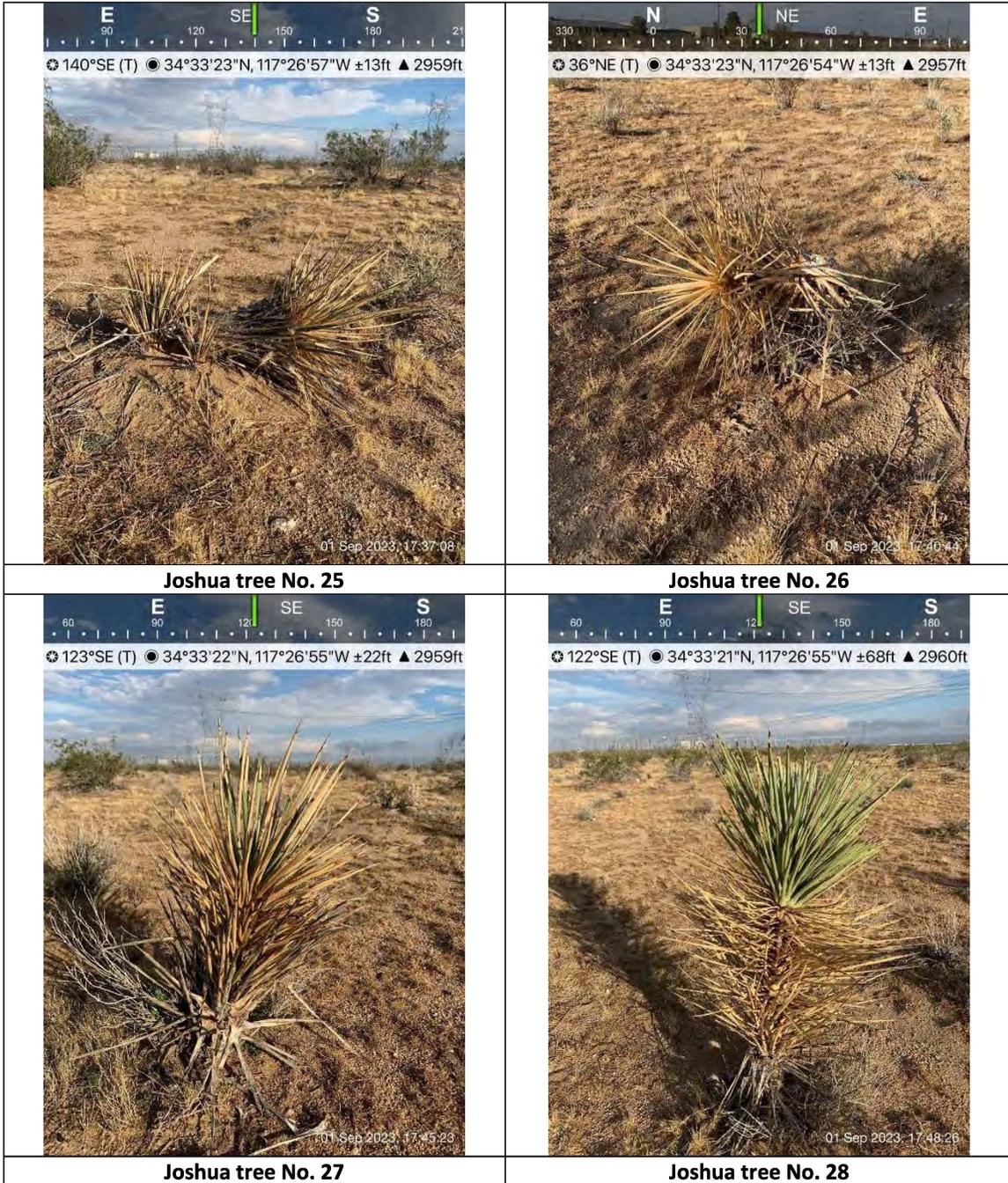


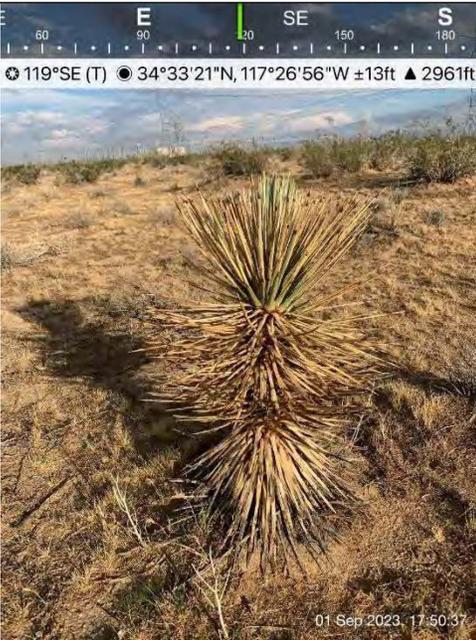
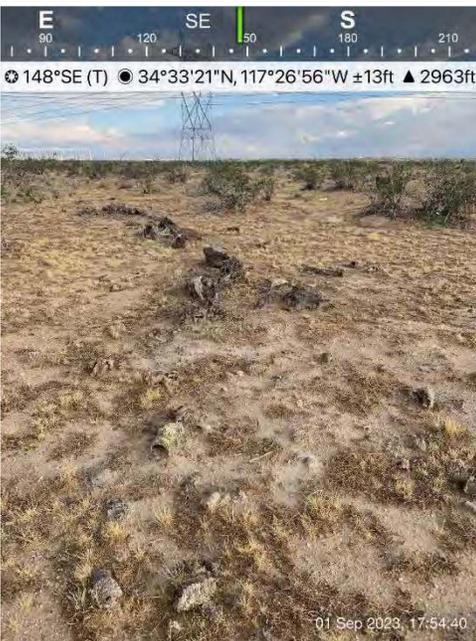


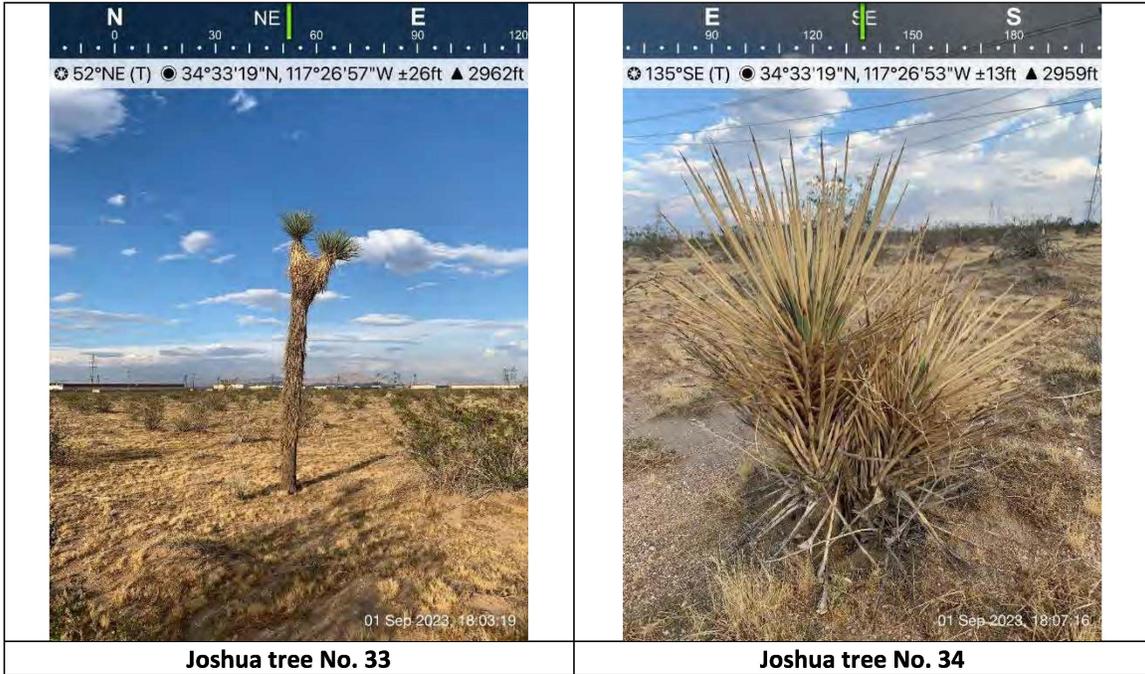
<p>Joshua tree No. 13</p>	<p>Joshua tree No. 14</p>
<p>Joshua tree No. 15</p>	<p>Joshua tree No. 16</p>

<p>Joshua tree No. 17</p>	<p>Joshua tree No. 18</p>
<p>Joshua tree No. 19</p>	<p>Joshua tree No. 20</p>

<p>Joshua tree No. 21</p>	<p>Joshua tree No. 22</p>
<p>Joshua tree No. 23</p>	<p>Joshua tree No. 24</p>



 <p>119°SE (T) ● 34°33'21"N, 117°26'56"W ±13ft ▲ 2961ft</p> <p>01 Sep 2023, 17:50:37</p>	 <p>146°SE (T) ● 34°33'22"N, 117°26'56"W ±118ft ▲ 2958ft</p> <p>01 Sep 2023, 17:51:23</p>
<p>Joshua tree No. 29</p>	<p>Joshua tree No. 30</p>
 <p>148°SE (T) ● 34°33'21"N, 117°26'56"W ±13ft ▲ 2963ft</p> <p>01 Sep 2023, 17:54:40</p>	 <p>131°SE (T) ● 34°33'20"N, 117°26'55"W ±13ft ▲ 2960ft</p> <p>01 Sep 2023, 17:58:10</p>
<p>Joshua tree No. 31</p>	<p>Joshua tree No. 32</p>



APPENDIX C. JOSHUA TREE SUMMARY DATA

Joshua Tree No.	Height (inches)	Height (meters)	DBH (inches)	Overall Condition	Notes
1	33	0.8	--	Moderate	--
2	121	3.1	10	Healthy	--
3	96	2.4	--	Healthy	Unable to measure DBH due to presence of many leaves obstructing view of and access to trunk.
4	80	2.0	--	Dead	Dead and broken in pieces on ground. Height determined from largest continuous section of broken trunk.
5	47	1.2	--	Moderate	--
6	78	2.0	10	Moderate	--
7	43	1.1	--	Moderate	--
8	24	0.6	--	Poor	--
9	17	0.4	--	Poor	--
10	37	0.9	--	Poor	--
11	150	3.8	11	Dead	Dead and fallen. Height determined from largest continuous section of broken trunk.
12	184	4.7	11	Dead	Dead and fallen. Height determined from largest continuous section of broken trunk.
13	35	0.9	--	Moderate	--
14	32	0.8	--	Moderate	--
15	20	0.5	--	Moderate	--
16	227	5.8	10	Moderate	--
17	73	1.9	5	Moderate	--
18	116	3.0	9	Moderate	--
19	44	1.1	--	Poor	--
20	256	6.5	13	Healthy	--
21	38	0.9	--	Moderate	--
22	245	6.2	15	Moderate	--
23	53	1.4	--	Healthy	--
24	66	1.7	--	Healthy	--
25	12	0.3	--	Moderate	One portion has fallen over, but it and several other sprouts have green leaves.
26	17	0.4	--	Dead	Top is broken off and fallen over with no live leaves.
27	25	0.6	--	Poor	--
28	44	1.1	--	Healthy	--
29	33	0.8	--	Moderate	--
30	36	0.9	--	Poor	--
31	--	--	--	Dead	Dead, fallen over, and mostly decomposed. Couldn't not measure height or DBH but was originally large.
32	14	0.4	--	Poor	--
33	170	4.3	11	Healthy	--
34	32	0.8	--	Moderate	--

Appendix F. Mojave Desert Tortoise Survey Report

-- Content Appears on Following Page --



August 28, 2023

Phil Martin & Associates
2987 NW Fairway Heights Dr.
Bend, OR 97703

[Delivered via email: pmartin@philmartinassociates.com]

SUBJECT: Results of Mojave Desert Tortoise (*Gopherus agassizii*) Survey at the Rancho 30 LLC Project Site, Adelanto, San Bernardino County, California

To whom it may concern,

Bloom Biological, Inc. (BBI) was retained to conduct a site assessment and presence/absence survey for Mojave desert tortoise (*Gopherus agassizii*) within the Rancho 30 LLC project site and vicinity in the City of Adelanto, San Bernardino County, California. The site assessment and presence/absence survey were conducted on 9 April and 2 May 2023 in accordance with the U.S. Fish and Wildlife Service (USFWS) *Desert Tortoise (Mojave Population) Field Manual: (Gopherus agassizii)* (USFWS 2009; updated 2019), with the primary purpose of determining the presence/absence of desert tortoise within the project site and surrounding 500 ft. While suitable desert tortoise habitat is present within the project site and within 500 ft of the site, no sign of desert tortoise was detected.

NATURAL HISTORY & PROTECTIONS

The Mojave population of desert tortoise includes tortoises north and west of the Colorado River in California, Arizona, Utah, and Nevada. They occupy a variety of habitats including sandy flats, rocky foothills, alluvial fans, washes, and canyons in areas of sparse vegetation, but are most commonly found on valley bottoms and bajadas in the Mojave Desert (Germano et al. 1994). Peak activity occurs between March through June and September through October when temperatures are above 75°F. This species is strictly herbivorous and consumes a variety of herbs, grasses, cacti, and wildflowers. The Mojave Desert is rich in winter annuals which are an important food source as well as perennial grasses, with woody perennials and cacti being an important late-season and drought source of food (Germano et al. 1994). In California, this species most frequently occurs in creosote scrub, cactus scrub, shadscale scrub, and Joshua tree woodland with soil friable enough for digging burrows and firm enough that the burrows will not collapse with the upper parts of bajadas and alluvial fans generally being too rocky for burrow construction (Luckenbach 1981). The highest density of desert tortoises in the Mojave Desert is found in the Fremont Valley near California City, California, where relatively uniform creosote is present in light gravel to sandy soil (Luckenbach 1981). Mojave desert tortoises were listed by the USFWS as “threatened” in April 1990 (USFWS 1990) and are now also protected as a “threatened” species under the California Endangered Species Act (CESA).

SITE DESCRIPTION

The project site consists of three vacant parcels with a combined area of 30.81 acres [APN: 3128-011-02-0000 (11.09 acres), 3128-011-03-0000 (10.28 acres), and 3128-011-04-000 (9.48 acres)] south of the intersection of Rancho Rd. and Raccoon Ave. in Adelanto, California (Figure 1). The project site is largely flat and elevations on site range from approximately 2,945 to 2,960 ft above mean sea level (amsl). The property is located in the USGS CA 7.5-minute *Adelanto* quadrangle. Soils present on site consist of Cajon sand and

Helendale-Bryman loamy sands (NRCS 2022). Vegetation consists of creosote bush-white bursage (*Larea tridentata-Ambrosia dumosa*) shrubland alliance with the following dominant species: creosote bush, white-bursage, old han schismus (*Schismus barbatus*), and brome (*Bromus* sp.) (Jepson Flora Project 2023). Vegetation density varies throughout the project site, with some areas containing sparse vegetation cover and others containing sparse/moderate vegetation cover. Photographs of the project site are provided in Appendix A.

PROJECT DESCRIPTION

The proposed Project consists of the construction of an Indoor Cultivation Facility on three vacant parcels consisting of a combined 30.81 acres (1,342,154.1 square feet) located southwest of the intersection of Rancho Rd. and Raccoon Ave. in Adelanto, California. The project proposes an indoor marijuana operation with ten 30,000 square foot cultivation buildings and ten 10,000 square foot warehouse buildings. The project will be developed in phases depending upon the market. Phase 1 proposes two 30,000 square foot cultivation buildings and one 10,000 square foot warehouse building. The project is scheduled to start construction in the fourth quarter of 2025.



Figure 1. Project Site Aerial Overview (Google Earth, May 2023)

SURVEY AREA

The area assessed for desert tortoise presence/absence and habitat (Survey Area) includes the project site and all undeveloped areas within 500 ft (Figure 2). While portions of the Survey Area consist of industrial development, there are areas of potential desert tortoise habitat south of the site and east across Raccoon Ave. Similar to the project site, areas to the south consist of creosote bush-white bursage shrubland of relatively the same density as onsite. To the east is a vacant parcel containing relatively low growing non-native grasses.

SURVEY METHODS

The Project was assessed for the presence/absence and abundance of desert tortoise utilizing the preconstruction survey protocol provided in the USFWS *Desert Tortoise (Mojave Population) Field Manual: (Gopherus agassizii)* (USFWS 2009; updated in 2019). An assessment of the Survey Area was conducted by biologists Kerry Ross and Rainey Barton on 9 April 2023 and consisted of a complete survey of the Survey Area. The results of the assessment concluded that potential desert tortoise habitat (creosote bush-white bursage shrubland and sandy/loamy soils) is present within the Survey Area and a focused survey for desert tortoise presence/absence was needed for the site. The focused survey was conducted on 2 May 2023 by biologists Rainey Barton and Michelle Picca and consisted of 100% survey coverage of the Survey Area during one of the desert tortoise’s most active periods (April through May) when weather conditions were suitable for tortoise activity (temperature >40°C). Thirty-foot-wide (10 m) belt transects were walked, pausing frequently to inspect all burrows and potential signs of desert tortoise. As the Project site is less than 165 acres, it is considered a small project, and determining presence of desert tortoise was based primarily on sign (rather than live animals), requiring that surveyors diligently observe and describe sign. Survey dates, times, and weather conditions are provided in Table 1. Surveyor qualifications are provided in Appendix B.

Table 1. Survey Dates, Times, and Weather Conditions

Date	Time	Weather
04/9/2023	0700-1500h	Start: 52° F, 10% cloud cover, Calm End: 84° F, 0% cloud cover, 9 mph No rain; No fog; Excellent visibility
05/02/2023	0800-1430h	Start: 57° F, 40% cloud cover, 8 mph End: 69° F, 45% cloud cover, 11 mph No rain; No fog; Excellent visibility

RESULTS

A review of the California Department of Fish and Wildlife’s (CDFW) California Natural Diversity Database for desert tortoise presence in the vicinity of the project returned one (1) result. This record is 4.2 miles southeast of the Project where multiple desert tortoises and burrows were observed in 1990, 2003, and 2007 (CDFW 2023).

No desert tortoise, desert tortoise sign, or burrows were observed within the Survey Area. While there were many small mammal burrows onsite, likely belonging to white-tailed antelope squirrels (*Ammospermophilus leucurus*), none were of the shape conducive to desert tortoise presence and when inspect no desert tortoises were observed within the burrows. There were two larger burrows within the Survey Area, 338 ft from the site. These burrows appeared to have been initially dug by squirrels and excavated by either coyote or dogs and no sign of use by desert tortoise was found (Appendix A, Photos 5 & 6). All burrows were inspected for the presence of desert tortoise individuals and sign (i.e., scat, tracks, eggshell fragments, bones, shells, etc.) and none had any indication of use by desert tortoise. No sign of desert tortoise presence was detected within the project site or within 500 ft.

CERTIFICATION

I certify that the information in this report and attached appendices fully and accurately represents the work of BBI. If you have any questions or require additional information, please feel free to contact us at (949) 272-0905 ext. 103 or raineybarton@bloombiological.com.

Sincerely,

BLOOM BIOLOGICAL, INC.



Rainey Barton
Project Manager / Biologist

LITERATURE CITED

CDFW. 2023. RareFind: Adelanto, Victorville, Shadow Mountains SE, Shadow Mountains, Victorville NW, Helendale, Phelan, Baldy Mesa, and Hesperia Quadrants. California Natural Diversity Database. Website <https://wildlife.ca.gov/Data/CNDDB> (Accessed 13 Mar 2023).

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Jepson Flora Project. 2023. Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California. Berkeley, California. University of California.

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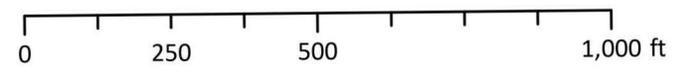
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Figure 2. Survey Area Map

- Project Boundary
- 500-ft Survey Area
- 10-m Survey Transects

UTM NAD83 Zone 11N Coordinate Grid
 Date: 08/24/2023
 Author: Bloom Biological, Inc.
 Credits: ESRI Imagery



APPENDIX A. SURVEY PHOTOGRAPHS



Photo 1. Southwest corner of project site facing north (04/09/2023).



Photo 2. Southwest corner of project site facing east (04/09/2023).



Photo 3. Southeast corner of project site facing northwest (04/09/2023).



Photo 4. Southeast corner of project site facing west (04/09/2023).



Photo 5. Rodent burrow south of the Project (04/09/2023).



Photo 6. Rodent burrow south of the Project (04/09/2023).

APPENDIX B. SURVEYOR QUALIFICATIONS

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Kerry Ross

Biologist

Qualifications

Mr. Ross has fifteen years of professional experience as an avian biologist, on a wide variety of field-based projects throughout California, Nevada and Florida. He is an avid birder and possesses superior field identification skills for raptors and all other avian taxa. Mr. Ross began working with BBI in 2015 and has performed a variety of pre-construction surveys during that time, along with monitoring work during construction to mitigate impacts to sensitive species and/or nesting birds. He is adept at recording detailed data forms and spatial data according to protocol while maintaining maximal coverage of each survey area. Mr. Ross has consistently provided services for SDG&E under the current contract with various prime contractors.

Professional Experience

Has conducted a broad array of avian surveys for private sector, utility, and other municipalities in California, including locations in San Diego, Kern, Humboldt, Del Norte, Mendocino, Trinity and Sonoma counties, including infrastructure-related surveys for wind farms and utility transmission lines. Avian sampling techniques employed included bird use count (BUC), eagle point count (EPC), linear transects, point counts along a transect line, and area bird surveys, all in accordance with published California Energy Commission and California Department of Fish and Wildlife (CDFW) guidelines for wind and solar energy projects in California.

SDG&E On-call, CA

Provides on-call biological surveys for various preconstruction surveys. Works as a technician, identifying nesting birds and delineating buffered zones around nests. Writes detailed reports, conducts safety tailboards, and submits complex job packages with spatial data for each project daily.

SCE, Various Locations, CA

Works as an on-call biologist for a variety of Southern California Edison (SCE) transmission line projects throughout Southern California. Performs preconstruction surveys and during-construction monitoring related to nesting birds. Submits detailed daily reports of findings, including geospatial data and images from each surveyed site. Creates a daily safety tailboard for each site.

Mitsubishi Mining Company, Inyokern, CA

Surveys mine lease sites for nesting raptors as part of the North Slope (San Bernardino Mountains) Raptor Conservation Strategy implemented by the USFS. Evaluates Golden Eagle nest sites for nest building signs and nest occupancy. Maps and photographs all findings, and updates seasonal databases. Coordinates with mine owners for access to remote canyon sites. Operates according to stringent mine safety protocols.

Confidential Client, Tehachapi, CA

Conducted half-day or full-day surveys for eagles and other California Condor at an operational wind plant near the Tehachapi mountains. Recorded detailed data and flight paths for all sensitive species detected, entered data and digitized flight path maps daily. Used radio tracking devices daily.

HawkWatch International, Nevada and Florida

Lead observer for five seasons of migratory raptor counts. Performed data entry and submission; educated visitors to the hawk watch station, hawk migration and identification of all raptors resulting in the expansion of a long-term data. Also captured and marked migrating raptors.

San Diego Zoo Global, Naval Base Coronado, San Diego, CA

Searched for and monitored nests of Western Snowy Plovers and Least Terns in coastal areas. Banded adults and chicks of both species, re-sighted color-banded individuals, entered and organized nesting and banding data.

Institute of Wildlife Studies, San Clement Island, CA

Surveyed for and monitored endemic Loggerhead Shrike, wrote summary reports and upkept project database.

Various Clients and Agencies, throughout California

Conducted protocol surveys for a variety of sensitive species over a 14-year period, including Marbled Murrelet, Yellow-billed Cuckoo, Willow Flycatcher, and Northern Spotted Owl.

Education

Humboldt State University, Arcata, CA

Major: Wildlife Biology (Bachelor's degree pending)

College of the Redwoods, Eureka, CA

Associate of Science - December 2003

Workshops & Certifications

- Spatial Data Collection Platforms: ESRI ArcCollector, ESRI Survey123
- Certified Marbled Murrelet Surveyor, Trainer, and Evaluator 1999-2012
- Threatened Species Recovery Authorized (limited) Individual US Fish & Wildlife Service Permit # TE-823807-3 authorized to capture, band, weigh, and measure Western Snowy Plovers and their eggs
- Oiled Wildlife Care Network Advanced Skills & Supervisor Training, Marine Wildlife Care Center, Arcata, CA 2006
- Oiled Wildlife Care Network Basic Skills Course, Marine Wildlife Care Center, Arcata, CA 2005
- Snowy Plover Workshop and Training, Mad River Biologists, 2000 and 2001
- Wilderness Survival Course, Ketchum, Idaho, 1988
- American Heart Association, CPR and Advanced First Aid
- Swift Water Rescue Training, Wild Rivers Idaho, Ketchum, Idaho
- Pacific Seabird Group Member
- Helicopter Underwater Escape Training
- Marbled Murrelet Surveyors Training Annual Certification
- Skilled four-wheel drive, powerboat, ATV, and snowmobile operator
- Specialize in raft kayak, and ski-based surveys.



Rainey Barton | Biologist & Project Manager

raineybarton@bloombiological.com | 949.272.0905 ext.103 | 13611 Hewes Ave., Santa Ana, CA

Qualifications

Rainey Barton has over seven years of professional experience as a biologist, on a wide variety of field-based projects throughout California. She is an all-around excellent California naturalist, possessing excellent field identification skills for many taxa. Rainey began working with Bloom Biological, Inc. (BBI) in 2019 and has performed work for a variety of large- and small-scale projects including residential, commercial, and renewable energy development, SCE, SDG&E, and private utility companies, as well as conducting scientific research alongside Peter Bloom, Ph.D., zoologist and vice president of BBI. Her project related work has involved evaluation of habitat and assessment of potential environmental impacts which culminate in the preparation of biological assessment reports in compliance with California Environmental Quality Act (CEQA) guidelines. She is adept at all aspects of project management, field work, and report preparation, adhering strictly to guidelines and protocols. Additionally, she is skilled at recording detailed and spatial data according to protocol while maintaining maximal coverage of survey areas. She also provides geospatial analysis using a variety of Geographic Information System (GIS) platforms integrated to prepare insightful reports. Prior to working with BBI, Rainey worked as a Fisheries/Field Technician with United Water Conservation District and a Stormwater Consultant with Willdan Engineering, both located in the Southern California region. Her professional experience over the years has resulted in an in-depth understanding of the regulations, policies, and procedures associated with biological resources in Southern California including CEQA, California Fish and Game Code (CFGC), Clean Water Act (CWA), Federal Endangered Species Act (ESA), California Endangered Species Act (CESA), Army Corps Permitting for Waters and Wetlands of the US, and Regional Water Quality Control Board Permitting.

Rainey is currently pursuing a master's degree in biology at the California State University, Northridge where she is conducting research on habitat and space use by the nesting population of Swainson's Hawk (*Buteo swainsoni*) in the Antelope Valley.

Professional Experience

Rainey has conducted a broad array of biological surveys and assessments and has worked on many field-based projects throughout California, including locations in San Bernardino, Santa Barbara, San Diego, Los Angeles, Kern, Riverside, Ventura, Imperial, and Orange counties. Avian sampling techniques employed include bird use count (BUC), linear transects, point counts along a transect line, area bird surveys, and mist netting all in accordance with regulatory guidelines. Botanical surveys conducted by Rainey follow the mapping and identification system detailed in the Manual of California Vegetation (Sawyer et al. 2009). She performs geospatial analysis for a wide variety of projects utilizing a multitude of GIS platforms integrated to prepare informative reports. Biological Assessments prepared by Rainey have been reviewed and approved by the Los Angeles County Department of Regional Planning (DRP) Environmental Review Board (ERB) among other advisory committees throughout Southern California. She maintains an active subscription with the California Natural Diversity Database (CNDDDB) and utilizes this tool prior to every biological survey conducted, ensuring that the most recent version of the database is reviewed. Additionally, she reports all special status species observations to CNDDDB upon conclusion of each survey using the CNDDDB field survey form.

Through her work in Los Angeles County, Rainey has become familiar with the following Los Angeles County plans and regulations: Oak Tree Ordinance, Los Angeles County Oak Woodlands Conservation Management Plan, Significant Ecological Areas Ordinance, Santa Monica Mountains North Area Plan, Los Angeles County Local Coastal Program for Unincorporated Santa Monica Mountains (including the Land Use Plan and the Local Implementation Program), as well as the General Plan.

Bloom Biological, Inc. Research | Consulting | Conservation

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The following provides a sample of the work performed by Rainey during her employment with BBI:

MLJ Resources, Murrieta, CA

Prepared a biological assessment report for proposed commercial development in Riverside County which analyzed the proposed project's compliance with the requirements of the Western Riverside County Multiple Species Habitat Conservation Plan. Analyzed the site for potential sensitive species habitat and sensitive resources including vernal pool, fairy shrimp, Burrowing Owl, and endemic plant species. Conducted and coordinated field surveys, provided GIS analysis, prepared final report, and provided mitigation consultation.

Anonymous Architects, Los Angeles, CA

Prepared multiple Biological Assessment Reports for several proposed developments within the City of Los Angeles, California. Analyzed the proposed project sites for potential sensitive resources and prepared the reports per the requirements of the City of Los Angeles Biological Resources Assessment, Biological Full Report Template with Instructions. Provided GIS analysis, conducted field surveys, and prepared final report.

Brodin Design Build, Studio City, CA

Prepared a Biological Assessment Report for a proposed development within the City of Los Angeles, California. Analyzed the proposed project site for potential sensitive resources and prepared the report per the requirements of the City of Los Angeles Biological Resources Assessment, Biological Full Report Template with instructions. Coordinated and conducted field surveys, provided GIS analysis, and prepared final report.

Leigh Herzig, Topanga, CA

Prepared a Biological Assessment Report consistent with the requirements of the Santa Monica Mountains Local Implementation Program of the Santa Monica Mountains Local Coastal Program. Provided GIS analysis, coordinated and conducted field surveys, prepared final report, and attended ERB hearing.

Keystone Strategic Planning, Los Angeles County, CA

Prepared a supplemental letter update to a Biological Assessment Report previously prepared in accordance with requirements of the Santa Monica Mountains Local Implementation Program of the Santa Monica Mountains Local Coastal Program. Analyzed consistency of the Biological Assessment Report, conducted field surveys, provided GIS analysis, and prepared subsequent letter report of findings.

Laguna 3 Land, Laguna Beach, CA

Prepared multiple Biological Assessment Reports for proposed developments within an Environmentally Sensitive Area of the City of Laguna Beach in accordance with requirements of the General Plan. Conducted field surveys, prepared final report, and recommended mitigation measures for potential impacts.

Keith Messick Architecture, Tustin, CA

Prepared a Biological Field Survey Report for a proposed development in Tustin, CA. Coordinated field surveys, prepared biological inventory, and provided recommendations for further survey efforts. Documented the presence of Coastal California Gnatcatcher (*Poliophtila californica californica*) onsite.

Confidential Client, Kern County, CA

Conducting a multi-year study of Bird Use within an area proposed for large scale wind development following detailed California Energy Commission (CEC) and California Department of Fish and Wildlife (CDFW) guidelines for wind and solar energy projects. Coordinating and conducting Bird Use Count surveys. Coordinated and conducted Swainson's Hawk protocol surveys within a 5-mile radius of the project site

and Golden Eagle nest surveys by helicopter within 2-miles. Providing GIS and data analyses, quarterly, annual, and final reports, and coordinating all aspects of the project.

City of Whittier, Los Angeles County, CA

Prepared a biological assessment for a proposed project located adjacent to the Puente Hills Habitat Preservation Authority. Analyzed the site and surrounding area for the presence of numerous sensitive species and biological resources including, but not limited to, mountain lion (*Puma concolor*), Coastal California Gnatcatcher, special status bats, and wildlife corridors. Coordinated USFWS protocol level surveys for Coastal California Gnatcatcher. Prepared subsequent biological assessment report including recommendations for mitigating potential project impacts and facilitated mitigation measures.

National Audubon Society & Defenders of Wildlife, Antelope Valley, CA

Conducted annual, multi-year, inventories of the breeding population of Swainson's Hawk (*Buteo swainsoni*) in the Antelope Valley. Prepared multiple reports and publications (Bloom et al. 2023) and a Conservation Strategy for Swainson's Hawk in the Antelope Valley. Coordinated and conducted field work, synthesized current and historical data, and prepared subsequent reports and manuscripts.

San Diego Gas & Electric, San Diego County, CA

Coordinated and conducted a 5-year status review of nesting Golden Eagles (*Aquila chrysaetos*) within proximity to San Diego Gas & Electric Facilities in San Diego County, CA in a survey area encompassing more than 900 sq-miles. Coordinated and conducted field surveys following detailed protocols including surveying by ground and by helicopter, provided GIS analysis, synthesized data, and prepared the final report.

Terra-Gen, Kern and Los Angeles Counties, CA

Conducted Swainson's Hawk protocols surveys throughout the Antelope Valley in regions of Kern and Los Angeles Counties. Conducted and coordinated surveys, synthesized data, and prepared final report.

EDF Renewables, Kern County, CA

Conducted Swainson's Hawk protocols surveys throughout the Antelope Valley in Kern County. Conducted and coordinated surveys, synthesized data, and prepared final report.

Leeward Renewable Development, Kern and Los Angeles County, CA

Conducted Swainson's Hawk pre-construction and protocol surveys in regions of Los Angeles and Kern Counties in the Antelope Valley. Conducted and coordinated surveys, synthesized data, and prepared final report.

Southern California Edison (SCE), Various Locations, CA

Works as an on-call biologist for SCE transmission line projects throughout Southern California. Performs preconstruction surveys related to nesting birds and sensitive plant species. Submits detailed daily reports of findings, including geospatial data and images from each surveyed site. Creates a daily safety tailboard for each site. Manages the coordination of field staff.

Mitsubishi Mining Company, Inyokern, CA

Surveys mine lease sites for nesting raptors as part of the North Slope (San Bernardino Mountains) Raptor Conservation Strategy implemented by the USFS. Evaluates Golden Eagle, Peregrine Falcon (*Falco peregrinus*), and Red-tailed Hawk (*Buteo jamaicensis*) nest sites for signs of building, nest occupancy, and nest success. Maps and photographs all findings and updates seasonal databases. Coordinates with mine owners for access to remote canyon sites. Operates according to stringent mine safety protocols. Assisted permit holders with the banding of Golden eagle young before fledging. Prepares annual status reports and is preparing a publication for peer-review.



Bear Valley Electric Service, San Bernardino County, CA

Conducted pre-construction biological survey of U.S. Forest Service (USFS) land for nesting or roosting birds and USFS sensitive avian, reptile, amphibian, plant, and mammal species including Bald Eagle (*Haliaeetus leucocephalus*), southern rubber boa (*Charina umbratic*), San Bernardino Mountain kingsnake (*Lampropeltis zonata parvirubra*), Southwestern Willow Flycatcher (*Empidonx traillii extimus*), and California Spotted Owl (*Strix occidentalis occidentalis*). Provided report of findings and mapped locations of potential sensitive species locations and habitat.

Bear Valley Electric Service, San Bernardino County, CA

Conducted pre-construction biological survey and daily monitoring of utility pole replacement adjacent to Stanfield Marsh, Big Bear Lake, CA. Surveyed daily for nesting or roosting birds and USFS sensitive avian, reptile, amphibian, plant, and mammal species prior to utility enhancement and replacement activities. Provided report of findings and mapped locations of nesting birds. Prepared nesting bird management plan for construction activities. Provided construction monitoring for the duration and managed all aspects of the project.

Ocean Terrace HOA, Rancho Palos Verdes, CA

Conducted multiple surveys for nesting birds, including a nesting Cooper's Hawk (*Accipiter cooperii*), prior to proposed vegetation trimming activities at Ocean Terrace HOA, Rancho Palos Verdes, CA. Prepared a written and mapped report of findings and consulted the project proponents on recommended mitigation measures.

SC Tree and Landscape & Green Crew Landcare, Inc., Marina del Rey, CA

Conducts annual surveys for nesting and wading birds and raptors at several locations in the Marina del Rey Harbor in accordance with the Marina del Rey Tree Pruning and Tree Removal Policy (No. 23) of the Marina del Rey Land Use Plan. Reported on findings and prepared map of sensitive resource locations. Provided recommendations for mitigation and avoidance of roosting birds.

Mojave National Preserve, San Bernardino County, CA

Assists permit holder with the banding of Red-tailed Hawk, Great Horned Owl (*Bubo virginianus*), and Common Raven (*Corvus corax*) young nesting in Joshua Tree (*Yucca brevifolia*) in Mojave National Preserve, San Bernardino County, CA.

Orange County Parks and Irvine Ranch Conservancy, Orange County, CA

Assists with trapping and banding of adult and nestling Barn Owls (*Tyto alba*), Great Horned Owls (*Bubo virginianus*), Western Screech Owls (*Megascops kennicottii*), Red-shouldered Hawks (*Buteo lineatus*), Red-tailed Hawks, and American Kestrel (*Falco sparverius*) at various locations throughout Orange County including at O'Neil Regional Park as well as on the Irvine Ranch Conservancy (IRC) lands, and the Orange County Water District (OCWD) lands. Additionally, conducts field surveys for nesting raptors throughout Orange County open space.

Education

California State University, Channel Islands
Major: Environmental Science and Resource Management, B.S.
Minor: Biology
Graduation date: May 2018

California State University, Northridge
Major: Biology, M.S.
Expected graduation date: December 2024



Workshops & Certifications

- Federal Bird Banding Permit (20431), Sub-permittee
- Raptor Research Foundation Conference, 2020, 2021
- Introduction to Desert Tortoise and Field Techniques Course, 2020
- Spatial Data Collection Platforms: ESRI ArcCollector, ESRI Survey123
- Spatial Data Analysis Software: ArcGIS Desktop, ArcGIS Pro, ESRI Story Maps
- Wilderness First Aid, 2017
- American Heart Association, CPR, 2017
- Ventura Audubon Society, Member
- The Wildlife Society, Member
- California Safe Boating Certification, 2017
- Remote sUAV Pilot (Part 107)
- UAV Software: Drone Deploy, Pix4D, Precision Flight
- The State of the Los Angeles River Symposium, 2018
- ESRI User Conference, 2018
- Least Bell's Vireo Nesting Pair Identification Training, 2018

Publications

Bloom, P.H., Barton, R.B, and M.J. Kuehn. 2023. Swainson's Hawk nesting population in the Antelope Valley of the western Mojave Desert, California. *Western Birds*, 54:32-43.

MICHELLE PICCA

WILDLIFE BIOLOGIST



Mrs. Picca earned her BS at Point Loma Nazarene University and is currently a Biologist for Endemic Environmental. She has experience with biological monitoring, conducting biological resource surveys, and writing technical reports. Mrs. Picca also has excellent visual and auditory recognition of California bird species and is capable in the identification of a diversity of reptiles, amphibians, and mammal species native to California. She has experience with mist netting and the capture and banding of birds, nesting bird surveys, pitfall trapping, seine netting, bat surveys, herpetological surveys, habitat restoration projects, rare plant surveys, and species-specific surveys. Mrs. Picca has excellent technical writing skills, and has experience with the ArcGIS Field Maps and Survey123 apps.

EDUCATION, CERTIFICATIONS, & TRAININGS:

Burrowing Owl Symposium and Workshop Training (2023)

Desert Tortoise Workshop Training (2022)

AA, Environmental Studies, Saddleback College (2020-present)

Ecological Restoration Certificate, Saddleback College (2022)

BS, Business, International Development, and Sustainability Studies, Point Loma Nazarene University (2019)

PROFESSIONAL EXPERIENCE

CURRENT PROJECTS

Caltrans 08-1K7904 Chino Avenue Signals Project - Ontario, CA (2023)

The biologist monitored road improvement work for sensitive species which included burrowing owl, nesting hawks, owls and passerines. The biologist conducted weekly nesting bird surveys in advance of the roadway work activities. Bird nests were recorded and buffers were established. The work consisted of loop stub outs, removing street striping and re-application with a new paint and changing out street signals and signs along 5.25 miles of Euclid Avenue (Highway 83). The biologist wrote weekly monitoring reports and cooperated with crews to ensure all work was performed in compliance with environmental regulations. Sensitive species that were monitored included vermilion flycatcher, red-tailed hawk, and burrowing owl.

SR 71/91 Highway Interchange Improvement Project- Skanska - Corona, CA (2023)

The biologist monitored for sensitive species which included roosting bats (winter and maternity), least Bell's vireo, California gnatcatcher, burrowing owl, San Diego Ambrosia (*Ambrosia pumila*), San Miguel savory (*Clinopodium chandleri*), Brand's phacelia (*Phacelia stellaris*), Santa Ana sucker, and coast horned

lizard. The biologist monitored for compliance with all PLACs, CDFW regulations, Migratory Bird Treaty Act and Riverside County MSHCP. The biologist conducted nesting bird surveys in advance of clearing and grubbing activities. Bird nests were recorded and buffers were established. The biologist provided Biological Resource Information Program (BRIP) training for new employees on the jobsite. The biologist wrote daily monitoring reports and cooperated with crews to ensure all work was performed in compliance with environmental regulations.

Environmental Constraints Matrix and Vegetation Management- City of Irvine- Irvine CA (2020-present)

Habitat assessment, aquatic resource analysis, and nesting bird surveys were conducted in order to delineate sensitive habitat that needed protection during the upland and wetland vegetation removal phase of the project. A habitat matrix and vegetation alliance analysis were reported to define environmentally sensitive areas throughout Irvine, California. Preconstruction surveys and biological monitoring was conducted during fire break vegetation removal and vegetation maintenance. Jurisdictional wetlands were identified, and water quality monitoring was conducted in sensitive aquatic habitats. Species of concern included: red-tailed hawk, yellow breasted chat, California gnatcatcher, least Bell's vireo, spadefoot toad, and southwestern pond turtle.

Least Bell's Vireo and Nesting Bird Monitoring- Santa Ana Watershed Association- Riverside, CA (2020-present)

Mrs. Picca conducted least Bell's vireo presence-absence surveys and nesting bird surveys in coordination with non-native vegetation treatment performed by the Santa Ana Watershed Association. Mrs. Picca performed biological monitoring, surveying, and reporting to ensure compliance and protection for the nesting bird season.

Nesting Bird, Owl Nesting, and Preconstruction Surveys – City of Irvine- Irvine, CA (2020-present)

Biologist conducts nest surveys, owl surveys, and preconstruction surveys to determine seasonally active nests for pre-cutting and pre-construction activities performed by the City of Irvine for sensitive habitat in Irvine, California. Environmentally sensitive habitat was also surveyed and biologically monitored for rare plant species such as native tarplant. Many of these surveys included nests for least Bell's vireo, California gnatcatcher, and a wide variety of raptors known to the Irvine region. Reports and geospatial mapping are conducted to inform the City of Irvine for vegetation management.

Agua Dulce Residential Development Project-RTG Invest- Agua Dulce, CA (2021-present)

Mrs. Picca conducted biological monitoring and pit-fall trapping surveys to identify sensitive herps such as coast horned lizard and California legless lizard. Preconstruction reptile and amphibian surveys were conducted, and subsequent reports were written to document, delineate, and map the presence of sensitive species on site. Biologist also surveyed and monitored for nesting birds and rare plants such slender mariposa lily, and Peirson's morning glory. Additionally, Mrs. Picca set up camera traps to monitor badger den and kit fox activity.

Cardno SCE On Call Environmental Clearance Support- Southern California Edison- Southern California (2020-present)

Biologist performed preconstruction surveys, habitat assessment, and biological monitoring for task orders under the Cardno On Call Environmental Clearance Program. Biologist conducted pre-construction, nesting bird, and species-specific surveys for sensitive resources in support of vegetation removal projects with SCE. Focused surveys included California gnatcatcher and least Bell's vireo. Surveyor utilized ArcGIS Online (AGOL) Survey123 and Collector apps as field data tools to record biological and cultural resources for stakeholders in real-time.

Irvine Ranch Water District Restoration Consulting- IRWD- Irvine, CA (July 2020-present)

Biologist conducted preconstruction surveys and vegetation/wildlife mapping for IRWD Natural Treatment Sites to support non-native vegetation management efforts. Scope of work included native and non-native plant surveys, least Bell's vireo surveys, nesting bird surveys, and ArcGIS mapping.

Southern California Gas Company Pipeline Repair Project. Kern County, CA (2022)

Mrs. Picca conducted multiple protocol-level blunt-nosed leopard lizard surveys as a level 1 BNLL surveyor. Working under a level 2 surveyor, she conducted presence/absence transects on foot for adult and juvenile blunt-nosed leopard lizards and San Joaquin antelope squirrels. She is also competent at identifying other herps common to the central valley such as common side-blotched lizard, Blainsville's Horned Lizard, San Joaquin Coachwhip and whiptail.

Joint Force Training Base Nesting Bird and Southern Tarplant Surveys- Wildlife Innovations- Los Alamitos, CA (2022)

Mrs. Picca conducted nesting bird surveys and monitoring efforts with Wildlife Innovations in support of a solar panel construction project at the Joint Force Training Base in Los Alamitos. Active nests were identified, and buffers were established to protect the sensitive areas during clearing and grubbing activities. While surveying for active bird nests, a rare plant, southern tarplant, was also found. The project required vegetation community mapping for the southern tarplant areas and nesting bird mapping for avoidance during construction.

Aliso Creek California Gnatcatcher and Southwestern Pond Turtle Surveys- Laguna Canyon Foundation- Aliso Viejo CA (March 2020-present)

Biologist was part of a turtle trapping team to conduct surveys for southwestern pond turtle populations in ten sites throughout Aliso Creek. The work required coastal California gnatcatcher surveys, visual pond turtle surveys, pond turtle trapping, invasive removal, and biological reporting.

Short-joint Beavertail Cactus Relocation, Oak Monitoring, and Bat Surveying- Huttopia LLC- Valyermo, CA (2021-present)

Mrs. Picca took part in the short-joint beavertail cactus relocation project and oak monitoring to support Huttopia LLC with construction of a glamping area in Paradise Springs, CA. The scope of work included preconstruction rare plant surveys, mapping, monitoring the relocation, qualitative and quantitative follow-up reporting, and oak monitoring. Additional environmental services included nesting bird surveys and bat surveys.

Floradale Bridge Replacement Project-MCM- Lompoc, CA (2020-present)

Mrs. Picca conducted steelhead trout surveys and water quality monitoring. Sensitive species that were monitored included California red-legged frog, steelhead trout, southwestern pond turtle, and nesting birds.

(WILDLIFE PROTECTION FOCUSED)

Golden Eagle Nesting and Habitat Suitability Surveys- SDG&E- San Diego County, CA (2022)

Biologist conducted golden eagle nesting surveys, habitat suitability surveys, and nest monitoring for active golden eagle nests and territories throughout San Diego County. Active golden eagle nests were found and monitored over a three month period.

Desert Bighorn Sheep Surveys- SDG&E- San Diego County, CA (2022)

Biologist conducted desert bighorn sheep surveys, habitat suitability surveys, and lambing monitoring in territories throughout San Diego County. Active lambing territories were found and monitored over a three month period.

Southwestern Pond Turtle Trapping Project-Laguna Canyon Foundation- Aliso Creek, CA (2020)

Biologist conducted pond turtle trapping, surveying, monitoring, and reporting in Aliso Creek to report for the Laguna Canyon Foundation. Morphological traits and survival data were measured, and turtles were tagged for future studies. Captured individuals were processed in order to develop reports to determine pond turtle presence, survival, relative abundance, population demographics, and the impact of habitat restoration on the survival of the pond turtles.

Bird Nesting Surveys- Bloom Biological Inc. - Southern California (2020- present)

Surveys include systematic sampling of birds in various locations throughout the Irvine Ranch Conservancy study area and Casper Wilderness Park. Trapping and capture methods include Bal-Chatri Traps and mist net deployment for adults. Species included in the survey; burrowing owl, turkey vulture, red-tailed hawk, screech owl, and barn owl.

SPECIES-SPECIFIC EXPERIENCE:

Bats

Mrs. Picca has surveyed bats in cliffs, bridges, man-made structures and trees for a variety of projects throughout Southern California. She has also conducted Townsend's big-eared bat surveys. Examples of these projects include the Huttopia-Paradise Spring Project and SR 71/91 Highway Interchange Improvement Project.

Coastal California Gnatcatcher

Mrs. Picca has surveyed and monitored for coastal California gnatcatcher on a large variety of projects. Projects with California gnatcatcher include: Fairview Park Restoration Project, City of Irvine Matrix and Vegetation Clearance Project, Santa Ana Watershed Association, and Cardno.

Herps

Mrs. Picca has worked with a variety of amphibians and reptiles such as western toad, spadefoot toad, coast horned lizard, blunt-nosed leopard lizard, California legless lizard, California red-legged frog, desert

tortoise, and southwestern pond turtle. This experience comes from projects such as the Irvine Environmental Constraints Matrix, Agua Dulce Development Project, Laguna Canyon Foundation Project, Southern California Gas Company Pipeline Repair Project, and the Flordale Bridge Replacement Project.

Nesting Birds

Mrs. Picca has surveyed, trapped, tagged, and monitored nests on countless projects. Biologist has conducted nesting bird surveys for multiple seasons and with a wide range of species throughout southern California. These surveys and monitoring efforts range from species-specific surveys, raptor surveys, mist net trapping and extracting, and banding. Mrs. Picca has partaken in the MAPS Station in the Prado Basin.

Least Bell's Vireo

Mrs. Picca has surveyed and monitored for least Bell's vireo on a large variety of projects. Projects with least Bell's vireo include: SAWA Least Bell's vireo monitoring surveys, Fairview Park Restoration, and City of Irvine Matrix and Vegetation Clearance Project.

Raptors/Birds of Prey

Mrs. Picca has surveyed, trapped, and monitored raptor nests on countless projects and research studies. Trapping and capture methods include Bal-Chatrri traps and mist net deployment. Species in surveys included: golden eagle, burrowing owl, American kestrel, turkey vulture, Cooper's hawk, red-tailed hawk, red-shouldered hawk, screech owl, barn owl, and spotted owl.

Rare Plants

Biologist has surveyed and monitored for a variety of rare plants and host plants such as southern tarplant, short-joint beavertail, San Diego ambrosia, San Miguel savory, Brand's phacelia, slender mariposa lily, and Peirson's morning glory. These surveys were done through projects such as the Fairview Park Restoration and Mitigation Project, Huttopia-Paradise Springs Project, SR 71/91 Highway Interchange Improvement Project, and Agua Dulce Project.

Appendix G. Mohave Ground Squirrel Survey Report

-- Content Appears on Following Page --

CALIFORNIA DEPARTMENT OF FISH AND GAME
MOHAVE GROUND SQUIRREL
(*XEROSPERMOPHILUS MOHAVENSIS*)
GUIDELINE
SURVEY REPORT

PROPOSED RANCHO 30 LLC PROJECT
SAN BERNARDINO COUNTY, CALIFORNIA

Prepared By:
RANDEL WILDLIFE CONSULTING, INC.
South Pasadena, California

July 2023
(RWC File No. 155-0001)

Prepared For:
Bloom Biological, Inc.
13611 Hewes Ave
Santa Ana, CA 92705

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INTRODUCTION

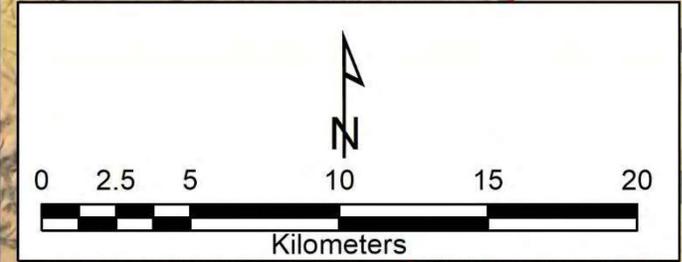
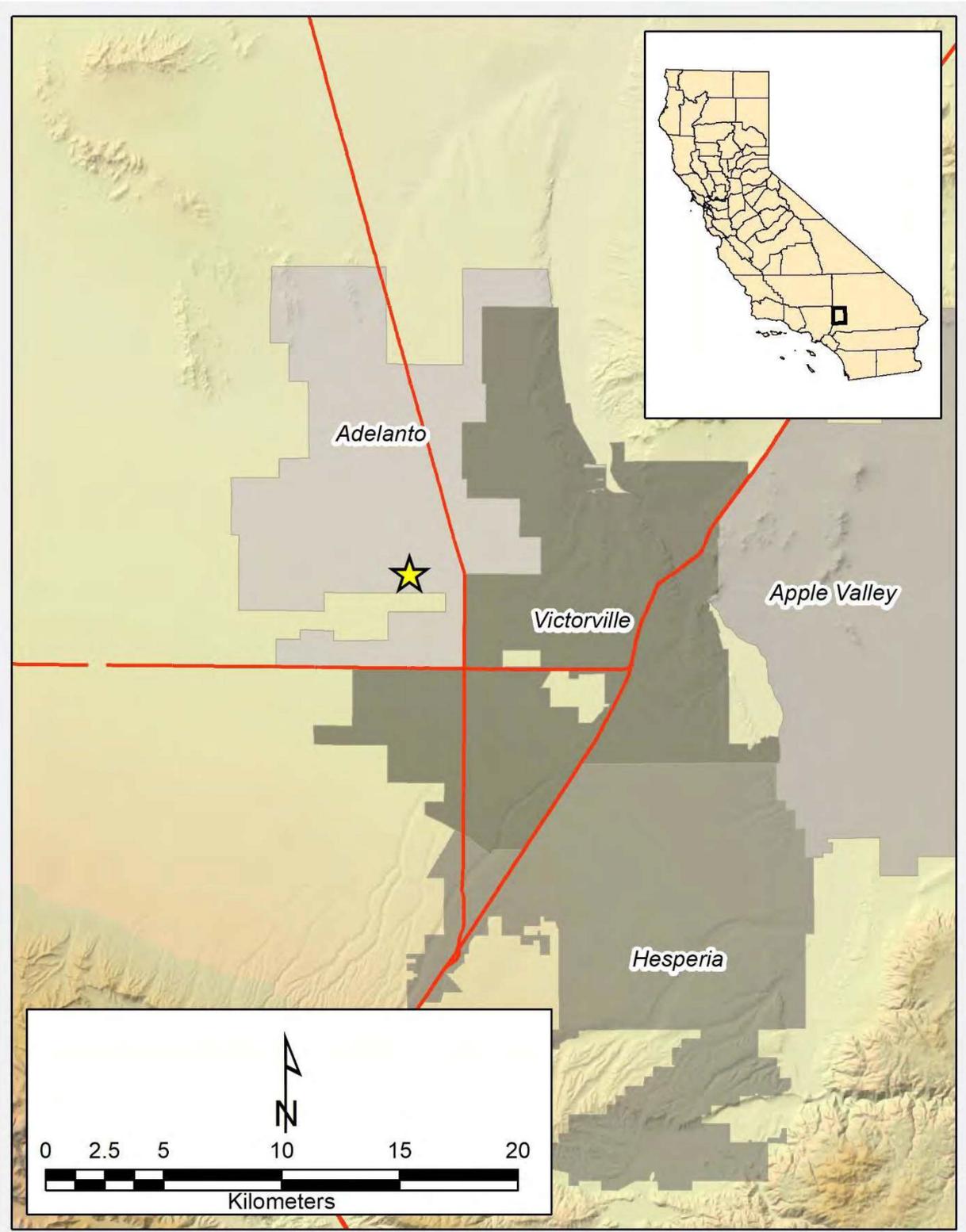
This report presents the results of focused Mohave ground squirrel (MGS; *Xerospermophilus mohavensis*) surveys on the proposed Rancho 30 LLC project site, City of Adelanto, San Bernardino County, California (Figure 1). Mohave ground squirrel focused surveys were conducted in accordance with California Department of Fish and Wildlife (CDFW) guidelines (CDFW 2003) and authorized by CDFW under Memorandum of Understandings between CDFW and Randel Wildlife Consulting, Inc. The purpose of this study was to determine the presence or absence of the California threatened Mohave ground squirrel within the proposed 30-acre Rancho 30 LLC location, City of Adelanto, San Bernardino County, California (Figure 2) pursuant to requirements outlined by the California Environmental Quality Act and California Endangered Species Act.

Project Location

The proposed Rancho 30 LLC project is located on three parcels (APN: 3128-011-02-0000, 3128-011-03-0000, and 3128-011-04-0000) of approximately 30.81-acres of undeveloped land bordered by Rancho Rd on the north, Racoon Ave on the east, vacant land to the south, and Mesa Linda Drive on the west. The project is located in the southwestern portion of San Bernardino County, in the geographic sub-region of the southwestern Mojave Desert. The City of Adelanto (hereafter City) is accessible via Interstate 15 (I-15), U.S. Highway 395 (US-395), State Route 18 (SR-18), and Historic Route 66 (National Trails Highway).

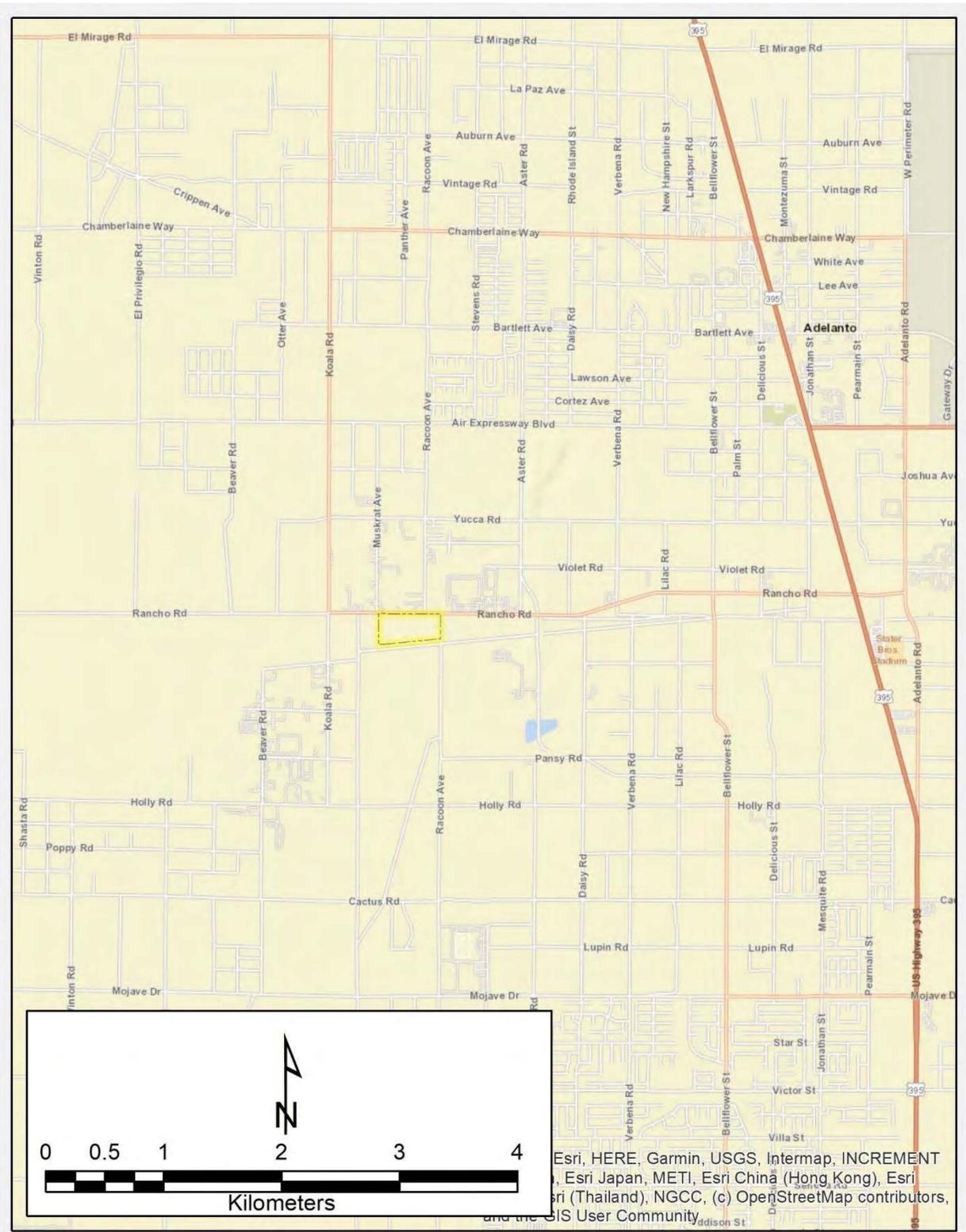
Project Description

The proposed Rancho 30 LLC project will consist of the construction of a new indoor marijuana operation on the aforementioned vacant land site. The project proposes the development of ten 30,000 square-foot cultivation buildings and ten 10,000 square-foot warehouse buildings within the 30.81-acre site. The project proponent is proposing a phased development strategy with increased building and warehouse capacity developed based on market conditions. Phase 1 proposes the development of two 30,000 square-foot cultivation buildings and one 10,000 square foot warehouse building, with an estimated construction initiation date in Q4 2025.



★ Project Location

Figure 1
Regional Vicinity



Esri, HERE, Garmin, USGS, Intermap, INCREMENTAL, Esri Japan, METI, Esri China (Hong Kong), Esri India, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



 Project Location

Figure 2
Local Vicinity

Mojave Ground Squirrel

Mohave ground squirrel are small, diurnal ground squirrels endemic to the western Mojave Desert, occupying portions of Los Angeles, Kern, Inyo, and San Bernardino counties (Best 1995); with a historic distribution estimated at approximately 7,812 square miles from the eastern slopes of the Transverse and Sierra Nevada mountain ranges in the west to the Mojave River in the east, and from Owens Lake in the north to Palmdale in the south (Figure 3; Best 1995, Leitner 2008).

Mohave ground squirrel occupy desert scrub habitat associations with creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), and saltbush (*Atriplex* sp.) dominant or co-dominant at lower elevations and Joshua tree (*Yucca brevifolia*) and blackbrush (*Coleogyne ramosissima*) communities at elevations >1,500 m above mean sea level (Grinnell 1933, Ingles 1965, Best 1995). Mohave ground squirrel are non-communal and occur at relatively low abundance where present (Leitner and Leitner 2017). Mohave ground squirrel exhibit a seasonal activity pattern (late February to July) followed by an extended period of below ground dormancy annually (Bartholomew and Hudson 1960, Best 1995). During the active period MGS forage heavily to accumulate sufficient fat stores to both reproduce and survive aestivation and hibernation (Best 1995). Despite the need to approximately double their body mass, MGS are a trap shy species with a low detection probability.

Survey Location

MGS Survey Grid: Legal Description

Three parcels of land located in the State of California, County of San Bernardino, and City of Adelanto with tax assessor numbers of 3128-011-02-0000, 3128-011-03-0000, and 3128-011-04-0000. The same properties are more fully described by the Public Land Survey System as having an aggregate area of 30 acres located in the SW 1/2 of the SE 1/4 of Section 10, Township 5 North, Range 5 West; and entirely within the U.S. Geological Survey (USGS) 7.5-Minute Series Adelanto¹ topographic quadrangle (Figure 4).

¹ United States Geological Survey. 2021. 7.5-Minute Adelanto Topographic Quadrangle. Reston, VA 22092.

MGS Survey Grid: Soil Description

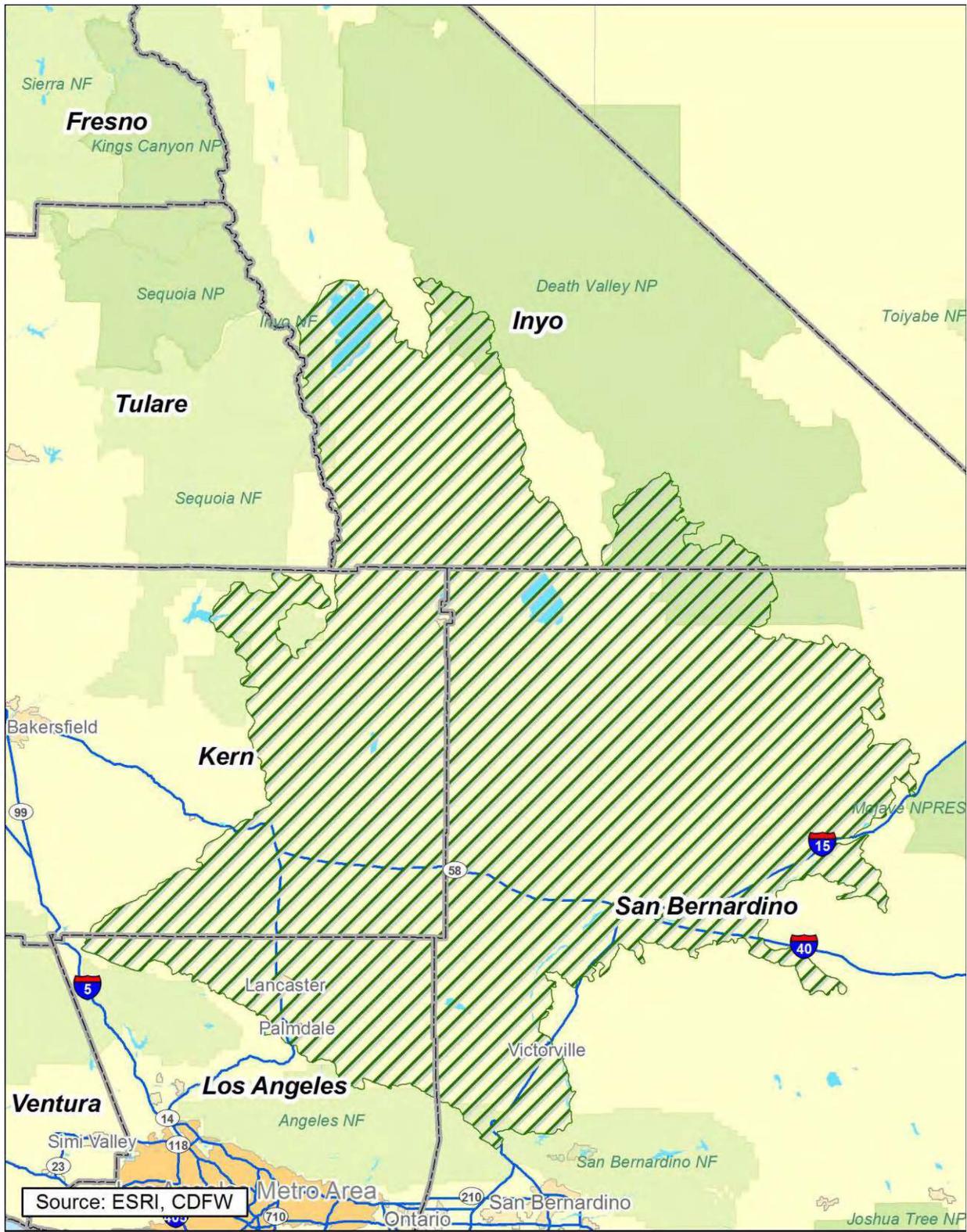
Helendale-Bryman Loamy Fine Sand, 2-5% slope (Figure 5).

The Helendale series consists of very deep, well drained soils that formed in alluvium from granitoid rocks. Helendale soils are on fan piedmonts, fan remnants, alluvial fans and terraces. Taxonomic class is coarse-loamy, mixed, superactive, thermic typic Haplargids. Vegetation associated with Helendale series soils is creosote bush, burrobrush, and fiddleneck at an elevation near 3,220 feet (NRCS 1986).

Bryman series consists of deep, well drained soils formed in alluvium from dominantly granitic sources at elevations between 2,800 and 3,800 feet. Bryman soils are typically associated with terraces on older alluvial fans with slopes ranging from 0 to 15 percent. Vegetation associated with Bryman loamy fine sand is primarily creosote bush, bursage, ephedra, Joshua tree, and annual forbs and grasses (NRCS 1986).

Cajon Sand, 0-2% slopes (Figure 5)

The Cajon series consists of very deep, somewhat excessively drained soils formed in sandy alluvium from dominantly granitic rocks at elevations ranging from 200 to 4,300 feet. Cajon soils are associated with alluvial fans, fan skirts, fan aprons, inset fans, and river terraces with slopes ranging from 0 to 15 percent. Vegetation associated with Cajon sand is mostly desert shrubs including creosote bush, saltbush, ephedra, Joshua tree, and some perennial and native grasses (NRCS 1986).

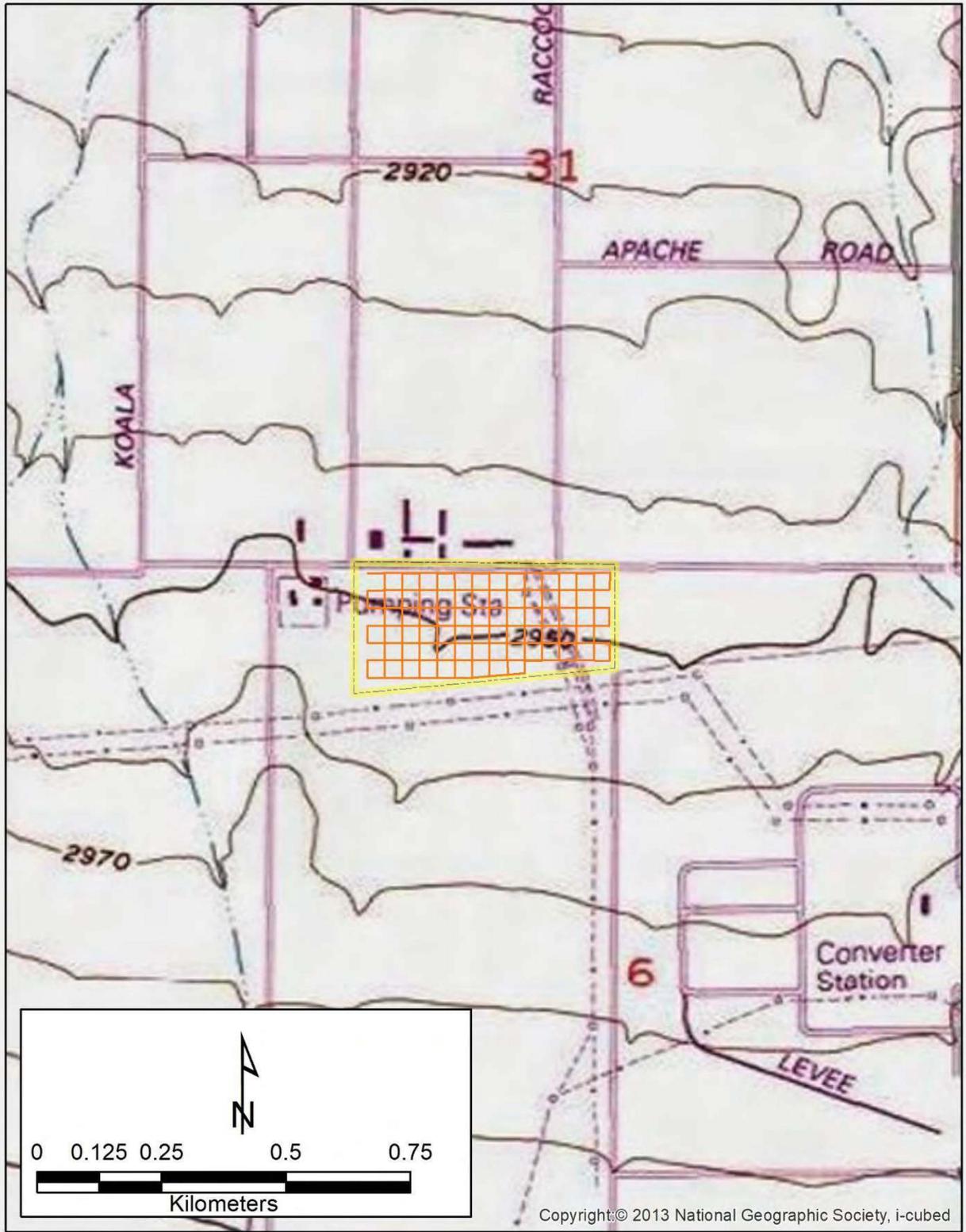


Source: ESRI, CDFW



 Mohave Ground Squirrel

Figure 3. Mohave Ground Squirrel Distribution



-  Project Location
-  MGS Grid

Figure 4
Mohave Ground Squirrel
Survey Location

MGS Grid 1: Land Cover/Land Use

Current zoning is Medium Industrial (MI); with a Land Use designation of Light Industrial (City of Victorville, Zoning and Land Use Checker, accessed 3 April 2023). A historic image review (1952–present) conducted by Randel Wildlife Consulting, Inc. did not result in the identification of significant prior disturbance. The parcel is undeveloped with transmission line easement road in the eastern quarter (see Appendix A).

METHODS

Site Reconnaissance / Habitat Assessment

A habitat assessment of the subject property was conducted by Dr. Charles J. Randel on 15 April 2023. Surveys were conducted to allow for 100% visual coverage of the subject site with biological resources and potential constraints to focused surveys identified. As a result of the reconnaissance level surveys, it was determined that suitable habitat for the Mojave ground squirrel was present and focused trapping surveys should be conducted to determine presence/absence of the species within the subject properties.

Focused Surveys: Mohave ground squirrel

Randel Wildlife Consulting, Inc. conducted focused Mohave ground squirrel surveys in accordance with CDFW guidelines (CDFG 2003). Surveys consisted of five consecutive days of live-trapping during three predefined sessions (Session 1: 15 March–30 April; Session 2: 1–31 May; Session 3: 15 June – 15 July). The small size and irregularly shaped project footprint prevented the installation of a 10 x 10 or 4 x 25 trapping array. To fully install 100 Sherman live traps, Randel Wildlife Consulting, Inc. installed a 6 x 15 array with an additional 10 traps paralleling the southern parcel boundary spaced between 25 and 35 m from adjacent trap stations. Each survey session consisted of 100 live-traps, baited with 4-way horse feed, and shaded to prevent heat stress. Traps were checked no less frequently than every four hours, when temperatures were between 40°–90° F.

Camera Surveys: Mohave ground squirrel

Randel Wildlife Consulting, Inc. installed three Browning Strike Force HD ProX model game cameras within the Mohave ground squirrel focused survey grid. Cameras were mounted to a t-post using zip-ties at a vertical height of 1 m, oriented to true north, with a downward pitch angle of approximately 53° to cover PVC baits placed approximately 1.5 m north of the camera. Cameras were installed and operational concurrently with focused surveys. Cameras were programmed to collect a three burst image collection 24 hours per day, with a trigger recovery delay of 1 second.

RESULTS

Site Context

Ecoregion

The MGS focused survey site is located in the EPA's Western Mojave Basins Level IV Ecoregion. This ecoregion includes the alluvial plains, fans, and bajadas of major valleys located between the dispersed mountain ranges of the Mojave Basin and Range Level III Ecoregion. North to south climate and vegetation variation is minimal with creosotebush (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*) dominate on the landscape (Griffith et al. 2016).

Vegetation Alliance

Vegetation was consistent with *Larrea tridentata* Shrubland Alliance (Sawyer et al. 2009). This vegetation alliance is found on minor washes and rills, alluvial fans, bajadas, and upland slopes of well-drained, alluvial, colluvial, and/or sandy soils (Appendix A – Site Photographs).

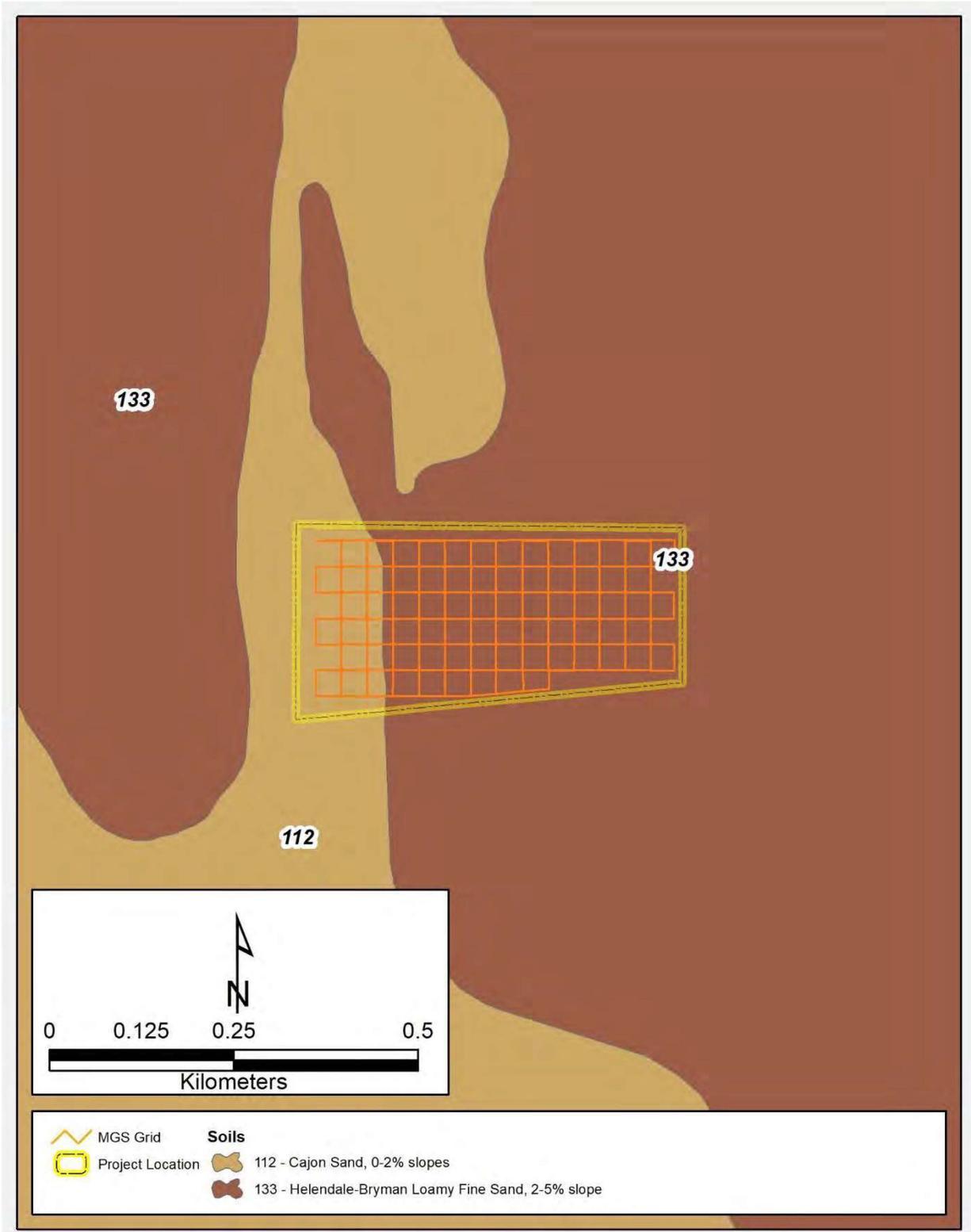


Figure 5
Soil Types

Focused and Camera Trapping Surveys

CDFW Mohave ground squirrel guideline surveys were conducted by Randel Wildlife Consulting, Inc. on the following dates (Appendix C – Mojave Ground Squirrel Grid Survey Data):

Grid 1

- Session 1: 15–19 April 2023
- Session 2: 21–25 May 2023
- Session 3: 20–24 June 2023

No Mohave ground squirrels were identified as a result of focused surveys or camera trapping surveys of the subject parcels. Mammalian species captured included the white-tailed antelope squirrel (*Ammospermophilus leucurus*).

Table 1. Summary of diurnal captures by species and trapping session.

Session	Species	New Captures	Recaptures	Total Captures
1	White-tailed Antelope Squirrel	2	0	2
2	White-tailed Antelope Squirrel	0	0	0
3	White-tailed Antelope Squirrel	6	11	17

Table 2. Summary of camera trapping surveys.

Session	Camera Trap Days	Images
1	15	7,956
2	15	15,324
3	15	11,167

Table 3. Wildlife Species Documented.

Common Name	Scientific Name
Painted lady	<i>Vanessa cardui</i>
White-lined sphinx moth	<i>Hyles lineata</i>
Checkered white	<i>Pontia protodice</i>
Western honey bee	<i>Apis mellifera</i>
Pallid-winged grasshopper	<i>Trimerotropis pallidipennis</i>
Western whiptail	<i>Aspidocelis tigris tigris</i>
Western side-blotched lizard	<i>Uta stansburiana elegans</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Domestic pigeon	<i>Columbia livia</i>
European starling	<i>Sternus vulgaris</i>
Loggerhead shrike	<i>Lanius ludovicianus</i>
Verdin	<i>Auriparus flaviceps</i>
Common raven	<i>Corvus corax</i>
Say's phoebe	<i>Sayornis saya</i>
Yellow-rumped warbler	<i>Setophaga coronate</i>
House finch	<i>Haemorhous meicanus</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Turkey vulture	<i>Cathartes aura</i>
Horned lark	<i>Eremophilus alpestris</i>
Western kingbird	<i>Tyrannus verticalis</i>
Ash-throated gray flycatcher	<i>Myiarchus cinerascens</i>
White-tailed antelope squirrel	<i>Ammospermophilus leucurus</i>

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APPENDIX A –REPRESENTATIVE SITE PHOTOGRAPHS

Photos	
<p>Description</p> <p>Rancho 30 LLC</p> <p>MGS Grid</p> <p>24 May 2023</p> <p>Photo from NW to SE</p>	 <p>Randel Wildlife Consulting Inc Rancho Rd (Adelanto) MGS Grid NW Corner (facing E) 05.24.2023 08:51 AM 11S 458822 3824044 9932 Rancho Rd, Adelanto, CA 92301, USA</p>
<p>Description</p> <p>Rancho 30 LLC</p> <p>MGS Grid</p> <p>24 May 2023</p> <p>Photo from SW to NE</p>	 <p>Randel Wildlife Consulting Inc Rancho Rd (Adelanto) MGS Grid SW corner (facing ene) 05.24.2023 08:37 AM 11S 458814 3823857 9753 Rancho Rd, Adelanto, CA 92301, USA</p>



Photos

Description
Rancho 30 LLC
MGS Grid
24 May 2023
 Photo from SE to NW



Randel Wildlife Consulting Inc
 Rancho Rd. (Adelanto) MGS Grid
 SE Corner (facing wnw)
 05.24.2023 08:44 AM
 11S 459272 3823883
 16827 Raccoon Ave, Adelanto, CA 92301, USA

Southeast corner of Mohave ground squirrel survey grid. Image is taken toward interior of grid showing disturbed *Larrea tridentata* Vegetation Alliance and Transmission Line towers.

Description
Rancho 30 LLC
MGS Grid
24 May 2023
 Photo from NE to SW



Randel Wildlife Consulting Inc
 Rancho Rd. (Adelanto) MGS Grid
 NE Corner (facing SW)
 05.24.2023 08:57 AM
 11S 459296 3824054
 16807 Raccoon Ave, Adelanto, CA 92301, USA

Northeast corner of Mohave ground squirrel survey grid. Image is taken toward interior of grid showing disturbed vegetation in the northeastern portion of the property



APPENDIX B –WEATHER SUMMARY

Date	Temperature (F)				Cloud Cover (%)				Wind (MPH)			
	Min	Time	Max	Time	Min	Time	Max	Time	Min	Time	Max	Time
4/15/23	41	0700	79	1500	0	0700	0	0700	0-5	0700	15	1730
4/16/23	45	0630	80	1430	0	0630	0	1530	0	0630	20	1530
4/17/23	45	0630	77	1530	0	0630	0	1830	0-5	0630	5-15	1330
4/18/23	43	0630	68	1430	0	0630	0	1830	0-5	0630	10-15	1830
4/19/23	41	0700	70	1600	15	1200	25	1100	5-15	0700	20-30	0800
5/21/23	69	0600	91	1330	60	0730	70	1330	0-5	0600	5-10	1330
5/22/23	60	0600	90	1400	15	1400	30	0600	0-5	0600	5-10	1400
5/23/23	61	0600	86	1400	0	1800	30	0600	5-10	0600	10-15	1500
5/24/23	52	0600	81	1500	20	1800	60	0600	0-5	0600	15-25	1500
5/25/23	50	0700	72	1630	0	0700	0	1630	0-5	0700	15-25	1500
6/20/23	52	0530	85	1730					0-5	0530	10-15	0930
6/21/23	54	0530	86	1430	20	0530	0	1330	0-5	0530	15-20	1030
6/22/23	53	0530	81	1430	0	0930	10	0530	0-5	0530	15-20	1730
6/23/24	52	0700	85	1600	0	1100	10	0700	0-5	0700	10-15	1100
6/24/24	53	0530	91	1300	0	0530	0	1400	0-5	0530	10-15	1400



Appendix H. Burrowing Owl Survey Report

-- Content Appears on Following Page --

August 28, 2023

Phil Martin & Associates
2987 NW Fairway Heights Dr.
Bend, OR 97703

[Delivered via email: pmartin@philmartinassociates.com]

SUBJECT: Results of Burrowing Owl (*Athene cunicularia*) Survey at the Rancho 30 LLC Project Site, Adelanto, San Bernardino County, California

To whom it may concern,

Bloom Biological, Inc. (BBI) was retained to conduct a habitat assessment and breeding season survey for Burrowing Owl (*Athene cunicularia*) within the Rancho 30 LLC project site and vicinity in the City of Adelanto, San Bernardino County, California. The habitat assessment and breeding season surveys were conducted between 9 April and 8 July 2023 in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), with the primary purpose of assessing the suitability of habitat onsite and determining the presence/absence of Burrowing Owls. While suitable Burrowing Owl habitat is present within the project site and within 500 ft of the site, no sign of Burrowing Owl presence was detected.

NATURAL HISTORY & PROTECTIONS

Burrowing Owls are unique among North American owls, active day and night, nesting in underground burrows, and typically nesting in small groups. In the breeding range, suitable habitat consists of open, treeless areas, within grassland, steppe, and desert biomes, generally in gently-sloping areas characterized by low, sparse vegetation, and well drained soils (James et al. 1991, Clayton and Schmutz 1999). Areas with high human activity such as golf courses, cemeteries, road-sides, airports, and fairgrounds are often used for nesting as well as agricultural fields and vacant urban lots. The presence of potential nest burrows is a critical requirement for this species, and they are often found alongside high densities of burrowing mammals such as prairie dogs (Poulin et al. 2020). In California, burrows are most often dug by California ground squirrel (*Otospermophilus beecheyi*) and round-tailed ground squirrel (*Xerospermophilus tereticaudus*). They will also utilize holes dug by badger (*Taxidea taxus*), coyote (*Canis latrans*), and fox (*Vulpes* sp.). Rock cavities, debris piles, culverts, and pipes are also used for nesting and roosting (Rosenberg et al. 1998). Adult male Burrowing Owls home range has been documented to comprise between 280 to 600 acres with size depending on the habitat type (Gervais et al. 2008). In California, the breeding season typically occurs between 1 February and 31 August with the peak of the breeding season between 15 April and 15 July, when most Burrowing Owls have active nests (CDFW 2012). Burrowing Owls are a CDFW Species of Special Concern and a USFWS Bird of Conservation Concern.

SITE DESCRIPTION

The project site consists of three vacant parcels with a combined area of 30.81 acres [APN: 3128-011-02-0000 (11.09 acres), 3128-011-03-0000 (10.28 acres), and 3128-011-04-000 (9.48 acres)] south of the intersection of Rancho Rd and Raccoon Ave in Adelanto, California (Figure 1). The project site is largely flat and elevations on site range from approximately 2,945 to 2,960 ft above mean sea level (amsl). The property is located in the USGS CA 7.5-minute *Adelanto* quadrangle. Soils present on site consist of Cajon sand and Helendale-Bryman loamy sands (NRCS 2022). Vegetation consists of creosote bush-white bursage (*Larrea*

tridentata-Ambrosia dumosa) shrubland alliance with the following dominant species: creosote bush, white-bursage, old man schismus (*Schismus barbatus*), and brome (*Bromus* sp.) (Jepson Flora Project 2023). Vegetation density varies throughout the project site, with some areas containing sparse vegetation cover and others containing sparse/moderate vegetation cover. Photographs of the project site are provided in Appendix A.

PROJECT DESCRIPTION

The proposed Project consists of the construction of an Indoor Cultivation Facility on three vacant parcels consisting of a combined 30.81 acres (1,342,154.1 square feet) located southwest of the intersection of Rancho Rd. and Raccoon Ave. in Adelanto, California. The project proposes an indoor marijuana operation with ten 30,000 square foot cultivation buildings and ten 10,000 square foot warehouse buildings. The project will be developed in phases depending upon the market. Phase 1 proposes two 30,000 square foot cultivation buildings and one 10,000 square foot warehouse building. The project is scheduled to start construction in the fourth quarter of 2025.



Figure 1. Project Site Aerial Overview (Google Earth, May 2023)

SURVEY AREA

The area assessed for Burrowing Owl presence/absence and habitat (Survey Area) includes all undeveloped areas within 500 ft of the project site (Figure 2). While portions of the Survey Area consist of industrial development, there are areas of suitable Burrowing Owl habitat to the north across Rancho Rd, south of the site, and east across Raccoon Ave. Similar to the project site, areas to the south consist of creosote bush-white bursage shrubland of relatively the same density as onsite. To the east is a vacant parcel containing relatively low growing non-native grasses. To the north of the site, across Rancho Rd, is a biotech manufacturing firm and to the northeast is the U.S. Department of Homeland Security, Adelanto Immigrations and Customs Enforcement (ICE) Processing Center. Between the biotech manufacturing firm and the ICE Processing Center, to the east of Raccoon Ave, is a large, graded area (220 m x 360 m) surrounded by concrete drainage channels containing rip-rap. As Burrowing Owls have been known to nest in similar rip-rap structures, this area was incorporated into the Survey Area.

SURVEY METHODS

Survey and habitat assessment methodology followed guidelines provided in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Prior to beginning the breeding season surveys, a complete survey of the project site and 500 ft buffer (Survey Area) was conducted on 9 April 2023 to assess the Survey Area for potential habitat. As the results of this survey indicated that Burrowing Owl habitat was present throughout the project site and within the Survey Area, four (4) breeding season focused surveys were completed between 10 April and 8 July 2023. Pedestrian surveys of the entire Survey Area were conducted by biologists Kerry Ross, Rainey Barton, and Michelle Picca. Two biologists were onsite during each survey round walking along predetermined transect lines spaced at 10 m. Surveyors walked parallel transects, pausing at the beginning and end of each transect and every 100 m to scan for Burrowing Owls using binoculars. Surveys were conducted between morning civil twilight and 1000 h and two hours before sunset and evening civil twilight and when weather conditions were optimal for Burrowing Owl activity and detection. Survey dates, times, and weather conditions are provided in Table 1. Surveyor qualifications are provided in Appendix B.

Utilizing the breeding season survey guidelines and conducting complete coverage of the Survey Area maximizes the probability of detecting Burrowing Owls. Additionally, vegetation onsite (scattered creosote bush-white bursage shrubland) was of a density that allowed substantial visual coverage with the spacing of transects at 10 m. Detection probability was further increased by timing the surveys to occur when Burrowing Owls are most active daily.

Table 1. Survey Dates, Times, and Weather Conditions

Date	Time	Weather
04/10/2023	0600-1000h	Start: 55° F, 10% cloud cover, Calm End: 70° F, 10% cloud cover, 3 mph
	1715-1930h	Start: 86° F, 0% cloud cover, 6 mph End: 72° F, 0% cloud cover, 5 mph No rain; No fog; Excellent visibility
05/01/2023	0545-1000h	Start: 56° F, 20% cloud cover, 5 mph End: 58° F, 45% cloud cover, 3 mph
	1700-2000h	Start: 64° F, 50% cloud cover, 7 mph End: 57° F, 30% cloud cover, 6 mph No rain; No fog; Excellent visibility
06/09/2023	0530-1000h	Start: 58° F, 0% cloud cover, 3 mph End: 61° F, 0% cloud cover, Calm
	1800-2030h	Start: 73° F, 25% cloud cover, 7 mph End: 66° F, 25% cloud cover, 7 mph No rain; No fog; Excellent visibility
07/08/2023	0530-1000h	Start: 60° F, 0% cloud cover, 6 mph End: 72° F, 0% cloud cover, 5 mph
	1800-2045h	Start: 86° F, 0% cloud cover, 7 mph End: 75° F, 0% cloud cover, 6 mph No rain; No fog; Excellent visibility

RESULTS

A review of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database for Burrowing Owl presence in the vicinity of the project returned thirteen (13) results, distributed to the southeast, east, and northeast of the Project. The records nearest to the Project are 2.9 miles to the northeast (nested in 2007) and 3.2 miles to the southeast (nested in 2005 and 2006). The most recently active burrow within 5 miles of the Project was active in 2009 and is located 4.6 miles to the southeast (CDFW 2023).

No Burrowing Owls, Burrowing Owl sign, or suitable burrows were observed within the Study Area. While there were many small mammal burrows onsite, likely belonging to white-tailed antelope squirrels (*Ammospermophilus leucurus*), nearly all were too small to allow for Burrowing Owl occupancy. There were two burrows within the survey area, 338 ft (103 m) from the site, of large enough size for Burrowing Owl. These burrows appeared to have been initially dug by squirrels and excavated by either coyote or dogs and no sign of use by Burrowing Owls was found (Appendix A, Photos 5 & 6). All burrows were inspected for the presence of Burrowing Owls (i.e., whitewash, pellets, prey remains, etc.) and none had any indication of use by Burrowing Owl. No sign of Burrowing Owl presence was detected within the project site or within 500 ft.

CERTIFICATION

I certify that the information in this report and attached appendices fully and accurately represents the work of BBI. If you have any questions or require additional information, please feel free to contact us at (949) 272-0905 ext. 103 or raineybarton@bloombiological.com.

Sincerely,

BLOOM BIOLOGICAL, INC.



Rainey Barton
Project Manager / Biologist

LITERATURE CITED

California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation. State of California Natural Resources Agency.

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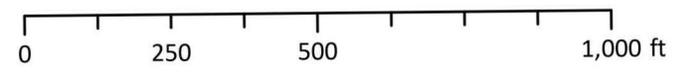
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Figure 2. Survey Area Map

- Project Boundary
- 500-ft Survey Area
- 10-m Survey Transects

UTM NAD83 Zone 11N Coordinate Grid
 Date: 08/24/2023
 Author: Bloom Biological, Inc.
 Credits: ESRI Imagery



APPENDIX A. SURVEY PHOTOGRAPHS



Photo 1. Southwest corner of project site facing north (04/09/2023).



Photo 2. Southwest corner of project site facing east (04/09/2023).



Photo 3. Southeast corner of project site facing northwest (04/09/2023).



Photo 4. Southeast corner of project site facing west (04/09/2023).



Photo 5. Rodent burrow south of the Project (04/09/2023).



Photo 6. Rodent burrow south of the Project (04/09/2023).

APPENDIX B. SURVEYOR QUALIFICATIONS

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Kerry Ross

Biologist

Qualifications

Mr. Ross has fifteen years of professional experience as an avian biologist, on a wide variety of field-based projects throughout California, Nevada and Florida. He is an avid birder and possesses superior field identification skills for raptors and all other avian taxa. Mr. Ross began working with BBI in 2015 and has performed a variety of pre-construction surveys during that time, along with monitoring work during construction to mitigate impacts to sensitive species and/or nesting birds. He is adept at recording detailed data forms and spatial data according to protocol while maintaining maximal coverage of each survey area. Mr. Ross has consistently provided services for SDG&E under the current contract with various prime contractors.

Professional Experience

Has conducted a broad array of avian surveys for private sector, utility, and other municipalities in California, including locations in San Diego, Kern, Humboldt, Del Norte, Mendocino, Trinity and Sonoma counties, including infrastructure-related surveys for wind farms and utility transmission lines. Avian sampling techniques employed included bird use count (BUC), eagle point count (EPC), linear transects, point counts along a transect line, and area bird surveys, all in accordance with published California Energy Commission and California Department of Fish and Wildlife (CDFW) guidelines for wind and solar energy projects in California.

SDG&E On-call, CA

Provides on-call biological surveys for various preconstruction surveys. Works as a technician, identifying nesting birds and delineating buffered zones around nests. Writes detailed reports, conducts safety tailboards, and submits complex job packages with spatial data for each project daily.

SCE, Various Locations, CA

Works as an on-call biologist for a variety of Southern California Edison (SCE) transmission line projects throughout Southern California. Performs preconstruction surveys and during-construction monitoring related to nesting birds. Submits detailed daily reports of findings, including geospatial data and images from each surveyed site. Creates a daily safety tailboard for each site.

Mitsubishi Mining Company, Inyokern, CA

Surveys mine lease sites for nesting raptors as part of the North Slope (San Bernardino Mountains) Raptor Conservation Strategy implemented by the USFS. Evaluates Golden Eagle nest sites for nest building signs and nest occupancy. Maps and photographs all findings, and updates seasonal databases. Coordinates with mine owners for access to remote canyon sites. Operates according to stringent mine safety protocols.

Confidential Client, Tehachapi, CA

Conducted half-day or full-day surveys for eagles and other California Condor at an operational wind plant near the Tehachapi mountains. Recorded detailed data and flight paths for all sensitive species detected, entered data and digitized flight path maps daily. Used radio tracking devices daily.

HawkWatch International, Nevada and Florida

Lead observer for five seasons of migratory raptor counts. Performed data entry and submission; educated visitors to the hawk watch station, hawk migration and identification of all raptors resulting in the expansion of a long-term data. Also captured and marked migrating raptors.

San Diego Zoo Global, Naval Base Coronado, San Diego, CA

Searched for and monitored nests of Western Snowy Plovers and Least Terns in coastal areas. Banded adults and chicks of both species, re-sighted color-banded individuals, entered and organized nesting and banding data.

Institute of Wildlife Studies, San Clement Island, CA

Surveyed for and monitored endemic Loggerhead Shrike, wrote summary reports and upkept project database.

Various Clients and Agencies, throughout California

Conducted protocol surveys for a variety of sensitive species over a 14-year period, including Marbled Murrelet, Yellow-billed Cuckoo, Willow Flycatcher, and Northern Spotted Owl.

Education

Humboldt State University, Arcata, CA

Major: Wildlife Biology (Bachelor's degree pending)

College of the Redwoods, Eureka, CA

Associate of Science - December 2003

Workshops & Certifications

- Spatial Data Collection Platforms: ESRI ArcCollector, ESRI Survey123
- Certified Marbled Murrelet Surveyor, Trainer, and Evaluator 1999-2012
- Threatened Species Recovery Authorized (limited) Individual US Fish & Wildlife Service Permit # TE-823807-3 authorized to capture, band, weigh, and measure Western Snowy Plovers and their eggs
- Oiled Wildlife Care Network Advanced Skills & Supervisor Training, Marine Wildlife Care Center, Arcata, CA 2006
- Oiled Wildlife Care Network Basic Skills Course, Marine Wildlife Care Center, Arcata, CA 2005
- Snowy Plover Workshop and Training, Mad River Biologists, 2000 and 2001
- Wilderness Survival Course, Ketchum, Idaho, 1988
- American Heart Association, CPR and Advanced First Aid
- Swift Water Rescue Training, Wild Rivers Idaho, Ketchum, Idaho
- Pacific Seabird Group Member
- Helicopter Underwater Escape Training
- Marbled Murrelet Surveyors Training Annual Certification
- Skilled four-wheel drive, powerboat, ATV, and snowmobile operator
- Specialize in raft kayak, and ski-based surveys.



Rainey Barton | Biologist & Project Manager

raineybarton@bloombiological.com | 949.272.0905 ext.103 | 13611 Hewes Ave., Santa Ana, CA

Qualifications

Rainey Barton has over seven years of professional experience as a biologist, on a wide variety of field-based projects throughout California. She is an all-around excellent California naturalist, possessing excellent field identification skills for many taxa. Rainey began working with Bloom Biological, Inc. (BBI) in 2019 and has performed work for a variety of large- and small-scale projects including residential, commercial, and renewable energy development, SCE, SDG&E, and private utility companies, as well as conducting scientific research alongside Peter Bloom, Ph.D., zoologist and vice president of BBI. Her project related work has involved evaluation of habitat and assessment of potential environmental impacts which culminate in the preparation of biological assessment reports in compliance with California Environmental Quality Act (CEQA) guidelines. She is adept at all aspects of project management, field work, and report preparation, adhering strictly to guidelines and protocols. Additionally, she is skilled at recording detailed and spatial data according to protocol while maintaining maximal coverage of survey areas. She also provides geospatial analysis using a variety of Geographic Information System (GIS) platforms integrated to prepare insightful reports. Prior to working with BBI, Rainey worked as a Fisheries/Field Technician with United Water Conservation District and a Stormwater Consultant with Willdan Engineering, both located in the Southern California region. Her professional experience over the years has resulted in an in-depth understanding of the regulations, policies, and procedures associated with biological resources in Southern California including CEQA, California Fish and Game Code (CFGC), Clean Water Act (CWA), Federal Endangered Species Act (ESA), California Endangered Species Act (CESA), Army Corps Permitting for Waters and Wetlands of the US, and Regional Water Quality Control Board Permitting.

Rainey is currently pursuing a master's degree in biology at the California State University, Northridge where she is conducting research on habitat and space use by the nesting population of Swainson's Hawk (*Buteo swainsoni*) in the Antelope Valley.

Professional Experience

Rainey has conducted a broad array of biological surveys and assessments and has worked on many field-based projects throughout California, including locations in San Bernardino, Santa Barbara, San Diego, Los Angeles, Kern, Riverside, Ventura, Imperial, and Orange counties. Avian sampling techniques employed include bird use count (BUC), linear transects, point counts along a transect line, area bird surveys, and mist netting all in accordance with regulatory guidelines. Botanical surveys conducted by Rainey follow the mapping and identification system detailed in the Manual of California Vegetation (Sawyer et al. 2009). She performs geospatial analysis for a wide variety of projects utilizing a multitude of GIS platforms integrated to prepare informative reports. Biological Assessments prepared by Rainey have been reviewed and approved by the Los Angeles County Department of Regional Planning (DRP) Environmental Review Board (ERB) among other advisory committees throughout Southern California. She maintains an active subscription with the California Natural Diversity Database (CNDDDB) and utilizes this tool prior to every biological survey conducted, ensuring that the most recent version of the database is reviewed. Additionally, she reports all special status species observations to CNDDDB upon conclusion of each survey using the CNDDDB field survey form.

Through her work in Los Angeles County, Rainey has become familiar with the following Los Angeles County plans and regulations: Oak Tree Ordinance, Los Angeles County Oak Woodlands Conservation Management Plan, Significant Ecological Areas Ordinance, Santa Monica Mountains North Area Plan, Los Angeles County Local Coastal Program for Unincorporated Santa Monica Mountains (including the Land Use Plan and the Local Implementation Program), as well as the General Plan.

Bloom Biological, Inc. Research | Consulting | Conservation

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The following provides a sample of the work performed by Rainey during her employment with BBI:

MLJ Resources, Murrieta, CA

Prepared a biological assessment report for proposed commercial development in Riverside County which analyzed the proposed project's compliance with the requirements of the Western Riverside County Multiple Species Habitat Conservation Plan. Analyzed the site for potential sensitive species habitat and sensitive resources including vernal pool, fairy shrimp, Burrowing Owl, and endemic plant species. Conducted and coordinated field surveys, provided GIS analysis, prepared final report, and provided mitigation consultation.

Anonymous Architects, Los Angeles, CA

Prepared multiple Biological Assessment Reports for several proposed developments within the City of Los Angeles, California. Analyzed the proposed project sites for potential sensitive resources and prepared the reports per the requirements of the City of Los Angeles Biological Resources Assessment, Biological Full Report Template with Instructions. Provided GIS analysis, conducted field surveys, and prepared final report.

Brodin Design Build, Studio City, CA

Prepared a Biological Assessment Report for a proposed development within the City of Los Angeles, California. Analyzed the proposed project site for potential sensitive resources and prepared the report per the requirements of the City of Los Angeles Biological Resources Assessment, Biological Full Report Template with instructions. Coordinated and conducted field surveys, provided GIS analysis, and prepared final report.

Leigh Herzig, Topanga, CA

Prepared a Biological Assessment Report consistent with the requirements of the Santa Monica Mountains Local Implementation Program of the Santa Monica Mountains Local Coastal Program. Provided GIS analysis, coordinated and conducted field surveys, prepared final report, and attended ERB hearing.

Keystone Strategic Planning, Los Angeles County, CA

Prepared a supplemental letter update to a Biological Assessment Report previously prepared in accordance with requirements of the Santa Monica Mountains Local Implementation Program of the Santa Monica Mountains Local Coastal Program. Analyzed consistency of the Biological Assessment Report, conducted field surveys, provided GIS analysis, and prepared subsequent letter report of findings.

Laguna 3 Land, Laguna Beach, CA

Prepared multiple Biological Assessment Reports for proposed developments within an Environmentally Sensitive Area of the City of Laguna Beach in accordance with requirements of the General Plan. Conducted field surveys, prepared final report, and recommended mitigation measures for potential impacts.

Keith Messick Architecture, Tustin, CA

Prepared a Biological Field Survey Report for a proposed development in Tustin, CA. Coordinated field surveys, prepared biological inventory, and provided recommendations for further survey efforts. Documented the presence of Coastal California Gnatcatcher (*Poliophtila californica californica*) onsite.

Confidential Client, Kern County, CA

Conducting a multi-year study of Bird Use within an area proposed for large scale wind development following detailed California Energy Commission (CEC) and California Department of Fish and Wildlife (CDFW) guidelines for wind and solar energy projects. Coordinating and conducting Bird Use Count surveys. Coordinated and conducted Swainson's Hawk protocol surveys within a 5-mile radius of the project site

and Golden Eagle nest surveys by helicopter within 2-miles. Providing GIS and data analyses, quarterly, annual, and final reports, and coordinating all aspects of the project.

City of Whittier, Los Angeles County, CA

Prepared a biological assessment for a proposed project located adjacent to the Puente Hills Habitat Preservation Authority. Analyzed the site and surrounding area for the presence of numerous sensitive species and biological resources including, but not limited to, mountain lion (*Puma concolor*), Coastal California Gnatcatcher, special status bats, and wildlife corridors. Coordinated USFWS protocol level surveys for Coastal California Gnatcatcher. Prepared subsequent biological assessment report including recommendations for mitigating potential project impacts and facilitated mitigation measures.

National Audubon Society & Defenders of Wildlife, Antelope Valley, CA

Conducted annual, multi-year, inventories of the breeding population of Swainson's Hawk (*Buteo swainsoni*) in the Antelope Valley. Prepared multiple reports and publications (Bloom et al. 2023) and a Conservation Strategy for Swainson's Hawk in the Antelope Valley. Coordinated and conducted field work, synthesized current and historical data, and prepared subsequent reports and manuscripts.

San Diego Gas & Electric, San Diego County, CA

Coordinated and conducted a 5-year status review of nesting Golden Eagles (*Aquila chrysaetos*) within proximity to San Diego Gas & Electric Facilities in San Diego County, CA in a survey area encompassing more than 900 sq-miles. Coordinated and conducted field surveys following detailed protocols including surveying by ground and by helicopter, provided GIS analysis, synthesized data, and prepared the final report.

Terra-Gen, Kern and Los Angeles Counties, CA

Conducted Swainson's Hawk protocols surveys throughout the Antelope Valley in regions of Kern and Los Angeles Counties. Conducted and coordinated surveys, synthesized data, and prepared final report.

EDF Renewables, Kern County, CA

Conducted Swainson's Hawk protocols surveys throughout the Antelope Valley in Kern County. Conducted and coordinated surveys, synthesized data, and prepared final report.

Leeward Renewable Development, Kern and Los Angeles County, CA

Conducted Swainson's Hawk pre-construction and protocol surveys in regions of Los Angeles and Kern Counties in the Antelope Valley. Conducted and coordinated surveys, synthesized data, and prepared final report.

Southern California Edison (SCE), Various Locations, CA

Works as an on-call biologist for SCE transmission line projects throughout Southern California. Performs preconstruction surveys related to nesting birds and sensitive plant species. Submits detailed daily reports of findings, including geospatial data and images from each surveyed site. Creates a daily safety tailboard for each site. Manages the coordination of field staff.

Mitsubishi Mining Company, Inyokern, CA

Surveys mine lease sites for nesting raptors as part of the North Slope (San Bernardino Mountains) Raptor Conservation Strategy implemented by the USFS. Evaluates Golden Eagle, Peregrine Falcon (*Falco peregrinus*), and Red-tailed Hawk (*Buteo jamaicensis*) nest sites for signs of building, nest occupancy, and nest success. Maps and photographs all findings and updates seasonal databases. Coordinates with mine owners for access to remote canyon sites. Operates according to stringent mine safety protocols. Assisted permit holders with the banding of Golden eagle young before fledging. Prepares annual status reports and is preparing a publication for peer-review.



Bear Valley Electric Service, San Bernardino County, CA

Conducted pre-construction biological survey of U.S. Forest Service (USFS) land for nesting or roosting birds and USFS sensitive avian, reptile, amphibian, plant, and mammal species including Bald Eagle (*Haliaeetus leucocephalus*), southern rubber boa (*Charina umbratic*), San Bernardino Mountain kingsnake (*Lampropeltis zonata parvirubra*), Southwestern Willow Flycatcher (*Empidonx traillii extimus*), and California Spotted Owl (*Strix occidentalis occidentalis*). Provided report of findings and mapped locations of potential sensitive species locations and habitat.

Bear Valley Electric Service, San Bernardino County, CA

Conducted pre-construction biological survey and daily monitoring of utility pole replacement adjacent to Stanfield Marsh, Big Bear Lake, CA. Surveyed daily for nesting or roosting birds and USFS sensitive avian, reptile, amphibian, plant, and mammal species prior to utility enhancement and replacement activities. Provided report of findings and mapped locations of nesting birds. Prepared nesting bird management plan for construction activities. Provided construction monitoring for the duration and managed all aspects of the project.

Ocean Terrace HOA, Rancho Palos Verdes, CA

Conducted multiple surveys for nesting birds, including a nesting Cooper's Hawk (*Accipiter cooperii*), prior to proposed vegetation trimming activities at Ocean Terrace HOA, Rancho Palos Verdes, CA. Prepared a written and mapped report of findings and consulted the project proponents on recommended mitigation measures.

SC Tree and Landscape & Green Crew Landcare, Inc., Marina del Rey, CA

Conducts annual surveys for nesting and wading birds and raptors at several locations in the Marina del Rey Harbor in accordance with the Marina del Rey Tree Pruning and Tree Removal Policy (No. 23) of the Marina del Rey Land Use Plan. Reported on findings and prepared map of sensitive resource locations. Provided recommendations for mitigation and avoidance of roosting birds.

Mojave National Preserve, San Bernardino County, CA

Assists permit holder with the banding of Red-tailed Hawk, Great Horned Owl (*Bubo virginianus*), and Common Raven (*Corvus corax*) young nesting in Joshua Tree (*Yucca brevifolia*) in Mojave National Preserve, San Bernardino County, CA.

Orange County Parks and Irvine Ranch Conservancy, Orange County, CA

Assists with trapping and banding of adult and nestling Barn Owls (*Tyto alba*), Great Horned Owls (*Bubo virginianus*), Western Screech Owls (*Megascops kennicottii*), Red-shouldered Hawks (*Buteo lineatus*), Red-tailed Hawks, and American Kestrel (*Falco sparverius*) at various locations throughout Orange County including at O'Neil Regional Park as well as on the Irvine Ranch Conservancy (IRC) lands, and the Orange County Water District (OCWD) lands. Additionally, conducts field surveys for nesting raptors throughout Orange County open space.

Education

California State University, Channel Islands
Major: Environmental Science and Resource Management, B.S.
Minor: Biology
Graduation date: May 2018

California State University, Northridge
Major: Biology, M.S.
Expected graduation date: December 2024



Workshops & Certifications

- Federal Bird Banding Permit (20431), Sub-permittee
- Raptor Research Foundation Conference, 2020, 2021
- Introduction to Desert Tortoise and Field Techniques Course, 2020
- Spatial Data Collection Platforms: ESRI ArcCollector, ESRI Survey123
- Spatial Data Analysis Software: ArcGIS Desktop, ArcGIS Pro, ESRI Story Maps
- Wilderness First Aid, 2017
- American Heart Association, CPR, 2017
- Ventura Audubon Society, Member
- The Wildlife Society, Member
- California Safe Boating Certification, 2017
- Remote sUAV Pilot (Part 107)
- UAV Software: Drone Deploy, Pix4D, Precision Flight
- The State of the Los Angeles River Symposium, 2018
- ESRI User Conference, 2018
- Least Bell's Vireo Nesting Pair Identification Training, 2018

Publications

Bloom, P.H., Barton, R.B, and M.J. Kuehn. 2023. Swainson's Hawk nesting population in the Antelope Valley of the western Mojave Desert, California. *Western Birds*, 54:32-43.

MICHELLE PICCA

WILDLIFE BIOLOGIST



Mrs. Picca earned her BS at Point Loma Nazarene University and is currently a Biologist for Endemic Environmental. She has experience with biological monitoring, conducting biological resource surveys, and writing technical reports. Mrs. Picca also has excellent visual and auditory recognition of California bird species and is capable in the identification of a diversity of reptiles, amphibians, and mammal species native to California. She has experience with mist netting and the capture and banding of birds, nesting bird surveys, pitfall trapping, seine netting, bat surveys, herpetological surveys, habitat restoration projects, rare plant surveys, and species-specific surveys. Mrs. Picca has excellent technical writing skills, and has experience with the ArcGIS Field Maps and Survey123 apps.

EDUCATION, CERTIFICATIONS, & TRAININGS:

Burrowing Owl Symposium and Workshop Training (2023)

Desert Tortoise Workshop Training (2022)

AA, Environmental Studies, Saddleback College (2020-present)

Ecological Restoration Certificate, Saddleback College (2022)

BS, Business, International Development, and Sustainability Studies, Point Loma Nazarene University (2019)

PROFESSIONAL EXPERIENCE

CURRENT PROJECTS

Caltrans 08-1K7904 Chino Avenue Signals Project - Ontario, CA (2023)

The biologist monitored road improvement work for sensitive species which included burrowing owl, nesting hawks, owls and passerines. The biologist conducted weekly nesting bird surveys in advance of the roadway work activities. Bird nests were recorded and buffers were established. The work consisted of loop stub outs, removing street striping and re-application with a new paint and changing out street signals and signs along 5.25 miles of Euclid Avenue (Highway 83). The biologist wrote weekly monitoring reports and cooperated with crews to ensure all work was performed in compliance with environmental regulations. Sensitive species that were monitored included vermilion flycatcher, red-tailed hawk, and burrowing owl.

SR 71/91 Highway Interchange Improvement Project- Skanska - Corona, CA (2023)

The biologist monitored for sensitive species which included roosting bats (winter and maternity), least Bell's vireo, California gnatcatcher, burrowing owl, San Diego Ambrosia (*Ambrosia pumila*), San Miguel savory (*Clinopodium chandleri*), Brand's phacelia (*Phacelia stellaris*), Santa Ana sucker, and coast horned

lizard. The biologist monitored for compliance with all PLACs, CDFW regulations, Migratory Bird Treaty Act and Riverside County MSHCP. The biologist conducted nesting bird surveys in advance of clearing and grubbing activities. Bird nests were recorded and buffers were established. The biologist provided Biological Resource Information Program (BRIP) training for new employees on the jobsite. The biologist wrote daily monitoring reports and cooperated with crews to ensure all work was performed in compliance with environmental regulations.

Environmental Constraints Matrix and Vegetation Management- City of Irvine- Irvine CA (2020-present)

Habitat assessment, aquatic resource analysis, and nesting bird surveys were conducted in order to delineate sensitive habitat that needed protection during the upland and wetland vegetation removal phase of the project. A habitat matrix and vegetation alliance analysis were reported to define environmentally sensitive areas throughout Irvine, California. Preconstruction surveys and biological monitoring was conducted during fire break vegetation removal and vegetation maintenance. Jurisdictional wetlands were identified, and water quality monitoring was conducted in sensitive aquatic habitats. Species of concern included: red-tailed hawk, yellow breasted chat, California gnatcatcher, least Bell's vireo, spadefoot toad, and southwestern pond turtle.

Least Bell's Vireo and Nesting Bird Monitoring- Santa Ana Watershed Association- Riverside, CA (2020-present)

Mrs. Picca conducted least Bell's vireo presence-absence surveys and nesting bird surveys in coordination with non-native vegetation treatment performed by the Santa Ana Watershed Association. Mrs. Picca performed biological monitoring, surveying, and reporting to ensure compliance and protection for the nesting bird season.

Nesting Bird, Owl Nesting, and Preconstruction Surveys – City of Irvine- Irvine, CA (2020-present)

Biologist conducts nest surveys, owl surveys, and preconstruction surveys to determine seasonally active nests for pre-cutting and pre-construction activities performed by the City of Irvine for sensitive habitat in Irvine, California. Environmentally sensitive habitat was also surveyed and biologically monitored for rare plant species such as native tarplant. Many of these surveys included nests for least Bell's vireo, California gnatcatcher, and a wide variety of raptors known to the Irvine region. Reports and geospatial mapping are conducted to inform the City of Irvine for vegetation management.

Agua Dulce Residential Development Project-RTG Invest- Agua Dulce, CA (2021-present)

Mrs. Picca conducted biological monitoring and pit-fall trapping surveys to identify sensitive herps such as coast horned lizard and California legless lizard. Preconstruction reptile and amphibian surveys were conducted, and subsequent reports were written to document, delineate, and map the presence of sensitive species on site. Biologist also surveyed and monitored for nesting birds and rare plants such slender mariposa lily, and Peirson's morning glory. Additionally, Mrs. Picca set up camera traps to monitor badger den and kit fox activity.

Cardno SCE On Call Environmental Clearance Support- Southern California Edison- Southern California (2020-present)

Biologist performed preconstruction surveys, habitat assessment, and biological monitoring for task orders under the Cardno On Call Environmental Clearance Program. Biologist conducted pre-construction, nesting bird, and species-specific surveys for sensitive resources in support of vegetation removal projects with SCE. Focused surveys included California gnatcatcher and least Bell's vireo. Surveyor utilized ArcGIS Online (AGOL) Survey123 and Collector apps as field data tools to record biological and cultural resources for stakeholders in real-time.

Irvine Ranch Water District Restoration Consulting- IRWD- Irvine, CA (July 2020-present)

Biologist conducted preconstruction surveys and vegetation/wildlife mapping for IRWD Natural Treatment Sites to support non-native vegetation management efforts. Scope of work included native and non-native plant surveys, least Bell's vireo surveys, nesting bird surveys, and ArcGIS mapping.

Southern California Gas Company Pipeline Repair Project. Kern County, CA (2022)

Mrs. Picca conducted multiple protocol-level blunt-nosed leopard lizard surveys as a level 1 BNLL surveyor. Working under a level 2 surveyor, she conducted presence/absence transects on foot for adult and juvenile blunt-nosed leopard lizards and San Joaquin antelope squirrels. She is also competent at identifying other herps common to the central valley such as common side-blotched lizard, Blainsville's Horned Lizard, San Joaquin Coachwhip and whiptail.

Joint Force Training Base Nesting Bird and Southern Tarplant Surveys- Wildlife Innovations- Los Alamitos, CA (2022)

Mrs. Picca conducted nesting bird surveys and monitoring efforts with Wildlife Innovations in support of a solar panel construction project at the Joint Force Training Base in Los Alamitos. Active nests were identified, and buffers were established to protect the sensitive areas during clearing and grubbing activities. While surveying for active bird nests, a rare plant, southern tarplant, was also found. The project required vegetation community mapping for the southern tarplant areas and nesting bird mapping for avoidance during construction.

Aliso Creek California Gnatcatcher and Southwestern Pond Turtle Surveys- Laguna Canyon Foundation- Aliso Viejo CA (March 2020-present)

Biologist was part of a turtle trapping team to conduct surveys for southwestern pond turtle populations in ten sites throughout Aliso Creek. The work required coastal California gnatcatcher surveys, visual pond turtle surveys, pond turtle trapping, invasive removal, and biological reporting.

Short-joint Beavertail Cactus Relocation, Oak Monitoring, and Bat Surveying- Huttopia LLC- Valyermo, CA (2021-present)

Mrs. Picca took part in the short-joint beavertail cactus relocation project and oak monitoring to support Huttopia LLC with construction of a glamping area in Paradise Springs, CA. The scope of work included preconstruction rare plant surveys, mapping, monitoring the relocation, qualitative and quantitative follow-up reporting, and oak monitoring. Additional environmental services included nesting bird surveys and bat surveys.

Floradale Bridge Replacement Project-MCM- Lompoc, CA (2020-present)

Mrs. Picca conducted steelhead trout surveys and water quality monitoring. Sensitive species that were monitored included California red-legged frog, steelhead trout, southwestern pond turtle, and nesting birds.

(WILDLIFE PROTECTION FOCUSED)

Golden Eagle Nesting and Habitat Suitability Surveys- SDG&E- San Diego County, CA (2022)

Biologist conducted golden eagle nesting surveys, habitat suitability surveys, and nest monitoring for active golden eagle nests and territories throughout San Diego County. Active golden eagle nests were found and monitored over a three month period.

Desert Bighorn Sheep Surveys- SDG&E- San Diego County, CA (2022)

Biologist conducted desert bighorn sheep surveys, habitat suitability surveys, and lambing monitoring in territories throughout San Diego County. Active lambing territories were found and monitored over a three month period.

Southwestern Pond Turtle Trapping Project-Laguna Canyon Foundation- Aliso Creek, CA (2020)

Biologist conducted pond turtle trapping, surveying, monitoring, and reporting in Aliso Creek to report for the Laguna Canyon Foundation. Morphological traits and survival data were measured, and turtles were tagged for future studies. Captured individuals were processed in order to develop reports to determine pond turtle presence, survival, relative abundance, population demographics, and the impact of habitat restoration on the survival of the pond turtles.

Bird Nesting Surveys- Bloom Biological Inc. - Southern California (2020- present)

Surveys include systematic sampling of birds in various locations throughout the Irvine Ranch Conservancy study area and Casper Wilderness Park. Trapping and capture methods include Bal-Chatri Traps and mist net deployment for adults. Species included in the survey; burrowing owl, turkey vulture, red-tailed hawk, screech owl, and barn owl.

SPECIES-SPECIFIC EXPERIENCE:

Bats

Mrs. Picca has surveyed bats in cliffs, bridges, man-made structures and trees for a variety of projects throughout Southern California. She has also conducted Townsend's big-eared bat surveys. Examples of these projects include the Huttopia-Paradise Spring Project and SR 71/91 Highway Interchange Improvement Project.

Coastal California Gnatcatcher

Mrs. Picca has surveyed and monitored for coastal California gnatcatcher on a large variety of projects. Projects with California gnatcatcher include: Fairview Park Restoration Project, City of Irvine Matrix and Vegetation Clearance Project, Santa Ana Watershed Association, and Cardno.

Herps

Mrs. Picca has worked with a variety of amphibians and reptiles such as western toad, spadefoot toad, coast horned lizard, blunt-nosed leopard lizard, California legless lizard, California red-legged frog, desert

tortoise, and southwestern pond turtle. This experience comes from projects such as the Irvine Environmental Constraints Matrix, Agua Dulce Development Project, Laguna Canyon Foundation Project, Southern California Gas Company Pipeline Repair Project, and the Flordale Bridge Replacement Project.

Nesting Birds

Mrs. Picca has surveyed, trapped, tagged, and monitored nests on countless projects. Biologist has conducted nesting bird surveys for multiple seasons and with a wide range of species throughout southern California. These surveys and monitoring efforts range from species-specific surveys, raptor surveys, mist net trapping and extracting, and banding. Mrs. Picca has partaken in the MAPS Station in the Prado Basin.

Least Bell's Vireo

Mrs. Picca has surveyed and monitored for least Bell's vireo on a large variety of projects. Projects with least Bell's vireo include: SAWA Least Bell's vireo monitoring surveys, Fairview Park Restoration, and City of Irvine Matrix and Vegetation Clearance Project.

Raptors/Birds of Prey

Mrs. Picca has surveyed, trapped, and monitored raptor nests on countless projects and research studies. Trapping and capture methods include Bal-Chatrri traps and mist net deployment. Species in surveys included: golden eagle, burrowing owl, American kestrel, turkey vulture, Cooper's hawk, red-tailed hawk, red-shouldered hawk, screech owl, barn owl, and spotted owl.

Rare Plants

Biologist has surveyed and monitored for a variety of rare plants and host plants such as southern tarplant, short-joint beavertail, San Diego ambrosia, San Miguel savory, Brand's phacelia, slender mariposa lily, and Peirson's morning glory. These surveys were done through projects such as the Fairview Park Restoration and Mitigation Project, Huttopia-Paradise Springs Project, SR 71/91 Highway Interchange Improvement Project, and Agua Dulce Project.