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RB INYOKERN DATA CENTER

Application for Small Power Plant Exemption (SPPE)

Inyokern, Kern County, California

Docket Number – 26-SPPE-01

Appendix D Supplement - Section D.1 Revision 1

BIOLOGICAL ANALYSIS REPORT

R & L CAPITAL, INC. RB INYOKERN DATA CENTER PROJECT

JUNE 2026



BIOLOGICAL ANALYSIS REPORT

RB INYOKERN DATA CENTER PROJECT

Prepared for:

R & L Capital, Inc.
P.O. Box 907
Trona, CA 93592
Contact: Robbie Barker
Phone: (760) 264-5760

Consultant:



5080 California Avenue, Suite 220
Bakersfield, CA 93309
Contact: Jaymie Brauer
Phone: (661) 616-2600
Fax: (661) 616-5970

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ACRONYMS AND ABBREVIATIONS

AMSL	Above Mean Sea Level
APN	Assessor Parcel Number
BAR	Biological Analysis Report
BIOS	Biogeography Information and Observation System
BSA	Biological Study Area
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGF	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNDPA	California Native Desert Plants Act
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CUP	Conditional Use Permit
CWHR	California Wildlife Habitat Relationships
DOC	Department of Conservation
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
HCP	Habitat Conservation Plan
IPaC	Information for Planning and Consultation
LAFCo	Local Agency Formation Commission
MBTA	Migratory Bird Treaty Act
M-2	Medium Industrial
MDB&M	Mount Diablo Base and Meridian
MW	mega watt
NEPA	National Environmental Policy Act
NHD	National Hydrography Dataset
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
PD	Precise Development Combining
POI	Point of Interconnection
RWQCB	Regional Water Quality Control Board
SCE	Southern California Edison
SPPE	Small Power Plant Exemption
SOI	Sphere of Influence
SR	State Route
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WRCC	Western Regional Climate Center

EXECUTIVE SUMMARY

The Biological Analysis Report (BAR) evaluates the potential for sensitive biological resources to be impacted by the proposed RB Inyokern Data Center Project (Project). The Project is located in the eastern high desert region of Kern County in the unincorporated community of Inyokern, California. The Project, as proposed, would develop an approximately 50-acre site with a 24/7 continuously operational 99 megawatts (MW) Tier III data center and associated infrastructure, including a new Southern California Edison (SCE) substation that interconnects to SCE's Inyokern Substation to the east of the data center facility. The data center would be approximately 238,000 square feet, single-story, with a maximum 30 feet height and would contain six modular data suites. The project utilizes dual-sided electrical and mechanical systems for concurrent maintainability, high energy efficiency and redundancy.

QK biologists conducted reconnaissance surveys of the Project site in August and November 2025. The surveys were conducted to document current site conditions, evaluate potential biological resources onsite, and determine the suitability of the habitat to support special-status plant and wildlife species that may occur on the Project site. Database reviews were conducted to determine the potential for special-status species and other sensitive biological resources that may occur on-site that could be impacted by the Project.

The database reviews identified thirteen special-status plant species and sixteen special-status wildlife species having the potential to be on or near the Project site. Based on these database reviews, on-site reconnaissance surveys, and environmental conditions such as soil type, elevation, historical range, and other factors, it was determined that three special-status plant species, Barstow woolly sunflower (*Eriophyllum mohavense*), Charlotte's phacelia (*Phacelia nashiana*) and Latimer's woodland-gilia (*Saltugilia latimeri*) and eleven special-status wildlife species, Crotch's bumble bee (*Bombus crotchii*), desert tortoise (*Gopherus agassizii*), golden eagle (*Aquila chrysaetos*), Swainson's hawk (*Buteo swainsoni*), western burrowing owl (*Athene cunicularia* ssp. *hypugaea*), prairie falcon (*Falco mexicanus*), loggerhead shrike (*Lanius ludovicianus*), LeConte's thrasher (*Toxostoma lecontei*), American badger (*Taxidea taxus*), desert kit fox (*Vulpes macrotis arsipus*) and Mohave ground squirrel (*Xerospermophilus mohavensis*), have the potential to occur on-site.

Direct and indirect impacts to biological resources without implementation of avoidance and minimization measures could include direct injury to or mortality of individual special-status species and interference with normal wildlife behaviors. Potential indirect impacts without implementation of avoidance and minimization measures could include loss of special-status species and/or foraging habitat. Nesting migratory birds may be impacted if Project construction activities occur during the nesting season. The Project is not expected to substantially impact wildlife movement corridors or jurisdictional aquatic resources and would not conflict with local policies, ordinances, or conservation plans. Due to the potential presence of special-status wildlife species, avoidance and minimization measures are

recommended, which, when implemented, would reduce Project impacts to biological resources to less-than-significant levels.

SECTION 1 - INTRODUCTION

QK prepared this Biological Analysis Report (BAR) to evaluate the potential for sensitive biological resources to be impacted by the proposed RB Inyokern Data Center Project (Project). QK reviewed readily available technical documents and agency-maintained databases for sensitive biological resources and assessed biological conditions throughout the Project during an on-site reconnaissance survey. The results of the desktop research and field surveys are summarized in this BAR, which provides the technical basis for the analysis of potential impacts to biological resources that may result from the construction, operation, and maintenance of the Project.

1.1 - Project Location

The Project site is located in the eastern high desert region of Kern County in the unincorporated community of Inyokern, California (Figure 1-1). The proposed Project is located on State Route (SR) 178, between SR 395 to the east and Brown Road to the west (Project site; Figure 1-2). The proposed Project is located north of SR 178, while the gen-tie route and SCE substation point of interconnection (POI) are located south of SR 178. The Project site consists of four separate accessor parcel numbers (APN 084-010-43, -44, -45, and -47) under ownership of the Project proponent. The POI that interconnects to Southern California Edison's (SCE) Inyokern Substation to the east of the Project site is proposed on APN 084-010-48. The proposed Project can be found within Section 29, Township 26 South, Range 39 East, Mount Diablo Base and Meridian (MDB&M).

Forest, parkland, and preserve areas in the vicinity of the BSA include the Sequoia and Kings Canyon National Parks, located approximately 20 miles northwest. The Naval Air Weapons Station-China Lake military installation is located approximately 0.4 miles northeast of the BSA.

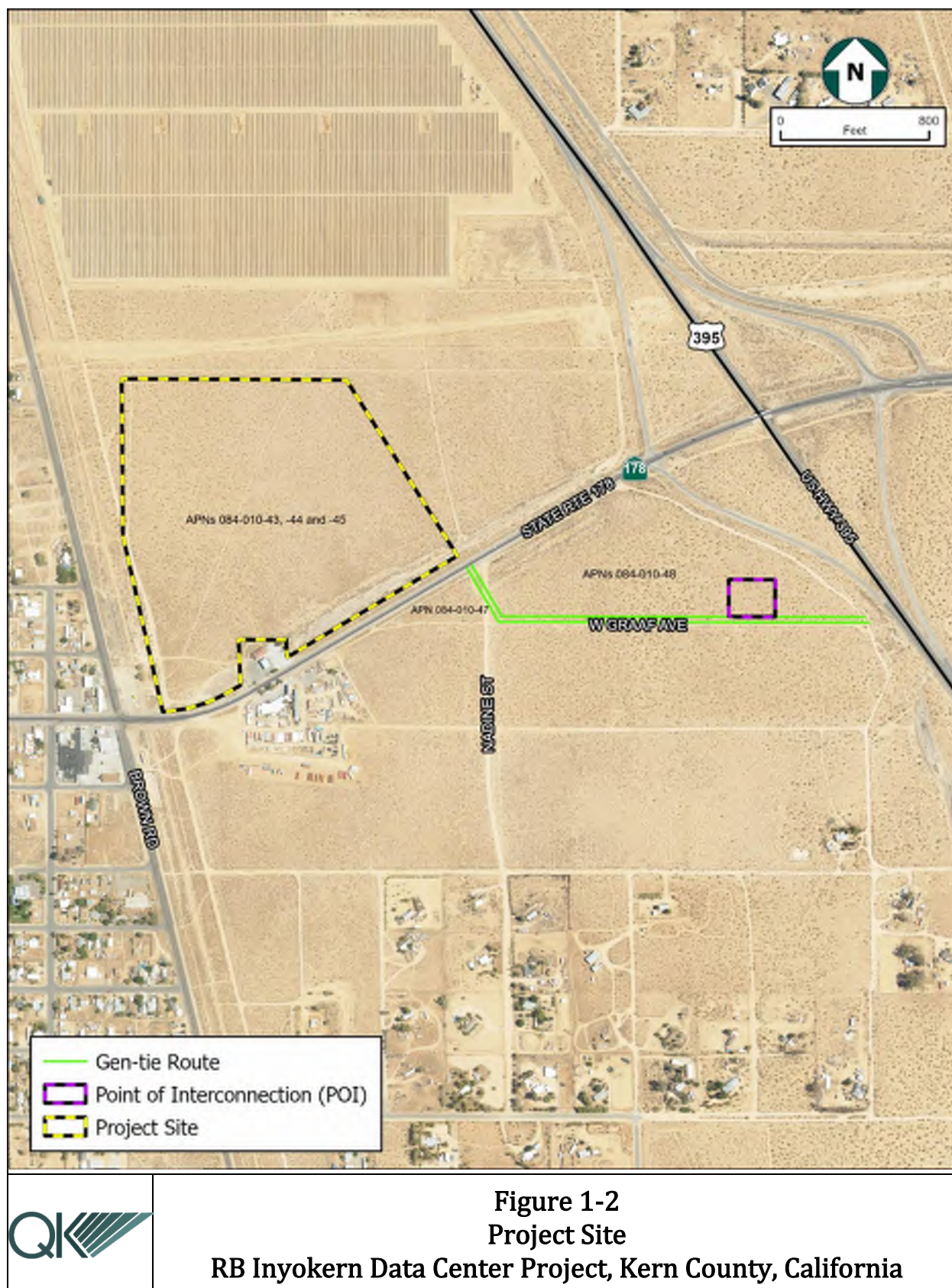
As more particularly described in this section, the trapezoid-shaped Project Site is bounded by SR 178 along the southern property line, Brown Road along the western perimeter, a 100' wide utility easement (of which a 138' wide area running west to east is degraded by vehicular use) and the RB Inyokern Solar Project along the northern boundary, and a utility easement and set back line around the entire Project Area.

1.2 - Project Description

The Project, as proposed by R & L Capital, Inc., would develop an approximately 50-acre site with a 24/7 continuous operational 99 megawatts (MW) Tier III data center and associated infrastructure, including a new substation that interconnects to SCE's Inyokern Substation to the east of the data center facility (Project). The data center would be approximately 238,000 square feet, single-story, with a maximum height of 30 feet, and would contain six modular data suites. The project will be constructed in three phases (35 MW, 70 MW, and 99 MW) and will utilize dual-sided electrical and mechanical systems for concurrent maintainability and high energy efficiency.

The Project site is located within the Sphere of Influence (SOI) of the Inyokern Community Services District (Inyokern CSD, District) boundaries and is requesting annexation into the District boundaries in order to serve the Project with water and sewer services.





The subject parcel is zoned M-2 PD (Medium Industrial, Precise Development Combining) and pursuant to Section 19.08.085 of Kern County Zoning Ordinance, the Planning Director may authorize the filing of a conditional use permit application to allow for the establishment of a use not expressly authorized as a permitted or conditionally permitted uses of the M-2 Zoning District (M-2) pursuant to the provisions of Chapter 19.104, subject to approval of a Conditional Use Permit (CUP).

An Environmental Impact Report (EIR) has been prepared for the California Energy Commission (CEC), which is the California Environmental Quality Act (CEQA) Lead Agency, to identify and evaluate potential environmental impacts associated with implementation of the RB Inyokern Data Center (Project, RBIDC) proposed by R & L Capital, Inc. (project proponent/operator). The EIR serves as part of an application for a Small Power Plant Exemption (SPPE Application) pursuant to Public Resources Code Section 25541 and Section 1934 et seq. of the CEC regulations. The design balances grid-fed reliability with diesel-based backup emergency power and is consistent with CEC requirements for SPPE under Title 20 CCR § 1936.

The following discretionary actions are required for the proposed development:

- Small Power Plant Exemption (SPPE Application) pursuant to Public Resources Code Section 25541 and Section 1934 et seq. of the CEC
- Annexation Approval by Kern County Local Agency Formation Commission (LAFCo) into the Inyokern CSD.
- Conditional Use Permit (CUP) for a use not listed pursuant to Section 19.08.085 of Kern County Zoning Ordinance.
- Approval by the Kern County Planning Department for the proposed lot line adjustment.
- Approval by the Kern County Board of Supervisors to amend the Inyokern Specific Plan to eliminate a future secondary collector (90-foot ROW).

Associated infrastructure includes the following components:

General Infrastructure

- 238,000 square feet, 30 feet in height, data center facility.
- 17,325 square feet administration office with offices, employee facilities, and loading docks.
- Internal one-way circulation roadway network, including curb, gutter, and sidewalks.
- Adequate parking on-site [155 9 feet x 20 feet, 6 ADA (including 1 ADA Van), 25 EV spaces (including 18 installed with EV chargers)].
- External security lighting features.
- Landscaping, including trees to meet Kern County requirements.
- An administration office that includes water and sewer services provided by the Inyokern CSD, an industrial septic system, and an on-site groundwater well and water treatment system for a backup water source.

- Stormwater drainage system.

Power Systems

- Emergency backup uninterruptible power system (UPS) that is supported by two areas of 20 2.75MW diesel-fueled generators, with battery storage capacity.
- Six 300,000-gallon fuel storage tanks for renewable or low-sulfur diesel for generators with 72-hour capacity on-site storage.
- Two switchgear yards.
- New substation with 115 kV SCE feed, 2×60/80/100 MVA transformers (delta-wye).
- Rooftop and parking cover-mounted solar panels.

Water and Cooling Systems

- Primary water source is municipal.
- Two 142,000-gallon and two 52,000-gallon water storage tanks for supplemental and fire suppression water supply.
- Hybrid (high and low temperature) cooling towers and chillers that utilize recycled water.
- Humidification system to manage data center and tower discharge network of variable refrigerant flow (VRF) split-system air conditioners for office, loading zones, storage rooms, and corridors.

Construction

Construction of the proposed data center project is anticipated to begin in 2027 and would require approximately 48 months to complete, based on the integrated construction schedule for site development, structural work, major mechanical and electrical installation, data hall buildout, and commissioning activities. Construction activities for the proposed project are generally organized into the following major categories:

- Site preparation and infrastructure development.
- Structural and building shell construction.
- Mechanical, electrical, and data hall systems installation, followed by commissioning and closeout.

1.3 - Purpose, Goals, and Objectives

The purpose of this BAR is to identify where potential special-status biological resources may occur within the Project site, determine how those resources may be impacted by the proposed Project, and recommend avoidance, minimization, and mitigation measures to reduce the potential for impact to a less-than-significant level. This BAR has been prepared to support an analysis of biological conditions as required by CEQA. Information contained in this BAR would, at least partially, support an analysis of project effects required by the National Environmental Policy Act (NEPA) and support regulatory permit applications, if needed.

SECTION 2 - METHODS

2.1 - Definition of Biological Study Area

The Biological Study Area (BSA) used for this BAR includes everything within the limits of the Project site and a 250-foot survey buffer around the Project site, where feasible (Figure 2-1).

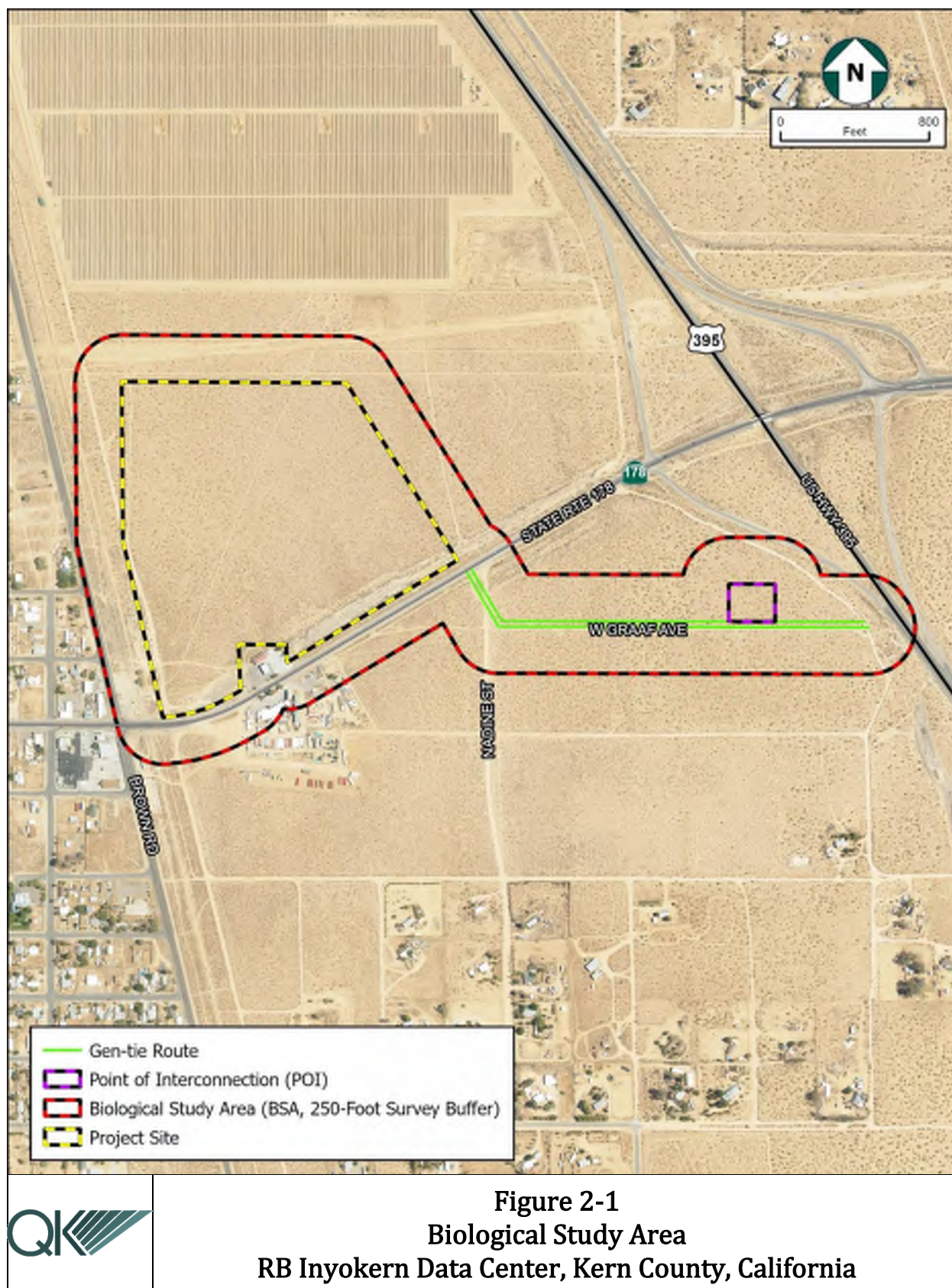
2.2 - Definition of Special-Status Species

For the purpose of this report, special-status species include:

- Species listed as threatened or endangered under the Federal Endangered Species Act (FESA); species that are under review may be included if there is a reasonable expectation of listing within the life of the Project.
- Species listed as candidate, threatened, or endangered under the California Endangered Species Act (CESA).
- Species designated as Fully Protected, Species of Special Concern, or Watch List by the California Department of Fish and Wildlife (CDFW).
- Other species included on the CDFW's Special Animals List.
- Plant species with a California Rare Plant Rank (CRPR) in categories 1 or 2.
- Species designated as locally important by the Local Agency and/or otherwise protected through ordinance or local policy.

The potential for each special-status species to occur in the BSA was evaluated according to the following criteria:

- **No Potential.** Habitat on and adjacent to the Project is clearly unsuitable to meet the needs of the species (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and the species would have been identifiable on-site if present.
- **Potential.** Conditions on the Project may, in some way, support a portion of the species' ecology (foraging, reproduction, movement/migration). Negative survey results do not exclude the potential for a species to occur.
- **Present.** Species or diagnostic sign of the species were observed on the Project or have been recorded (e.g., databases, other reports) on the Project recently (within the last five years).



2.3 - Literature Review and Database Analysis

The following sources were reviewed to obtain available information on sensitive biological resources in the Project vicinity:

- CDFW's California Natural Diversity Database (CNDDDB; CDFW 2025a; CDFW 2025b).
- CDFW's Biogeographic Information and Observation System (BIOS; CDFW 2025c).
- CDFW's California Wildlife Habitat Relationships (CWHR) System (Mayer and Laudenslayer 1988).
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2025).
- Calflora (Calflora 2025).
- U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) system (USFWS 2025a).
- USFWS Critical Habitat Mapper (USFWS 2025b).
- USFWS National Wetlands Inventory (NWI; USFWS 2025c).
- United States Geological Survey (USGS) National Hydrography Dataset (NHD; USGS 2025).
- Federal Emergency Management Agency (FEMA) flood zone maps (FEMA 2025).
- U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2025a).
- NRCS Lists of Hydric Soils (NRCS 2025b).
- eBird Explore (eBird 2025).
- VertNet (VertNet 2025).
- Current and historical aerial imagery from Google Earth (Google LLC 2025).

All State and federal data sources listed above focused on the California USGS 7.5-minute quadrangle *Inyokern* in which the Project is located, and the surrounding eight quadrangles: *Ridgecrest North*, *Ridgecrest South*, *White Hills*, *Inyokern SE*, *Owens Peak*, *Pearsonville*, *Ninemile Canyon*, and *Freeman Junction*.

The CNDDDB provides element spatial information on the individually documented occurrences of special-status species and sensitive natural communities. Some of the information available for review in the CNDDDB is still undergoing review by the CDFW; those records are identified as unprocessed data. The CNPS database and Calflora provide similar information to the CNDDDB, but at a much lower spatial resolution. Much of the information in those databases is obtained opportunistically and is often focused on protected lands or on lands where development has been proposed. Neither database represents a comprehensive survey of special-status resources in the region. As such, the absence of recorded occurrence in those databases at any specific location does not preclude the possibility that a special-status resource may be present, which is why site-specific surveys were undertaken. The IPaC and CDFW's special-status animals list provides only lists of species that could occur in the region, with no specific records of occurrence. The NWI, NDH, and Web Soil Survey provide comprehensive spatial data, but at a low resolution that requires confirmation in the field.

The results of the database inquiries were reviewed to develop a comprehensive list of sensitive biological resources that may be present on or in the vicinity of the Project site (see Table A-1 in Appendix A). This list was then evaluated against existing site conditions observed during the biological field surveys of the BSA to determine which special-status resources have the potential to occur, and then the potential for impacts to those resources as a result of the implementation of the Project was analyzed.

2.4 - Reconnaissance-Level Field Survey

A reconnaissance survey of the BSA was conducted on August 26, 2025, by QK Biologists Karissa Denney and Eric Madueno. An additional survey was conducted on November 6, 2025, by QK Biologists Eric Madueno, Dylan Burkey, and Kelli Baldwin, to survey the gen-tie and POI area. The surveys consisted of walking meandering pedestrian transects spaced 50 to 100 feet apart throughout the BSA to achieve 100 percent coverage of the Project site. Areas inaccessible to the surveyor, either due to a physical barrier or unauthorized access, were surveyed with high-powered binoculars.

Tasks completed during the survey included developing an inventory of plant and wildlife species observed, characterizing vegetation associations and habitat conditions, assessing the potential for federally and State-listed and special-status plant and wildlife species to occur, assessing the potential for bat usage habitat, and assessing the potential for migratory bird and raptor nesting within the BSA. All spatial data were recorded using ESRI Collector for ArcGIS software installed on an iPad, and site conditions were documented with representative photographs. This is standard reconnaissance survey methodology accepted by CDFW.

Additional Surveys

QK has conducted multiple surveys in close proximity of the Project site, including the RB Inyokern Solar Project located approximately 500 feet north of the BSA and the SCE Pole Replacement and Upgrades Project located east of the BSA across SR 395 (QK 2023). Surveys conducted included pre-activity surveys for desert tortoise, western burrowing owl, desert kit fox, and Mohave ground squirrel and construction monitoring during power pole placement (see Table 2-1). Desert tortoise and Mohave ground squirrel surveys were conducted by authorized desert tortoise and Mohave ground squirrel QK biologists Jeff Erway and Curtis Uptain. Supporting reports that describe the survey area boundaries, survey methodology, and results are provided in Appendix F.

**Table 2-1
Survey Project, Type, Dates and Personnel**

Project	Survey Type	Dates	Staff
RB Inyokern Solar Project	Pre-Construction	October 9, 2023	Eric Madueno, Karissa Denney, Mitch Wayman, Lauren Fah
		November 7, 2023	Eric Madueno, Karissa Denney, William Ryan

		November 8, 2023	Curtis Uptain, Jeff Erway (MGS, DETO)
		December 12, 2023	Eric Madueno, Mitch Wayman, Will Ryan, Jeff Erway
	Construction Monitoring	August 1, 2023 through March 17, 2025	Dave Dayton, Eric Madueno, Jeff Erway, Mitch Wayman, William Ryan, Curtis Uptain, Karissa Denney, Robert Vovilla
SCE Pole Replacement and Upgrades to Support the RB Inyokern Solar Project	Pre-Construction and Construction Monitoring	April 13, 2024	Curtis Uptain, Karissa Denney
		April 14, 2024 and April 21, 2024	Curtis Uptain
		April 24 and 25, 2024	Curtis Uptain, Danielle Temple
		May 1 and 2, 2024	Curtis Uptain, Brittany Gummo

2.5 - Protocol-Level Floristic Surveys

The BSA was evaluated for the presence of special-status plant species using standard methods described in Protocol for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018a). Three protocol-level floristic surveys were conducted on the BSA in 2024 (see Table 2-2). Two surveys were conducted on the parcel containing the proposed data center on April 8 and May 10, 2024. One survey was conducted on the parcel containing the gen-tie route and POI on March 29, 2024. Field datasheets are provided in Appendix E.

Table 2-2
Survey Location, Type, Dates and Personnel

APN	Survey Type	Dates	Personnel
APN 084-010-43, -44, -45, and -47	Floristics	April 8, 2024	Eric Madueno, William Ryan, Robert Vovilla
		May 10, 2024	Eric, Denver-Rose Harmon
APN 084-010-48	Floristics	March 29, 2024	Eric Madueno, William Ryan, Robert Vovilla

The surveys consisted of walking meandering pedestrian transects spaced 30 to 100 feet apart over the entire Project and the 250-foot buffer, where feasible. One hundred percent coverage of the Project footprint was achieved. Portions of the buffer fell on private property where access was not permitted, and these areas were visually surveyed with the aid of binoculars. The intent of the surveys was to identify and record all plant communities and plant species. Special-status species were photographed, and their location was documented using ESRI Collector for ArcGIS installed on an iPad. This is standard floristic survey methodology accepted by CDFW.

The survey methodologies and timing were optimal to increase the likelihood the target species would be evident and identifiable during the survey period. Staff reviewed species-

specific life history information, phenology, diagnostic identification characteristics, habitat associations, elevation range, and documented regional occurrence records. The BSA was evaluated for the presence of suitable habitat elements, including vegetation communities, soils, hydrology, and topography. Field surveys were conducted under conditions that allowed for adequate visual detection, including appropriate daylight and visibility.

The literature and database search, along with 2024 floristic surveys, provide a comprehensive evaluation of the potential for special-status plant species within the BSA.

SECTION 3 - REGULATORY SETTING

Regulated or sensitive resources that were studied and analyzed include special-status plant and wildlife species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement areas, and locally protected resources such as protected trees. Regulatory authority over biological resources is shared by federal, State, and local authorities. Primary authority for the regulation of general biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, the Kern County General Plan).

Regulation of biological resources on the site derives from the following list of statutes and guiding plans. Summaries of these statutes are provided in Appendix B. The significance of impacts to biological resources for purposes of CEQA was determined in the context of the Public Resources Code Section 21000 et seq.

- California Environmental Quality Act (CEQA)
- Federal Endangered Species Act (FESA)
- California Endangered Species Act (CESA)
- Federal Clean Water Act
- California Fish and Game Code (CFGC)
- Migratory Bird Treaty Act (MBTA)
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- Kern County General Plan
- Inyokern Specific Plan
- Indian Wells Valley Land Management Plan
- Desert Renewable Energy Conservation Plan
- California Desert Native Plants Act (CDNPA)

SECTION 4 - ENVIRONMENTAL SETTING

This section identifies the regional and local environmental setting of the Project and describes existing baseline conditions. The environmental setting of the BSA was obtained from various sources of literature, databases, and aerial photographs. Site conditions were verified and refined based on observations made during the biological surveys described in Section 3.

4.1 - Physical Characteristics

The BSA is situated on the western perimeter of the Mojave Desert, in the community of Inyokern in northeastern Kern County. The Project would develop 50 acres of property, consisting of private, undeveloped land. The BSA is not designated by the California Department of Conservation (DOC) as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. The DOC designates the Project site as non-agricultural and natural vegetation, and semi-agricultural and rural commercial land. No lands within the Project site are subject to a Williamson Act Land Use contract. Physical characteristics of the Project site are described below. Representative photographs of the Project site and surrounding area are included in Appendix C.

4.1.1 - TOPOGRAPHY

The topography of the BSA is generally flat, although the terrain is slightly more variable where anthropogenic disturbances have occurred (i.e., OHV roads) or have influenced drainage patterns. The topography gently slopes from south to north, with an elevation that ranges between 2,435 and 2,416 feet above mean sea level (AMSL). The foothills of the Sierra Nevada Mountain Range are approximately four miles west of the BSA, while the El Paso Mountain Range is approximately six miles to the south.

4.1.2 - CLIMATE

The region in which the BSA is located is characterized by a typical desert climate, with hot, dry, windy summers and mild, dry winters. Average high temperatures range from 59.7°F in December to 102.7°F in July, and it is not uncommon for temperatures to exceed 100.0°F during the summer (WRCC 2025). Average low temperatures range from 30.2°F in December to 66.2°F in July. Precipitation events are variable from year to year, with an average of 4.17 inches of rain falling mainly between December and March, although the region is known to experience sudden thunderstorms in the summer months.

4.1.3 - LAND USE

The BSA is located on undeveloped, privately-owned land in the community of Inyokern. Existing development in the Project vicinity includes a gas station/convenience store and hardware store with outdoor storage to the south, undeveloped land to the north and east, and Brown Road and single-family residences to the west. Representative photographs of the BSA are included in Appendix C.

4.1.4 - SOILS

The United States Department of Agriculture, Natural Resources Conservation Service (NRCS 2025) Web Soil Survey database contains no digital data for the region in which the BSA is located. In general, the BSA is underlain by sandy soils, which are characteristic of arid, desert environments and often formed in alluvium (sediments deposited by water) and windblown deposits from mixed sources.

4.1.5 - HYDROLOGY

The BSA is in the Grapevine Canyon watershed of the South Lahontan Hydrologic Region (HUC 12-180902050704; USGS 2025). Drainage for most of the watershed in the region is internal, which accounts for the presence of many dry lakebeds or playas in the region. Most of the perennial rivers are in the northern portion of this hydrologic region. These include the Owens River and Rush Creek in the north. In the south, the Mojave and Amargosa Rivers are present but typically dry for most of the year.

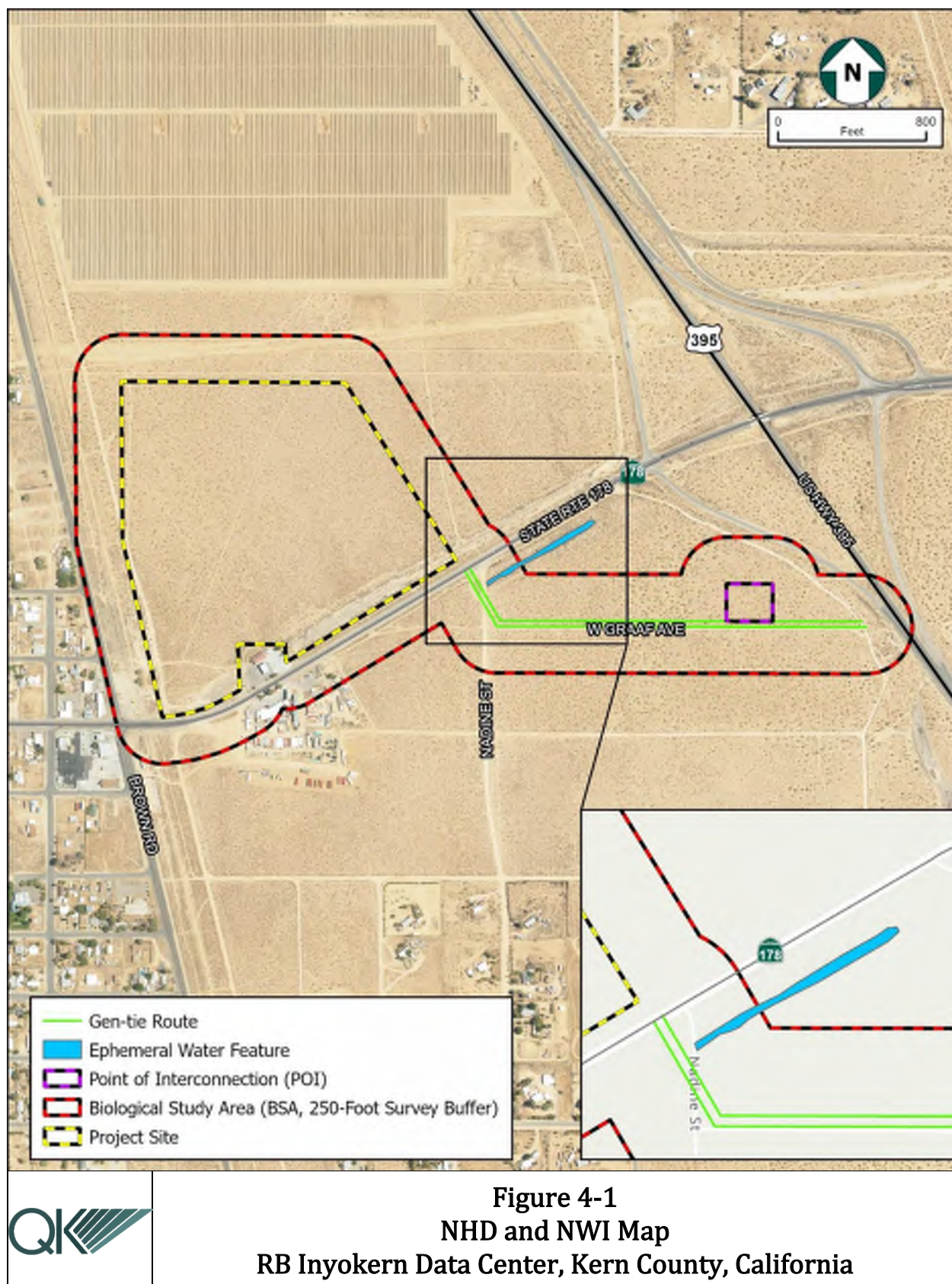
The National Hydrography Dataset (NHD) and the National Wetland Inventory (NWI) databases did not identify any water feature present in the BSA. During the survey, one water feature was identified in the BSA near the gen-tie route (Figure 4-1). The water feature did not contain any water, but indicators of water flow, including soil cracks, bed and bank, and a change in vegetation type, were present. The gen-tie route will not cross or impact the water feature.

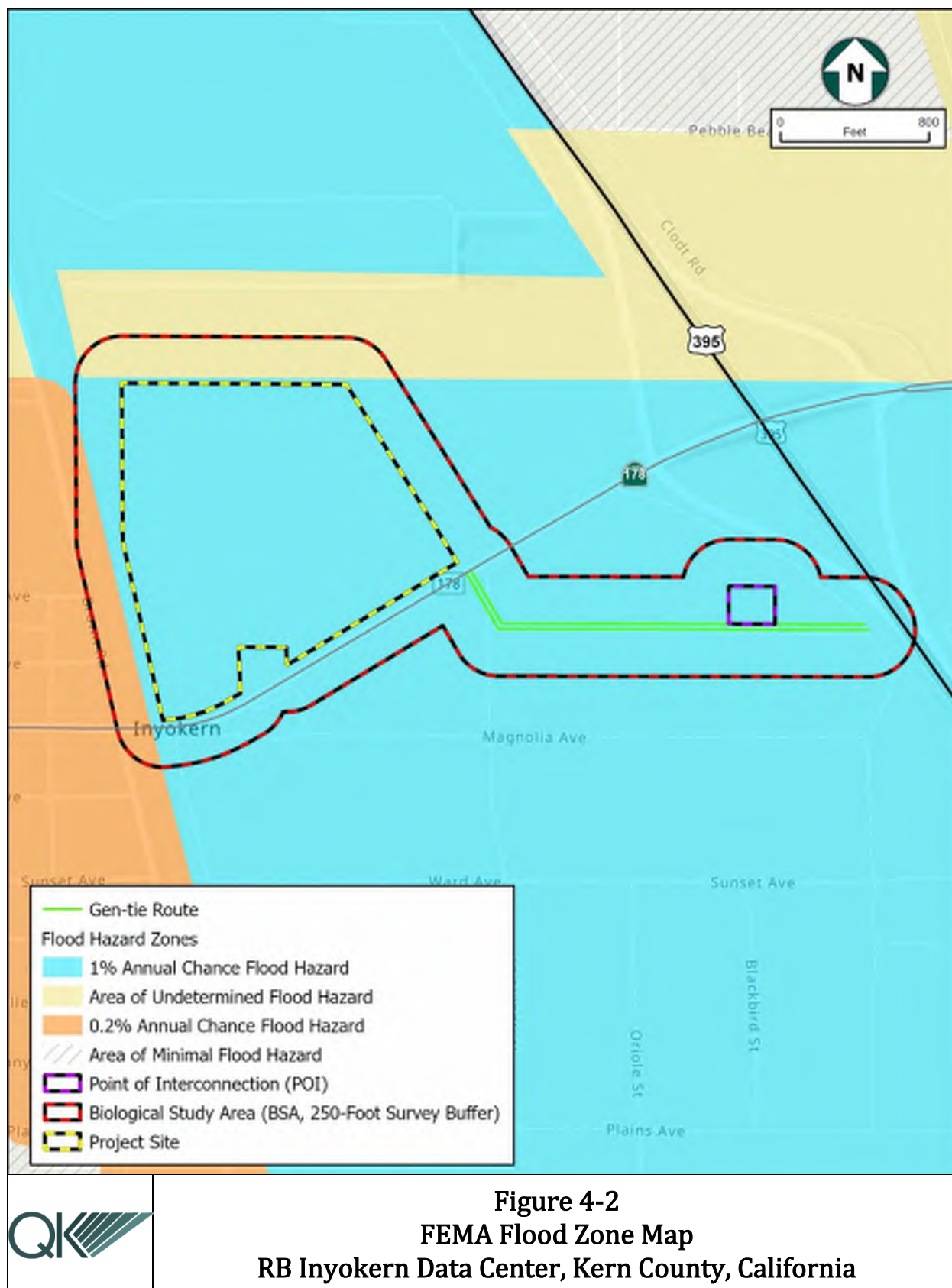
Thirteen features were identified within one mile north of the Project site. Twelve of the thirteen features are existing “freshwater ponds” (i.e., PUSK or PUBK) located on the Inyokern Wastewater Treatment Plant operated and maintained by the Inyokern Community Services District. The remaining feature is an unnamed intermittent stream that is bisected by SR 395 and the Inyokern Wastewater Treatment Plant. None of these features will be crossed or impacted by the Project.

The BSA is almost entirely in an area of one percent Annual Chance Flood Hazard as designated by FEMA. A small portion on the western boundary of the BSA is within a 0.2 percent Annual Chance Flood Hazard, and a small portion of the northern boundary is within an area of Undetermined Flood Hazard (FEMA 2025, Figure 4-2).

4.2 - Vegetation and Other Land Cover

Based on descriptions of the habitat classification system in the CWHR (Mayer and Laudenslayer 1988), two habitat types, Desert Scrub and Alkali Desert Scrub, were present within the BSA (Figure 4-3). The most prevalent habitat type within the BSA was Desert Scrub, which covers approximately two-thirds of the BSA. A complete list of plant species observed during the reconnaissance surveys is included in Appendix D.





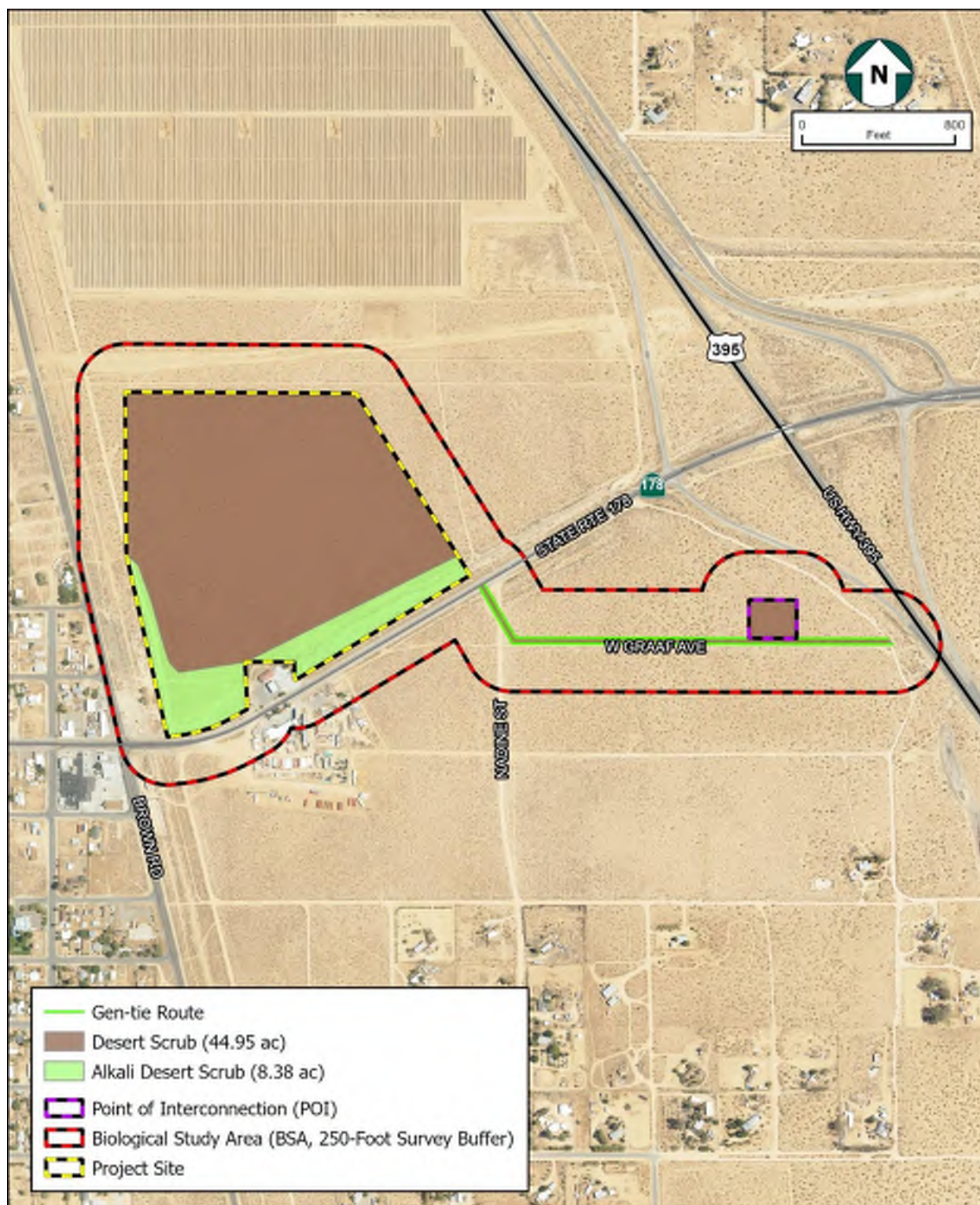


Figure 4-3
California Wildlife Habitat Relationships
RB Inyokern Data Center, Kern County, California

4.2.1 - DESERT SCRUB

Mayer and Laudenslayer (1988) describe Desert Scrub as a shrub dominated habitat typically consisting of open, scattered assemblages of broad-leaved evergreen or deciduous microphyll shrubs rarely exceeding three meters (10 feet). Creosote bush (*Larrea tridentata*) is often considered a dominant species owing primarily to its tall stature rather than density. Other species occurring in this habitat include catclaw acacia (*Senegalia greggii*), desert agave (*Agave deserti*), coastal bladderpod (*Cleomella arborea*), white brittlebush (*Encelia farinosa*), white bursage (*Ambrosia Dumosa*), desert globemallow (*Sphaeralcea ambigua*), and rubber rabbitbrush (*Ericameria nauseosa*). Desert Scrub supports a variety of wildlife species. The presence of standing water in winter and the growth of herbaceous plants in spring provide foraging areas and food for species typically reptiles and rodents. Common species include Couch's spadefoot toad (*Scaphiopus couchi*), desert tortoise, a variety of lizards and snakes, including the desert iguana (*Dipsosaurus dorsalis*) and common kingsnake (*Lampropeltis getula*), black-throated sparrow (*Amphispiza bilineata*), various pocket mice (*Perognathus* sp.) and kangaroo rats (*Dipodomys* sp.), desert kit fox, coyote (*Canis latrans*), and bobcat (*Lynx rufus*). Desert Scrub habitats are well developed on valley floors and lower bajadas. Soils are well drained and coarse, and salt content in the soil ranges from low to high concentrations of calcium carbonate and other salts, forming a hardpan. Desert Scrub habitats are found throughout the Mojave and Sonoran deserts at suitable elevations, generally below 1,220 m (4,000 feet), but can be found 300 m (1,000 feet) higher on south-facing slopes and occasionally reach higher elevations.

Desert Scrub habitat was present on 44.95 acres of the BSA. Within this habitat type, dominant species include creosote bush, white bursage, and cheesebush (*Ambrosia salsola*). Rubber rabbitbrush was also present in lower quantities. Common understory species were fiddleneck (*Amsinckia* sp.), clavate fruited primrose (*Chylismia claviformis*), buckwheat (*Eriogonum* sp.) goldfields (*Lasthenia californica*), non-native mustards and grasses, and some native grasses. Desert Scrub habitat within the gen-tie route and POI included a higher abundance of allscale (*Atriplex polycarpa*) as opposed to the data center.

4.2.2 - ALKALI DESERT SCRUB

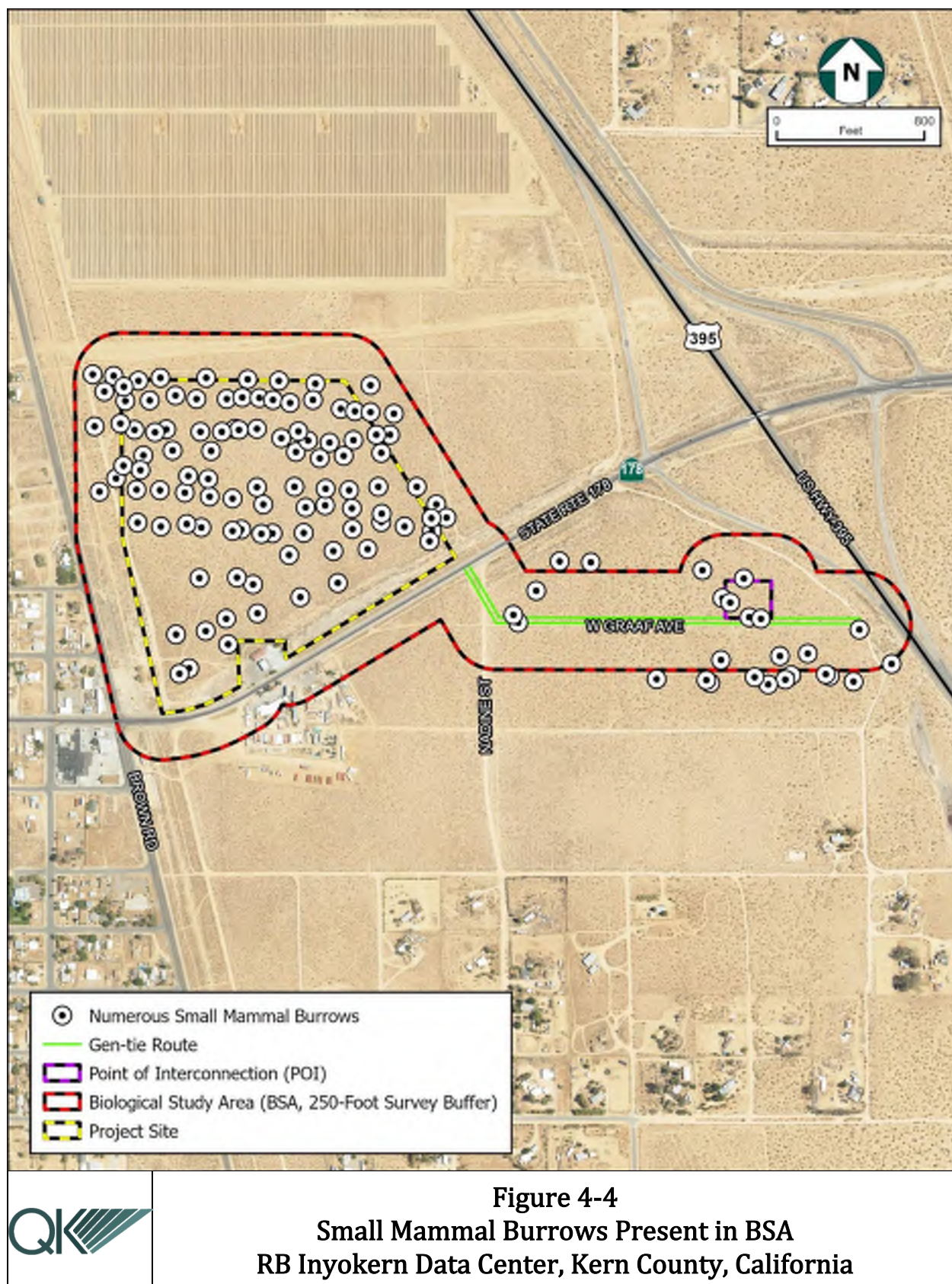
Mayer and Laudenslayer (1988) describe Alkali Desert Scrub as a shrub-dominated habitat that consists primarily of chenopods that are generally subdivided into xerophytic and halophytic phases. Some primary perennial shrub plant species of the xerophytic phase include allscale, desert holly (*Atriplex hymenelytra*), fourwing saltbush (*Atriplex canescens*), Nuttall saltbush (*Atriplex nuttallii*), big saltbush (*Atriplex lentiformis*), Parry saltbush (*Atriplex parryi*), shadscale (*Atriplex condertifolia*), Torrey salt bush (*Atriplex torreyi*), and western Mojave saltbush (*Atriplex spinifera*). Other associated shrubs include sagebrush (*Artemisia* sp.), white bursage (*Ambrosia Dumosa*), creosote bush, Nevada ephedra (*Ephedra nevadensis*), goldenbush (*Ericameria* sp.), Cooper goldenbush (*Ericameria cooperi*), and Shockley goldenhead (*Acamptopappus shockleyi*). The halophytic phase consists of arrowweed (*Pluchea sericea*), black greasewood (*Sarcobatus vermiculatus*), alkali goldenbush (*Isocoma acradenia*), kochia (*Bassia scoparia*), iodinebush

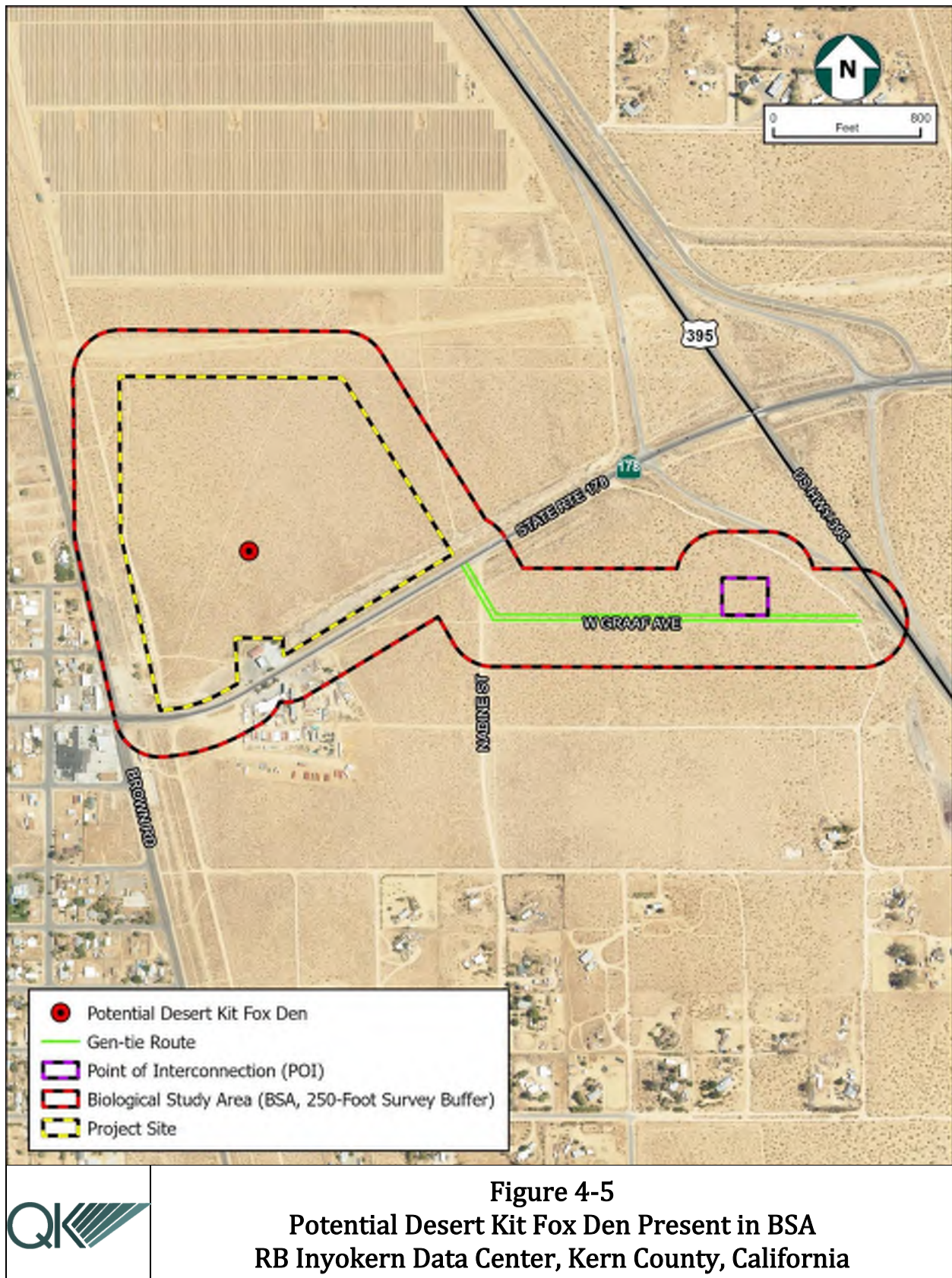
(*Allenrolfea occidentalis*), alkali rubber rabbitbrush, and alkali blite (*Suaeda* sp). Wildlife species characteristic of Alkali Desert Scrub includes the pallid kangaroo mouse (*Microdipodops pallidus*), chisel-toothed kangaroo rat (*Dipodomys microps*), Mohave ground squirrel, zebra-tailed lizard (*Callisaurus draconoides*), long-nosed leopard lizard (*Gambelia wislizenii*), and the San Emigdio blue butterfly (*Plebulina emigdionis*). Alkali Desert Scrub can generally be found surrounding the receding shores of large prehistoric lakes or alkali playas that mark the locations of dry lake beds and mainly occurs throughout the Mojave Desert, parts of the Colorado Desert, parts of the Great Basin, and in the southern San Joaquin Valley. Alkali Desert Scrub ranges from below sea level in Death Valley to over 5,900 feet in some Great Basin locations to 1825 m (6,000 ft).

Alkali Desert Scrub habitat was present on 8.38 acres of the BSA. Dominant species include allscale, burrobush, and cheesebush. Common understory species were white bursage, buckwheat, non-native mustard and grasses, and some native grasses.

4.3 - General Wildlife Observations

Wildlife occurring within the BSA was typical for undeveloped areas of the western Mojave Desert. Bird species included common raven (*Corvus corax*), horned lark (*Eremophila alpestris ammophila*), and house finch (*Haemorhous mexicanus*). Mammal species included black-tailed jackrabbit (*Lepus californicus*), white-tailed antelope squirrel (*Ammospermophilus leucurus*). Reptile species included common-side-blotched lizard (*Uta stansburiana*), and western whiptail (*Aspidoscelis tigris*). One potential desert kit fox den and numerous small mammal burrows were present on the BSA (Figure 4-4 and Figure 4-5). The potential fox den did not show habitation (i.e., no tracks, scat, or prey remains). Approximately 306 small mammal burrows with a width of 2.8 to 3.7 inches were identified throughout the BSA, which is the suitable size to support Mohave ground squirrel (LaRue 2015, Leitner 2014). Figure 4-4 depicts the locations of the potential Mohave ground squirrel burrows. Each point represents 1 to 15 potential burrows within a 50-foot radius. A list of wildlife observed during the field survey is provided in Table D-1 of Appendix D.





SECTION 5 - SENSITIVE BIOLOGICAL RESOURCES

Local, State, and federal agencies regulate special-status species and other sensitive biological resources and require an assessment of their presence or potential for presence to be on-site prior to the approval of proposed development on a property. This section discusses sensitive biological resources observed within the BSA and evaluates the potential for the BSA to support other sensitive biological resources. Assessments for the potential occurrence of special-status species are based upon known ranges, species habitat preferences, species occurrence records from the CNDDB, CNPS, IPaC, eBird, VertNet, and species occurrence records from other studies in the survey area, and the results of the survey of the BSA.

5.1 - Special-Status Species

Twenty-nine special-status species were identified in the literature and database review that are known or have the potential to occur within the surrounding nine-quadrangles centered on the Project site (Table 5-1; Special-Status Species Evaluation Table in Appendix A). Fourteen of the twenty-nine special-status species were identified as potentially occurring on the Project site and potentially being affected by the Project. Each species is discussed in the subsections below.

Table 5-1
Special-Status Species with Potential to Occur On-Site

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Potentially Affected by Project? Yes/No	Viability Threat? Yes/No
Plants			
<i>Carlquistia muirii</i> Muir's tarplant	-/- 1B.3/-	No	No
<i>Deinandra mohavensis</i> Mojave tarplant	-/SE 1B.3/-	No	No
<i>Delphinium purpusii</i> rose-flowered larkspur	-/- 1B.3/-	No	No
<i>Ericameria gilmanii</i> Gilman's goldenbush	-/- 1B.3/-	No	No
<i>Erigeron aequifolius</i> Hall's daisy	-/- 1B.3/-	No	No
<i>Eriophyllum mohavense</i> Barstow woolly sunflower	-/- 1B.2/-	Yes	No
<i>Layia heterotricha</i> pale-yellow layia	-/- 1B.1/-	No	No
<i>Lomatium shevockii</i> Owen's Peak lomatium	-/- 1B.2/-	No	No
<i>Monardella beneolens</i> sweet-smelling monardella	-/- 1B.3/-	No	No
<i>Nemacladus bellus</i> beautiful threadplant	-/- 1B.3/-	No	No
<i>Phacelia nashiana</i> Charlotte's phacelia	-/- 1B.2/-	Yes	No

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Potentially Affected by Project? Yes/No	Viability Threat? Yes/No
<i>Phacelia novemmillensis</i> Nine-Mile Canyon phacelia	-/- 1B.2/-	No	No
<i>Saltugilia latimeri</i> Latimer's woodland-gilia	-/- 1B.2/-	Yes	No
Invertebrates			
<i>Bombus crotchii</i> Crotch's bumble bee	-/SCE -/-	Yes	No
<i>Danaus plexippus plexippus</i> monarch - California overwintering population	FC/- -/-	No	No
Fish			
<i>Siphateles bicolor mohavensis</i> Mohave tui chub	FE/SE -/FP	No	No
Reptiles			
<i>Anniella campii</i> Southern Sierra legless lizard	-/- -/SSC	No	No
<i>Gopherus agassizii</i> desert tortoise	FT/SE -/-	Yes	No
Birds			
<i>Aquila chrysaetos</i> golden eagle	-/- -/SFP	Yes	No
<i>Athene cunicularia ssp. hypugaea</i> western burrowing owl	-/SCE -/SSC	Yes	No
<i>Buteo swainsoni</i> Swainson's hawk	-/ST -/-	Yes	No
<i>Falco mexicanus</i> prairie falcon	-/- -/WL	Yes	No
<i>Lanius ludovicianus</i> loggerhead shrike	-/- -/SSC	Yes	No
<i>Toxostoma lecontei</i> LeConte's thrasher	-/- -/SSC	Yes	No
Mammals			
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-/- -/SSC	No	No
<i>Euderma maculatum</i> spotted bat	-/- -/SSC	No	No
<i>Taxidea taxus</i> American badger	-/- -/SSC	Yes	No
<i>Vulpes macrotis arsipus</i> desert kit fox	-/- -/FBM	Yes	No
<i>Xerospermophilus mohavensis</i> Mohave ground squirrel	-/ST -/-	Yes	No
<u>CRPR (California Rare Plant Rank):</u>		<u>Federal Ranking</u>	
1A Presumed Extinct in California		FE	Federally Endangered
1B Rare, Threatened, or Endangered in California and elsewhere		FT	Federally Threatened
2A Plants presumed extirpated in California, but more common elsewhere		FPT	Federally Proposed Threatened
2B Plants Rare, Threatened, or Endangered in California, but more common elsewhere		<u>State Ranking</u>	
		FBM	Furbearing Mammal (CFGC Tit.14 §460)
		SE	State Endangered
		ST	State Threatened
		SCE	State Candidate Endangered
		SCT	State Candidate Threatened
<u>CRPR Threat Code Extension:</u>			
.1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)			

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Potentially Affected by Project? Yes/No	Viability Threat? Yes/No
.2 Fairly endangered in California (20-80% occurrences threatened)	SFP	State Fully Protected	
.3 Not very endangered in California (<20% of occurrences threatened)	SSC	State Species of Special Concern	
	WL	State Watch List	
	<u>Viability Threat:</u> Will a species' quality of life be threatened by the development of this project?		

5.1.1 - SPECIAL-STATUS PLANT SPECIES

Of the thirteen special-status plant species identified in Table 5-1, three species have the potential to occur on the Project site: Barstow woolly sunflower, Charlotte's phacelia and Latimer's woodland gila. The Project site does not provide suitable habitat to support Muir's tarplant, Mojave tarplant, rose-flowered larkspur, Gilman's goldenbush, Hall's daisy, pale-yellow layia, Owen's Peak lomatium, sweet-smelling monardella, beautiful threadplant, Nine Mile Canyon phacelia or Latimer's woodland-gilia (see Appendix A). Silver cholla (*Cylindropuntia echinocarpa*) and beavertail cactus (*Opuntia basilaris*), are plant species protected under the California Desert Native Plants Act (CDNPA) and have potential to be present on the BSA.

Barstow woolly sunflower

ERIOPHYLLUM MOHAVENSE

Status: CRPR 1B.2

Barstow woolly sunflower is an annual herb endemic to California that blooms between March and May (CNPS, 2025). It is found in creosote bush scrub, chenopod scrub, Mojavean desert scrub, and playa habitats. It occurs at elevations from approximately 1,640 to 3,150 feet. It is known to occur in Kern, San Bernardino, and Los Angeles counties. This species is threatened by energy development, road improvements, vehicles, and grazing.

This species was not observed during the protocol-level floristic surveys or the reconnaissance surveys conducted within the optimal blooming period for this species (March and May). The BSA is within the known range of the species, and a suitable habitat consisting of desert scrub and alkali sink scrub is present throughout the BSA. There is one CNDDDB occurrence within 10 miles of the BSA. This occurrence (EONDX 111389) is from 2018 and is approximately nine miles southeast of the BSA.

Charlotte's phacelia

PHACELIA NASHIANA

Status: CRPR 1B.2

Charlotte's phacelia is an annual herb endemic to California that blooms from March to June (CNPS, 2025). It usually occurs in granitic or sandy soils within Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. It occurs at elevations from approximately 1,968 to 7,217 feet and is threatened by grazing and mining.

This species was not observed during the protocol-level floristic surveys or the reconnaissance surveys conducted within the optimal blooming period for this species (March to June). The BSA is within the known range of the species, and a suitable habitat consisting of desert scrub is present throughout the BSA. There are 14 CNDDB occurrences of this species within 10 miles of the BSA. The closest occurrence (EONDX 18227) is approximately 5.0 miles northwest of the BSA.

Latimer's Woodland Gila***SALTUGILIA LATIMERI***

Status: CRPR 1B.2

Latimer's woodland-gilia is an annual herb endemic to California that blooms from March to June (CNPS, 2025). It is found on rocky or sandy, often granitic, sometimes limestone, substrates and sometimes washes within chaparral, Mojavean desert scrub, or pinyon and juniper woodland. It occurs at elevations from approximately 1,310 to 6,235 feet. There have been few recent observations, and possibly threatened by off-road recreational activities.

This species was not observed during the protocol-level floristic surveys or the reconnaissance surveys conducted within the optimal blooming period for this species (March to June). The BSA is within the known range of the species, and a suitable habitat consisting of desert scrub is present throughout the BSA. There are two CNDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 60329) is approximately 5.0 miles northwest of the BSA. Suitable habitat is absent from the BSA that could support this species.

5.1.2 - OTHER PROTECTED PLANT SPECIES***Silver cholla******CYLINDROPUNTIA ECHINOCARPA***

Status: Protected Under California Desert Native Plants Act

Silver cholla is a shrub native to California that blooms between March and June (CNPS, 2025). It is found in creosote bush scrub, pinyon-juniper woodland, and Joshua tree woodland habitats. It occurs at elevations from approximately 984 to 5,249 feet. This species is threatened by energy development, road improvements, vehicles, and grazing.

Silver cholla is not listed on any State or federal lists as threatened or endangered. This native desert plant is protected under the California Desert Native Plant Act (CNDPA) from harvesting or selling. Five silver cholla individuals were observed on the eastern portion of the Project site (Figure 5-1). The removal of individual silver cholla would require a California Desert Native Harvest Permit issued by the Kern County Agricultural Commissioner.

Beavertail cactus***OPUNTIA BASILARIS***

Status: Protected Under California Desert Native Plants Act

Beavertail cactus is a shrub (stem succulent) native to California that blooms between April to June (CNPS, 2025). It is found in creosote bush scrub, pinyon-juniper woodland, and Joshua tree woodland habitats. Beavertail cactus is not listed on any State or federal lists as threatened or endangered. This native desert plant is protected under the CNDPA from harvesting or selling. The removal of individual beavertail cacti would require a California Desert Native Harvest Permit issued by the Kern County Agricultural Commissioner.

5.1.1 - SPECIAL-STATUS ANIMAL SPECIES

The literature and database review identified sixteen special-status animal species known or with the potential to occur in the vicinity of the Project (see Appendix A). Five of the sixteen special-status species were determined to be absent from the BSA due to lack of suitable habitat or the BSA being outside of the species range. The BSA did not contain suitable overwintering habitat or preferred host plants to support the monarch butterfly. The BSA did not contain any ponds or moist soil to support the Mohave tui chub or Southern Sierra legless lizard. The BSA did not contain roosting habitat that can support the Townsend's big-eared bat or spotted bat. Eleven of the sixteen special-status species have the potential to occur on-site (see Table 5-1) and are discussed below.

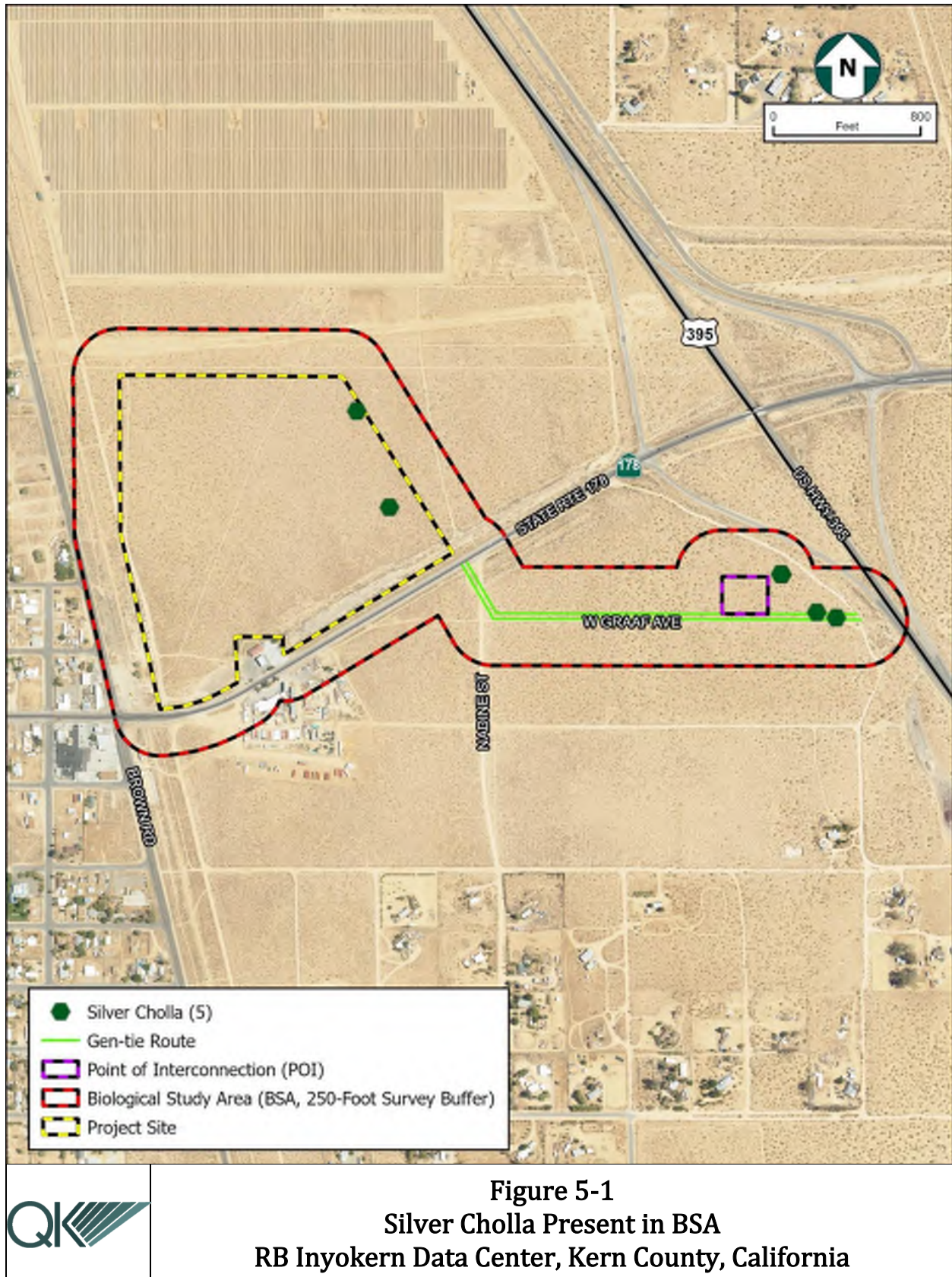
Crotch's Bumble Bee

BOMBUS CROTCHII

Status: State Candidate Endangered

The Crotch bumble bee occurs in relatively warm and dry environments of the inner Coast Range of California and the margins of the Mojave Desert. It inhabits grassland and scrub habitats where it nests in abandoned rodent burrows, and occasionally nests above ground in tufts of grass, rock piles, or cavities in dead trees. This species is classified as a short-tongued bumblebee whose food plants include *Asclepias*, *Chaenactis*, *Lupinus*, *Medicago*, *Phacelia*, and *Salvia*. The species is threatened by habitat loss and degradation, including agricultural intensification and rapid urbanization.

This species was not observed during the reconnaissance surveys, but the BSA is within the known range of the species, and suitable nesting habitat (small mammal burrows), and food plants (i.e., *Salvia* and *Chaenactis*) were present on the BSA. There are no CNDDB occurrences within 10 miles of the BSA. There is a low potential for this species to occur within the BSA as a resident or as a transient forager.



Desert Tortoise**GOPHERUS AGASSIZII**

Status: Federally Threatened, State Endangered

The desert tortoise is found throughout the Mojave Desert and south along the Colorado River and along the east side of the Salton Basin in the Sonoran Desert. It occurs in arid sandy or gravelly locations along riverbanks, washes, sandy dunes, alluvial fans, canyon bottoms, desert oases, rocky hillsides, creosote flats, and hillsides. It is most active during the day in spring, early summer, and during summer rains, typically in the early mornings or late afternoons. Winter hibernation begins in October or November. Courtship and breeding occur after emergence from their winter hibernation in March and April. The species is threatened by habitat loss and degradation, including agricultural intensification and rapid urbanization.

The BSA is within the known range of this species, and suitable habitat is present on the Project site. There are nine CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 114841) is approximately 3.5 miles west of the BSA. This occurrence is from 2019 and is presumed extant. No desert tortoises or their sign (i.e., burrows, scat, tracks) were present on the BSA during the reconnaissance surveys or protocol-level floristic surveys. No desert tortoise individuals or burrows were identified during pre-activity desert tortoise surveys conducted for the RB Inyokern Solar Project located north of the BSA (QK 2023). Based on the lack of tortoises and their sign on the BSA and surrounding area, it is unlikely that desert tortoises are present on the BSA. Additionally, the BSA is surrounded by development, and there is a low likelihood of wild tortoises entering the Project site from adjacent areas, either as transients or to establish residency.

Golden Eagle**AQUILA CHRYSAETOS**

Status: State Fully Protected

The golden eagle occurs in broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower and upper montane coniferous forests, pinon & juniper woodlands, valley & foothill grassland. It prefers rolling foothills, mountain areas, sage-juniper flats, and desert for foraging. Breeding occurs between late January and August (CDFW 2018b). It nests in cliff-walled canyons and in isolated large trees in open areas. The elevational range of this species is from sea level to 11,500 feet, and it may desert nest early in the incubation phase if disturbed by humans. The species is threatened by loss of nesting habitat, loss of foraging areas, lead poisoning, collision with man-made structures (i.e., wind turbines), and pesticide poisoning (CDFW 2018b).

This species was not observed during the reconnaissance surveys, and suitable nesting habitat is not present. This species may be a transient forager as the BSA is within the known range of the species, and foraging habitat is present. There are three CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 88145) is approximately 6.0 miles northwest of the BSA. This occurrence is from 2012 and is presumed extant. There is a potential for this species to occur within the BSA as a transient forager.

Swainson's Hawk***BUTEO SWAINSONI***

Status: State Threatened

Swainson's hawk is a State threatened-species under the CESA. The historical breeding range of Swainson's hawk in California included the Great Basin, Sacramento and San Joaquin Basins, the coast from Marin County to San Diego County, and scattered sites in the Mojave and Colorado Deserts.

The species continues to breed across its entire historical range, but in significantly lower numbers than in previous years. In the Mojave Desert, the species is known to nest in low densities in desert scrub habitat with a Joshua tree overstory. Throughout its range the species nest almost exclusively in trees, typically on the edges of woodland adjacent to grass or shrubland habitat. There are few trees in the area suitable for nesting.

Although Swainson's hawk has not been reported to the CNDBB, one was observed flying over the site to the north in April 2015 (Circle Mountain Biological Consultants, 2015). Swainson's hawk would not nest onsite and probably not forage there (as they tend to prefer fallow agricultural fields and other open areas in the desert), they have been observed resting in similar desert scrub habitats as they migrate through the region. With the general loss of farming in the area, there is a low potential Swainson's hawk would be present as a transient forager, but it is unlikely to inhabit the site.

Western Burrowing Owl***ATHENE CUNICULARIA SSP. HYPUGAEA***

Status: State Candidate Endangered, Species of Special Concern

The western burrowing owl is a broadly distributed, small ground-dwelling owl that can be found throughout western North America, Florida, Central and South America, Hispaniola, Cuba, and northern Lesser Antilles, and the Bahamas (Shuford and Gardali 2008). Typically, this species can be found in a variety of habitat types, including grasslands, deserts, or other open habitats where food resources are available and contain treeless areas with low vegetation cover and gently sloping terrain (Rodewald 2015).

Burrowing owls utilize earthen burrows, typically relying on other fossorial mammals to construct their burrows, such as prairie dog (*Cynomys* spp.) or American badger (USFWS 1998). In California, they are associated with California ground squirrels (Winchell 1994). They use a burrow throughout the year for temperature regulation, offspring rearing, shelter, and escape from predators. Although burrows are most often earthen, atypical burrows such as pipes, culverts, and other manmade structures will be used by burrowing owls as shelter (Shuford and Gardali 2008a). Burrowing owls can have several burrows close to one another that they may frequently use to avoid predators.

This species was not observed in the BSA during the reconnaissance survey, but the BSA is within the known range of the species, and both suitable foraging and nesting habitat are present. There are seven CNDDDB occurrences within 10 miles of the BSA. The closest

occurrence (EONDX 114375) is approximately four miles west of the BSA. This occurrence is from 2017 and is presumed extant. Two nesting pairs of burrowing owls were identified approximately 1,000 feet northeast of the proposed Project during a survey conducted in April 2023 for the RB Inyokern Solar Project (Circle Mountain 2023).

Prairie Falcon**FALCO MEXICANUS**

Status: State Watch List

Prairie falcons are large falcons with muted cream, brown, and gray plumage (Cornell 2017). They breed in open country through the West wherever they can find bluffs and cliffs to nest on, including in alpine habitat to about 11,000 feet. Breeding habitats include grasslands, areas of mixed shrubs and grasslands, savannahs, rangeland, some agricultural fields, desert scrub, and alpine meadows that support abundant ground squirrel or pika populations.

Prairie falcons in California are non-migratory and wander through the region during the year in response to changing food availability (Steenhof 2013). Prairie falcons search for prey from perches, when soaring, and most often take prey by gliding on a low approach to grab a small mammal or bird in their talons.

During courtship, the male and female spend a month or more visiting potential nest sites together (Cornell 2017). Prairie falcons nest primarily on cliffs, but also in trees, power line structures, buildings, mine highwalls, and inside caves or stone quarries (Steenhof 2013). They also use stick nests built by other species and artificial nests that have been built as part of conservation measures.

This species was not observed during the reconnaissance survey, but the BSA is within the known range of the species. The BSA contains suitable foraging habitat and some low-quality nesting habitat in power pole structures. There are four CNDDDB occurrences within 10 miles of the BSA. The nearest occurrence (EONDX 26078) is approximately 3.5 miles west of the BSA, although it is mapped generally as the exact location has been suppressed from the record. This occurrence is from 1977 and is presumed extant. There is a potential for this species to occur in the BSA as a transient forager.

Loggerhead Shrike**LANIUS LUDOVICIANUS**

Status: Species of Special Concern

The loggerhead shrike is a small predatory bird with a large head, gray above with a black facial mask, black hooked bill, and white below with black legs and feet. Females are smaller than males and tend to have browner primaries (Yosef 1996). Loggerhead shrikes mainly feed on small to medium-sized reptiles, amphibians, arthropods, and small mammals and birds. They often forage in open landscapes characterized by well-spaced, often spiny, shrubs and low trees, interspersed with short grasses, forbs, and bare ground. Their tomial tooth aids in killing their prey by damaging the spinal cord to induce paralysis. Loggerhead shrikes hunt from perches and impale their prey on sharp objects such as thorns and barbed-

wire fences. This impaling behavior probably evolved as a feeding adaptation to enable shrikes to immobilize larger prey than they could otherwise handle.

Loggerhead shrikes can be found all over North America, extending up into Canada during the breeding season and as far south as Central America during the non-breeding season (Yosef 1996). Populations that primarily inhabit the northern regions are migratory, moving south from areas that have 10-30 days per year of snow cover. Shrikes who primarily occupy southern regions reside year-round, usually living in pairs on permanent territories. Loggerhead shrikes that occupy southern California are primarily residents and breed between January and July (Shuford and Gardali 2008b).

This species was not observed during reconnaissance surveys, but the BSA is within the known range of the species. Both suitable nesting and foraging habitats are present. There are no CNDDDB occurrences within 10 miles of the BSA; however, QK staff have observed this species in the vicinity of the BSA during a previous survey on a nearby site just north of the Project site.

LeConte's Thrasher

TOXOSTOMA LECONTEI

Status: Species of Special Concern

LeConte's thrasher is an uncommon, year-round resident in southern California deserts and the San Joaquin Valley, preferring sparsely vegetated desert flats, alluvial fans, or gently rolling hills, typically with a high proportion of saltbush or shadscale species or cholla cactus (Sheppard 2020). Preferred habitat includes shrubs that are usually well scattered with contiguous or closed cover and typically eight feet or less in height. The species rarely occurs in habitats where creosote is the sole shrub species. This species forages on the ground for insects, arthropods, seeds, small lizards, and other small vertebrates. They typically nest in shrubs or cacti in desert wash habitat. The LeConte's thrasher is not migratory and mates for life (USFWS 1998). Nests are constructed on cholla or within dense, thorny shrubs, most frequently saltbush.

This species was not observed during the reconnaissance survey, but the BSA is within the known range of the species. Both suitable nesting and foraging habitats are present. There are four CNDDDB occurrences within 10 miles of the BSA. There is one occurrence (EONDX 24544) that overlaps with the BSA. This occurrence is from 1946 and is presumed extant. This species may occur either as an inhabitant or as a transient forager.

American Badger

TAXIDEA TAXUS

Status: Species of Special Concern

The American badger is a common resident at lower elevations throughout California except for the northern North Coast (Zeiner et al., 1988). They can typically be found in grasslands, deserts, and drier habitats. Badgers are typically nocturnal and hunt or forage at night while spending daylight hours below ground. Normally, they have a single den entrance that is approximately 8 to 12 inches in width, in an elliptical or half-moon shape, similar to their

body shape. Dens are usually found in friable soils, which are easier to dig in. American badgers spend most of their time near a den; however, they may have multiple dens in an area that can be used at the same time. American badgers are known to be able to dig a new den each night. During cooler nights, the entrance to the den may be partially plugged with soil to help regulate temperatures.

There are three CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 57415) is three miles southwest of the BSA. This occurrence is from 1970 and is presumed extant. Suitable denning and foraging habitats are present within the BSA. A prey abundance (e.g., rodents) is present that can sustain a foraging individual. This species is highly mobile and could be present at any time.

Desert Kit Fox***VULPES MACROTIS ARSIPUS***

Status: CFGC Protected

Desert kit foxes are found in the southeastern deserts of California and occur most often in the open desert, creosote bush flats, and sand dunes (NPS 2015). Desert kit foxes use subterranean dens year-round for shelter, pup-rearing, and protection from predators. They are nocturnal but may be visible above ground near their dens during the day. They have become well-adapted to desert life, obtaining water from their diet, and seldom needing to drink water. They feed primarily on Merriam's kangaroo rat (*Dipodomys merriami*), but also feed on black-tailed jackrabbits, desert cottontails (*Sylvilagus audubonii*), birds, lizards, and insects. Coyotes appear to be their only natural predator, although many suffer mortality due to vehicular strikes.

The CNDDDB does not track this species because it is not listed as threatened or endangered by the federal government or by the State, and it is not a State Species of Concern or a Fully Protected species. However, as a fur-bearing mammal, the CDFW cannot issue a trapping permit for the desert kit fox because it is prohibited from "take" by the CFGC (§460). The CDFW has interpreted this as meaning that no "take" of any form can occur, and by default, categorized the species as Fully Protected even though it is not listed as a Fully Protected species in the CFGC.

One potential desert kit fox den was identified on the BSA (Figure 4-5) during the surveys. Potential kit fox scat was also present at the den entrance. Known desert kit fox dens occur near the solar facility north of the Project site. This species is relatively wide-ranging and could potentially be present within the BSA at any time, either as a resident or a transient forager.

Mohave Ground Squirrel***XEROSPERMOPHILUS MOHAVENSIS***

Status: State Threatened

This squirrel species is rare throughout its range and is only found in the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo counties. It occupies open desert scrub, alkali

desert scrub, Joshua tree, and annual grassland habitats. This species is diurnal, that is, active above ground in the spring and early summer. It enters aestivation in July or August and emerges for the active season between March and June. It utilizes burrows at the base of shrubs for cover and aestivation, and it feeds on a variety of green vegetation, seeds, fruits, fungi, and arthropods.

There are 42 CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 110847) is approximately 1,263 feet north of the BSA. This occurrence is from 2015 and is presumed extant. The BSA is within the known range of this species, and suitable habitat is present. No Mohave ground squirrels were observed during the reconnaissance survey, and no winter fat or spiny hopsage (two of their preferred food plants) were identified on the BSA. However, the Project site contains approximately 306 small mammal burrows (Figure 4-4), many were of suitable size for Mohave ground squirrels. Previously, during Mohave ground squirrel protocol level trapping conducted in 2015 on a nearby site, one pregnant Mohave ground squirrel was captured (Circle Mountain Biological Consultants, Inc. 2015). Although the Project contains very low quality habitat to support this species, there is a low potential for Mohave ground squirrel to be present on the Project site as a transient or an established resident.

5.1.2 - OTHER PROTECTED WILDLIFE SPECIES

Nesting Birds

Habitat within the BSA supports nesting native birds that are protected by the federal MBTA and the CFGC. The reconnaissance surveys were conducted outside the nesting bird season (February 1 to September 15). Although the surveys included conducting searches for inactive bird nests, none were found. Bird species may construct nests within the BSA before or even after construction activities begin. Various species of birds will construct nests in a variety of substrates and structures, and nests may become established in trees or shrubs, in manmade structures, and directly on the ground. The BSA supports several types of habitats, substrates, and structures suitable for nesting birds, and there is a high potential that birds will nest within the BSA during the nesting season.

5.2 - Sensitive Natural Communities

5.2.1 - SENSITIVE COMMUNITIES

The database and literature review did not identify any sensitive plant communities known to occur or with the potential to occur within the vicinity of the BSA, and none were present during the reconnaissance surveys.

5.2.2 - CRITICAL HABITATS

The Project does not overlap with any federally designated critical habitat, and there is no identified critical habitat within 10 miles of the BSA.

5.3 - Jurisdictional Aquatic Resources

Based on the NHD, NWI, and on-site ground confirmation, there are no identified aquatic resources within the Project site. However, one ephemeral water feature is present within the BSA along the edge of the roadway. (Figure 4-1). The proposed Project activities will not impact the existing water feature and, therefore, will not require any additional permitting or consultation. If impacts to the water feature are anticipated, a formal jurisdictional delineation for submittal to State and federal agencies should be conducted, and additional permitting may be required.

The thirteen features identified by NHD within one mile of the Project site will not be crossed or impacted by the Project.

5.4 - Wildlife Movement

Wildlife movement corridors, also referred to as dispersal corridors or landscape linkages, are generally defined as linear features along which animals can travel from one habitat or resource area to another. Wildlife movement corridors can be large tracts of land that connect regionally important habitats that support wildlife in general, such as stopover habitat that support migrating birds or large contiguous natural habitats that support animals with very large home ranges (e.g., coyotes, mule deer [*Odocoileus hemionus californicus*]). They can also be small-scale movement corridors, such as riparian zones, that provide connectivity and cover to support movement at a local scale.

The Project is situated within the Pacific Flyway, which is a significant avian migration route that covers a wide swath of land along the western Americas from Patagonia to Alaska.

5.5 - Resources Protected by Local Policies and Ordinances

The Project site is located within unincorporated Kern County and is subject to the County of Kern General Plan and the Inyokern Specific Plan, which contains policies aimed at the preservation of biological resources and promotes coordination with federal and State resource agencies. These policies are listed in Appendix B. The General Plan and Specific Plan also outlines a work plan with implementation measures by which to uphold these policies, including a biological resource review for proposed projects and the development of mitigation measures for these projects.

5.6 - Habitat Conservation Plans, Natural Community Conservation Plans, or Recovery Plans

The Project is within the planning areas of the draft West Mojave Plan and the Desert Renewable Energy Conservation Plan (DRECP). The DRECP was finalized in 2016, and this first Phase of the DRECP concerns only BLM-managed lands within the planning area. As such, DRECP requirements do not apply to the Project.

SECTION 6 - IMPACT ANALYSIS AND RECOMMENDED AVOIDANCE AND MINIMIZATION MEASURES

This section provides an analysis of the potential for sensitive biological resources to be impacted by the Project. This section also provides avoidance and minimization measures to prevent and/or reduce Project impacts to sensitive biological resources. The impact analysis focuses on the construction phase of the Project.

6.1 - Special-Status Species

In accordance with Appendix G of the CEQA Guidelines, the proposed Project would have a significant effect on biological resources if it would:

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

Avoidance and minimization measures are designed to reduce or eliminate impacts to special-status species through Project construction and operation. Detailed specific measures are outlined below for each special-status species that may occur on the Project site or within potential alternative routes.

6.1.1 - PROJECT IMPACTS TO SPECIAL-STATUS PLANT SPECIES

Silver Cholla

Five silver cholla individuals were identified during the survey. The cholla were located near the eastern boundary of the Project site and along the gen-tie route. It is anticipated that this species will be avoided to the extent possible. However, a permit issued by the Kern County Agricultural Commissioner will be required for the removal of individual silver cholla individuals if they cannot be avoided.

Implementation of Measures BIO-1 and BIO-2, listed below, would reduce impacts to this species to a less-than-significant level. It is assumed there would be no impacts to this species during the operational phase. It is anticipated that this species would not colonize the Project areas during the operational phase of the Project, and it is assumed that there would be no additional impacts to this species during the operational phase.

Beavertail Cactus

This species was not present during the protocol-level floristic plant surveys conducted on the BSA within the optimal blooming period of the Barstow woolly sunflower (which is from April to June). However, the BSA is within the known range of this species, and the species could potentially be present within the desert scrub and alkali scrub habitat within the BSA.

A permit issued by the Kern County Agricultural Commissioner will be required for the removal of individual beavertail cactus individuals if they cannot be avoided.

Implementation of Measures BIO-1 and BIO-2, listed below, would reduce impacts to this species to a less-than-significant level. It is assumed there would be no impacts to this species during the operational phase. It is anticipated that this species would not colonize the Project areas during the operational phase of the Project, and it is assumed that there would be no additional impacts to this species during the operational phase.

Barstow Woolly Sunflower

The Barstow woolly sunflower was not present during the protocol-level floristic plant surveys conducted on the BSA within the optimal blooming period of the Barstow woolly sunflower (which is from March to May). However, the BSA is within the known range of this species, and the species could potentially be present within the desert scrub and alkali scrub habitat within the BSA.

Direct impacts from construction activities could include the destruction or injury of individual plants if present. During the growth and blooming period, the spread of dust during construction could cause an indirect impact on the species, as could the spread of non-native or invasive species caused by Project activities. Competition with invasive plants would have an indirect impact on this species.

If present, implementation of Measures BIO-1 and BIO-2, listed below, would reduce impacts to this species to a less-than-significant level. It is assumed there would be no impacts to this species during the operational phase. It is anticipated that this species would not colonize the Project areas during the operational phase of the Project, and it is assumed that there would be no additional impacts to this species during the operational phase.

Charlotte's Phacelia

Charlotte's phacelia was not present during the protocol-level floristic plant surveys conducted on the BSA within the optimal blooming period of the Charlotte's phacelia (which is from March to June). However, the BSA is within the known range of this species, and the species could potentially be present within the desert scrub and alkali scrub habitat within the BSA.

Direct impacts from construction activities could include the destruction or injury of individual plants if present. During the growth and blooming period, the spread of dust during construction could cause an indirect impact on the species, as could the spread of non-native or invasive species caused by Project activities. Competition with invasive plants would have an indirect impact on this species.

If present, implementation of Measures BIO-1 and BIO-2, listed below, would reduce impacts to this species to a less-than-significant level. It is assumed there would be no impacts to this species during the operational phase. It is anticipated that this species would not colonize

the Project areas during the operational phase of the Project, and it is assumed that there would be no additional impacts to this species during the operational phase.

Latimer’s Woodland-gilia

Latimer’s woodland-gilia was not present during the protocol-level floristic plant surveys conducted on the BSA within the optimal blooming period of the Latimer’s woodland-gilia (which is from March to June). However, the BSA is within the known range of this species, and the species could potentially be present within the desert scrub habitat within the BSA.

Direct impacts from construction activities could include the destruction or injury of individual plants if present. During the growth and blooming period, the spread of dust during construction could cause an indirect impact on the species, as could the spread of non-native or invasive species caused by Project activities. Competition with invasive plants would have an indirect impact on this species.

If present, implementation of Measures BIO-1 and BIO-2, listed below, would reduce impacts to this species to a less-than-significant level. It is assumed there would be no impacts to this species during the operational phase. It is anticipated that this species would not colonize the Project areas during the operational phase of the Project, and it is assumed that there would be no additional impacts to this species during the operational phase.

Avoidance and Minimization Measures

Implementation of the avoidance and minimization measures listed below would reduce Project impacts to special-status plant species to a level that would be less than significant. The following measures are recommended to avoid and minimize impacts to the Barstow woolly sunflower and silver cholla.

BIO-1: Pre-Construction Special-Status Plant Surveys. Prior to the issuance of a grading permit or ground disturbance, a qualified biologist knowledgeable on the identification of plant species should conduct a pre-construction survey to determine the exact locations of silver cholla, and beavertail cactus, and determine presence or absence of Barstow woolly sunflower, Charlotte’s phacelia, and Latimer’s woodland gilia onsite. The pre-construction survey will follow the CDFW “*Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*” (CDFW 2018). Protocol-level floristic surveys, and one pre-construction survey would be sufficient to address all three potential special-status plant species. The blooming period of the three potential special-status plant species are identified in Table 1.

Table1
Special-Status Plant Species Bloom Periods

Special-Status Plant Species Name	Blooming Period
Barstow woolly sunflower	March - May

<i>(Eriophyllum mohavense)</i>	
Charlotte's phacelia	March - June
<i>(Phacelia nashiana)</i>	
Latimer's woodland gila	March - June
<i>(Saltugilia latimeri)</i>	

If special-status plants are not identified during the survey(s), no further action is required. Locations of any special-status plant species or regulated cacti species observed should be mapped and described in a clearance survey report that would be submitted to Kern County. Silver cholla and beavertail cactus that cannot feasibly be avoided during construction would require a California Desert Native Harvest Permit issued by the Kern County Agricultural Commissioner.

BIO-2: Avoidance of Listed Special-Status Plants. No incidental take or relocation of any plant listed under the Federal Endangered Species Act, the California Endangered Species Act, or the California Native Plant Protection Act may occur unless the incidental take is authorized by the United States Fish and Wildlife Service and/or the California Department of Fish and Wildlife in a permit or other authorization. If focused plant surveys detect the presence of any listed plant, the plant populations shall be buffered from disturbance activities by implementing applicable impact avoidance protocols established by the United States Fish and Wildlife Service and/or the California Department of Fish and Wildlife, unless incidental take authority is obtained. Projects covered under the incidental take authority shall conduct activities in accordance with the take authorization. The California Department of Fish and Wildlife may be contacted to determine the appropriate buffer required to prevent incidental take of a listed plant if avoidance protocols have not been established for the species. The qualified biologist shall confirm that all applicable listed plant buffers have been implemented prior to the commencement of any disturbance activity.

6.1.2 - PROJECT IMPACTS TO SPECIAL-STATUS ANIMAL SPECIES

Crotch's Bumble Bee

The Crotch's bumblebee was not present during the reconnaissance or protocol-level rare plant surveys. The BSA is within the known range of the species, and known food plants of the species (*Saliva*) were present on the Project site, although not in large numbers to support a colony. They may be on site as a transient forager. Direct impacts to the Crotch bumble bee could include mortality or injury caused by Project construction activities. The Project could also result in the loss of suitable habitat. Implementation of Avoidance and Minimization Measures, BIO-3, BIO-10 and BIO-11, would reduce impacts to the species.

Desert Tortoise

No desert tortoises or positive signs of the species (burrows, scat) were present during the reconnaissance survey, protocol-level rare plant surveys, or additional surveys conducted in the general vicinity. The Desert Scrub and alkali scrub habitats within the BSA provide suitable but minimal burrowing and foraging habitat for this species, and it is possible that

the species could become established in these areas or be present as a transient forager anywhere within the Project site. However, based on the lack of tortoise sign on the Project site and the relatively disturbed surrounding area, it is unlikely that the desert tortoise is present on the Project site. Additionally, the BSA is surrounded by developed land, including a solar facility to the north, residential to the west, commercial and SR 178 to the south, and SR 395 to the east. There is a low likelihood of wild tortoises entering the Project site from adjacent areas. During the permitting process for the RB Inyokern Solar facility to the north, it should be noted US Fish and Wildlife Service did not request permit coverage for desert tortoise; they determined this species to be absent and unlikely to inhabit the site due to the lack of suitable habitat.

Direct impacts to the desert tortoise could include mortality or injury caused by Project construction activities. Noise, vibration, and increased human activity could alter the normal behaviors of tortoises, affecting overall fitness and reproductive success, making them more vulnerable to predation or causing them to void their water stores. The Project could also result in loss of suitable habitat if the species is determined to be present. Implementation of Measures BIO-4, BIO-8, BIO-10, and BIO-11 would reduce impacts to the species.

Golden Eagle

Golden eagle was not observed during reconnaissance surveys, but the BSA is within the known range of the species, and suitable habitat for foraging is present. Direct impacts to the golden eagle could include mortality or injury caused by Project construction activities. Noise, vibration, and increased human activity could alter normal behaviors, resulting in reduced foraging success and displacing individuals from established territories. Loss of suitable habitat could impact the species.

Implementation of Avoidance and Minimization Measures BIO-9 through BIO-11 would reduce impacts to this species.

Swainson's Hawk

Swainson's hawks were not observed during reconnaissance surveys, although it was reported that one was observed flying over the site to the north in April 2015 (Circle Mountain Biological Consultants, 2015). Swainson's hawk would not nest onsite and probably not forage there but may be present as a transient forager. Implementation of Avoidance and Minimization Measures BIO-9, BIO-10 and BIO-11, listed below, would reduce impacts to the species.

Western Burrowing Owl

The burrowing owl or associated sign was not present during reconnaissance surveys. The BSA is within the known range of the species, and suitable habitat is present. The burrowing owl has been identified in the general vicinity of the BSA, and there is a high potential for this species to occur on the BSA either as a transient or resident. Direct and/or indirect impacts to the burrowing owl could occur if there is an active burrow within the Project area during

the period of construction activities. Construction activities could result in crushing or destroying a burrow, with or without a burrowing owl inside. Noise, vibration, and increased human activity resulting from Project construction activities could alter the daily behaviors of individual owls and affect foraging success, displace owls from their burrows, or lead to nest failure. Operational activities have the potential to impact burrowing owls in the same way but to a lesser degree than construction activities. Suitable nesting and foraging habitat would be lost as a result of the Project. Implementation of Avoidance and Minimization Measures BIO-4, BIO-5, BIO-8, BIO-9, BIO-10 and BIO-11, listed below, would reduce impacts to the species.

Prairie Falcon

Prairie falcon was not observed during reconnaissance surveys, but the BSA is within the known range of the species, and suitable habitat for foraging is present. Direct impacts to the prairie falcon could include mortality or injury caused by Project construction activities. Noise, vibration, and increased human activity could alter normal behaviors, resulting in reduced foraging success and displacing individuals from established territories. Loss of suitable habitat could impact the species.

Implementation of Avoidance and Minimization Measures BIO-9 through BIO-11 would reduce impacts to this species.

Loggerhead Shrike

There were no observations of loggerhead shrike during reconnaissance surveys, but open areas of scrub habitat within the BSA provide suitable nesting and foraging habitat for loggerhead shrike. The species may use fence posts, utility lines, or scrubs within the BSA as perches and nest in areas of dense foliage. Direct impacts to this species could include the destruction of active nests resulting from Project construction activities. Noise, vibration, and increased human activity could alter normal behaviors, resulting in nest failure, reducing foraging success, and displacing individuals from established territories. Loss of suitable habitat could impact the species.

Implementation of Avoidance and Minimization Measures BIO-9 through BIO-11 would reduce impacts to this species.

LeConte's Thrasher

There were no observations of LeConte's thrasher during reconnaissance surveys, but the BSA provides suitable nesting and foraging habitat. The species may forage in areas of saltbush habitat and use saltbushes as nesting sites. Direct impacts to this species could include the destruction of active nests resulting from Project construction activities. Noise, vibration, and increased human activity could alter normal behaviors, resulting in nest failure, reducing foraging success, and displacing individuals from established territories. Loss of suitable habitat could impact the species.

Implementation of Avoidance and Minimization Measures BIO-9 through BIO-11 would reduce impacts to this species.

American Badger

The American badger was not observed during reconnaissance surveys, but there are suitable denning and foraging habitats within the BSA. Direct impacts to this species could include mortality or injury caused by entrapment or crushing of individuals within dens and vehicle strikes. Indirect impacts to the species could be caused by noise, vibration, and the presence of construction workers that could alter normal behaviors. Altering normal behaviors could affect reproductive success, foraging success, or displacement from active dens if they were present within or adjacent to the Project area during construction. Operational activities could impact the species in many of these same ways because it is assumed that this species could be present from time to time during the operational phase of the Project.

Implementation of Avoidance and Minimization Measures BIO-4, BIO-6, BIO-8, BIO-10, and BIO-11 listed below would reduce impacts to the species.

Desert Kit Fox

Suitable habitat to support the desert kit fox occurs throughout most of the BSA. One potential kit fox den was found on the Project site along with potential scat at the den entrance. This species could be present anywhere within the BSA at any time, including during the operational phase of the Project, either as a resident or transient forager.

Direct impacts to this species could include mortality or injury caused by entrapment or crushing of individuals within dens or from vehicle strikes. Indirect impacts caused by noise, vibration, and the presence of construction workers could alter the normal behaviors of desert kit foxes, which could affect reproductive success, foraging success, or displacement from active dens. Loss of foraging habitat could impact the species. The use of herbicides and pesticides can impact desert kit foxes due to the killing of prey from the herbicides and pesticides. Impacts to this species during the operational phase will be minimal or less than significant since limited operational and maintenance employees.

Implementation of Avoidance and Minimization Measures BIO-4, BIO-6, BIO-8, BIO-10, and BIO-11 listed below would reduce impacts to the species.

Mohave Ground Squirrel

A Mohave ground squirrel was trapped near the BSA. The BSA contains suitable habitat to support the Mohave ground squirrel, and multiple burrows suitable for this species were present throughout the BSA.

Direct impacts to this species could include, but are not limited to, mortality or injury caused by entrapment or crushing individuals within burrows or from vehicle strikes. Indirect

impacts caused by noise, vibration, and the presence of construction workers could alter the normal behaviors of the Mohave ground squirrel, which could affect reproductive success, foraging success, or displacement from active burrows. Loss of foraging habitat could impact the species. Implementation of Avoidance and Minimization Measures BIO-7, BIO-8, BIO-10, and BIO-11, would reduce impacts to Mohave ground squirrel.

Nesting Birds

The entire Project area contains habitat suitable to support a wide variety of nesting native and non-native bird species. Depending on the timing of construction, eggs and nestlings of bird species with small, well-hidden nests could be subject to loss. This action would result primarily during habitat clearing, earth removal, grading, digging, and equipment movement. If nesting occurs in the Project area during construction, an Environmentally Sensitive Area (ESA) may be established to reduce or eliminate potential impacts to nesting birds, eggs, and nestlings.

Noise, vibration, and increased human activity resulting from Project construction activities could alter the daily behaviors of individuals and affect foraging success or lead to nest failure. Access roads will be utilized during the construction phase, and there exists a potential for mortality due to vehicle collisions, although this risk is minimal as highly mobile species like birds are expected to disperse to nearby habitat.

Implementation of Avoidance and Minimization Measures BIO-9, BIO-10, and BIO-11 would reduce impacts to nesting birds.

Avoidance and Minimization Measures

Implementation of the avoidance and minimization listed below would reduce Project impacts to special-status wildlife species to levels that would be less than significant. The following measures are recommended to avoid and minimize impacts to Crotch's bumble bee, western burrowing owl, Mohave ground squirrel, desert tortoise, loggerhead shrike, American badger, LeConte's thrasher, desert kit fox, and migratory and nesting birds.

BIO-3: Pre-Construction Surveys for Crotch's Bumble Bee. Prior to the issuance of grading permits or ground disturbance, a qualified biologist would conduct pre-construction clearance surveys for special-status species. Preconstruction surveys would be conducted within 30 days before the beginning of ground disturbance or construction activities. The surveys would identify any potential evidence of species occupancy (including colony nests). If feasible, overwintering queen surveys and spring surveys should be completed to minimize the potential of directly impacting this species. If active nests or overwintering sites are discovered within the project footprint, they would be avoided by a minimum 100-foot radius. A biological monitor would be present during the proposed work if work occurs near active nest locations or overwintering sites. If any listed special-status species are detected within the project limits, and biologists determine there is potential for take, then USFWS and/or CDFW would be consulted (as applicable), and a take authorization could be obtained.

BIO-4: Pre-Construction Surveys for Burrowing Owl, Desert Tortoise, American Badger, and Desert Kit Fox. Within 14 days prior to the start of Project construction or ground disturbance activities, a pre-construction clearance survey should be conducted by a qualified biologist knowledgeable in the identification of these species. The timing of the pre-construction surveys may need to be phased to ensure appropriate timing before project activities begin.

If greater than 14 days elapse between the survey and the start of activities, an additional survey may be required. The pre-activity survey shall include walking transects to identify the presence of burrowing owls and their burrows, American badgers and their dens, and desert kit foxes and their dens. The pre-activity survey shall be walked using transects spaced at intervals of not greater than 30 feet, which will provide 100 percent coverage of the Project site and a 250-foot buffer for desert tortoise, American badger, desert kit fox, and a 500-foot buffer for burrowing owl. Some areas of the buffer may not be accessible, so transects within the buffer will only be walked where feasible. If no evidence of these special-status species is detected, no further action is required. If no desert tortoises or their burrows are located, no further action is warranted. If the species is present on-site, the Project proponent may pursue an Incidental Take Permit through the CDFW, pursuant to Fish and Game Code section 2081, and through the USFWS, pursuant to the Endangered Species Act Section 10(a)(1)(B).

BIO-5: Avoidance of Burrowing Owl Burrows and Burrowing Owl ITP. If burrows that could support this species are discovered during the pre-construction clearance survey conducted under Measure BIO-4, the avoidance buffers outlined below should be established, and burrow monitoring will be conducted in accordance with the California Department of Fish and Game (CDFG) *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). No work would occur within these buffers. If occupied burrowing owl burrows cannot be avoided by the appropriate buffer below, an ITP issued by the CDFW under the California Endangered Species Act (CESA) to authorize "take" that is incidental to an otherwise lawful activity, may be required before any work within the buffer.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1 -Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16 – Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16- Mar 31	50 m	100 m	500 m

*Meters (m)

BIO-6: Avoidance of American Badger and Desert Kit Fox Dens. If dens or burrows that could support any of these species are discovered during the pre-construction clearance survey conducted under Measure BIO-4, the avoidance buffers outlined below should be established, and den or burrow monitoring will be conducted in accordance with the USFWS *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011b). No work would occur within these buffers unless the biologist approves and monitors the activity.

American Badger and Desert Kit Fox Natal/Pupping Season

- American Badger
 - Breeding Season: Late Summer – Early Fall
 - Pregnancy (Delayed Implantation): December through February
 - Pups are Born: March through April
 - Pup Dispersal: June through August
- Desert Kit Fox
 - Mate Pairing: October through November
 - Mating: December through January (possibly into February)
 - Pups are Born: February or March
 - Pup Dispersal: July

American Badger and Desert Kit Fox

Potential or Atypical den: 50 feet

Known den: 100 feet

Natal or pupping den: 200 feet

Burrows and dens may be excavated by a qualified biologist once it is determined that the burrow or den is not occupied. To determine occupation, each den should be monitored for three consecutive days/nights using tracking medium and/or remote cameras fitted with a motion detector and/or infrared triggering system. In addition, prior to excavation of burrows or dens, one-way doors may be installed (only in the non-breeding season), and the burrows or dens will be scoped with optic cameras to ensure no wildlife is present. All excavations would be accomplished by hand or backhoe under the direct supervision of a qualified biologist.

BIO-7: Mohave Ground Squirrel ITP. Mohave ground squirrel is assumed to be present on Project site. Therefore, the Project must comply with the measures detailed below.

- a. A California Department of Fish and Wildlife 2081 incidental take permit shall be required prior to the issuance of grading permits or ground disturbance.
- b. The Project proponent or developer will provide compensatory habitat-based mitigation for loss of suitable habitat at a ratio determined by the California Department of Fish and Wildlife prior to issuance of a grading permit from the county. Compensatory mitigation for the loss of habitat will be provided through compliance with Senate Bill 34 and either the advance purchase of mitigation properties acceptable to the California Department of Fish and Wildlife or the contribution of in lieu fees to the California Department of Fish and Wildlife.

BIO-8: Avoidance and Minimization Measures for Desert Tortoise, Burrowing Owl, American Badger, Desert Kit Fox, and Mohave Ground Squirrel. The following avoidance and minimization measures should be implemented during construction of the Project to reduce the potential for impacts. These are modified from the *U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011), but they can be applied equally to protect all three species.

- a. Project-related vehicles should observe a daytime speed limit of 20 mph throughout the site in all Project areas, except on County roads and State and federal highways.
- b. All Project activities should occur during daylight hours, but if work must be conducted at night, then a nighttime construction speed limit of 10 mph should be established.
- c. Off-road traffic outside of designated Project areas should be prohibited.
- d. To prevent inadvertent entrapment of kit foxes or other animals during construction of the project, all excavated, steep-walled holes or trenches more than two feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps spaced at a minimum distance of 100 feet and constructed of earthen-fill or wooden planks should be installed.
- e. Before holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the CDFW should be contacted before proceeding with the work.
- f. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape.
- g. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes, American badgers, and burrowing owls before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the animal vacates the pipe of its own accord. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity until the fox, badger, or burrowing owl has escaped.
- h. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or Project site.
- i. No pets, such as dogs or cats, should be permitted on the Project site unless permitted in accordance with the Americans with Disabilities Act.
- j. Project-related use of pesticides, rodenticides and herbicides should be restricted.
- k. A representative should be appointed by the Project proponent, who will be the contact source for any employee or contractor who might inadvertently kill or injure one of these species or who finds a dead, injured, or entrapped animal. The

representative should be identified during the employee education program, and their name and telephone number should be provided to the CDFW.

- l. Upon completion of the Project, all areas subject to temporary ground disturbances (including storage and staging areas, temporary roads, pipeline corridors, etc.) should be recontoured and revegetated to promote restoration of the area to pre-project conditions following a revegetation plan approved by the County. An area subject to "temporary" disturbance means any area that is disturbed during the Project, but after Project completion, will not be subject to further disturbance and has the potential to be revegetated.
- m. Any Project personnel who are responsible for inadvertently killing or injuring one of these species should immediately report the incident to their representative. This representative should contact the CDFW immediately in the case of a dead, injured, or entrapped kit fox, American badger, or western burrowing owl.
- n. New sightings of American badger or western burrowing owl shall be reported to the CNDDB.

BIO-9: Pre-Construction Surveys for Nesting Birds. If Project construction activities must occur during the nesting season (February 1 to September 15), pre-construction nesting bird surveys for Swainson's hawk, golden eagle, prairie falcon, loggerhead shrike, Le Conte's thrasher and migratory birds should be conducted 14 days prior to the start of construction at the construction site plus a 250-foot buffer (avoidance buffer) for songbirds and a 500-foot buffer for raptors. The surveys should be phased with the construction of the Project. If no active nests are found, no further action is required. However, existing nests may become active, and new nests may be built at any time prior to and throughout the nesting season, including when construction activities are in progress. If active nests are found during the survey or at any time during construction of the Project, an avoidance buffer ranging from 250 feet to 500 feet may be required, with the avoidance buffer from any specific nest being determined by a qualified biologist. Full-time monitoring of an active nest may be needed when activities are occurring at the fringe of a buffer to determine whether activities are affecting nesting birds. Results of the monitoring may indicate a need to expand the size of avoidance buffer areas. The avoidance buffer will remain in place until the biologist has determined that the young are no longer reliant on the adults or the nest. Work may occur within the avoidance buffer under the approval and guidance of the biologist, but full-time monitoring may be required. The biologist should have the ability to stop construction if nesting adults show any sign of distress.

BIO-10: Biological Monitoring. A qualified biologist should monitor all ground-disturbing and vegetation removal activities occurring during all construction activities. The qualified biologist should be present at all times during ground-disturbing activities (including drilling holes and trenching) within and adjacent to habitats with the potential to support special-status wildlife species, including Crotch's bumblebee, Mohave ground squirrel, desert tortoise, burrowing owl, American badger, desert kit fox, and nesting birds. If a special-status species is found within the construction area, all construction shall cease

immediately, and the animal will be allowed to leave the area of its own accord or relocated by an authorized biologist to a suitable habitat outside of the Project area.

BIO-11: Worker Environmental Awareness Training. Prior to the initiation of construction activities, all personnel should attend a Worker Environmental Awareness Training program developed by a qualified biologist. The program should include information on the life histories of special-status species wildlife species, including Crotch's bumblebee, Mohave ground squirrel, desert tortoise, burrowing owl, American badger, desert kit fox, and nesting birds with the potential to occur on the Project, their legal status, the course of action should these species be encountered on-site, and avoidance and minimization measures to protect these species. All attendees at WEATs should signify that they have received and understand the training material by signing an attendance sheet, which will be maintained on-site. All attendees will be provided with summary training materials that they can carry while on the job and can reference while working on the Project.

Significance After Mitigation. Implementation of the avoidance, minimization, and mitigation measures above will reduce impacts to special-status wildlife species to a less-than-significant level.

6.2 - Sensitive Natural Communities and Critical Habitat

The proposed Project would have a significant effect on biological resources if it would:

- b) Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*

The Project does not support any riparian or other sensitive natural communities, nor does it overlap with any designated critical habitat. The Project would have no impacts on these resources, and no measures are warranted.

6.3 - Jurisdictional Aquatic Resources

The proposed Project would have a significant effect on biological resources if it would:

- c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*

One ephemeral water feature is present in the BSA (Figure 4-1). The proposed Project activities will not impact the existing water feature, and no measures are warranted.

6.4 - Wildlife Movement

The proposed Project would have a significant effect on biological resources if it would:

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

Although the Project is located within the Pacific Flyway, the Project is low-lying and is not expected to impact avian migratory movements within the flyway. The Project would not have any impacts on wildlife movement corridors, and no measures are warranted.

6.5 - Local Policies and Ordinances

The proposed Project would have a significant effect on biological resources if it would:

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

The Project does not conflict with the County of Kern General Plan or the Inyokern Specific Plan. The Project would not result in impacts related to local policies and ordinances and no measures are warranted.

6.6 - Adopted or Approved Plans

The proposed Project would have a significant effect on biological resources if it would:

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

The Project is within the boundaries of the draft West Mojave Plan, the Indian Wells Land Management Plan and DRECP. Because the Project is composed entirely of privately owned parcels, it is not subject to the jurisdiction of the draft West Mojave Plan or to Phase I of the DRECP, which both apply only to BLM-managed lands. Therefore, the Project would not conflict with any adopted HCP or NCCP; there will be no impacts, and no measures are warranted.

SECTION 7 - LIMITATIONS, ASSUMPTIONS, AND USE RELIANCE

This Biological Analysis Report has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The findings and opinions conveyed in this report are based on on-site field examinations, jurisdictional areas, and specified historical and literary sources. The biological investigation is limited by the scope of work performed. Biological surveys conducted as part of this assessment may not have been performed during a particular blooming period, nesting period, or particular portion of the season when positive identification of certain taxa would be expected if present and, therefore, cannot be considered definitive. The biological surveys are also limited by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile animal species could occupy the site on a transient basis or re-establish populations in the future. No other guarantees or warranties, expressed or implied, are provided.

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SECTION 9 - LIST OF PREPARERS

QK Inc.

Primary Authors

Eric Madueno, Senior Associate Environmental Scientist
Karissa Denney, Senior Environmental Scientist

Technical Review

Dave Dayton, Principal Environmental Scientist

Graphics

Karissa Denney, Senior Environmental Scientist

Field Reconnaissance Survey

Karissa Denney, Senior Environmental Scientist
Eric Madueno, Senior Associate Environmental Scientist
Dylan Burkey, Associate Environmental Scientist
Kelli Baldwin, Associate Environmental Scientist

APPENDIX A

SPECIAL-STATUS SPECIES EVALUATION TABLE

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
Plants				
<i>Carlquistia muirii</i> Muir's tarplant	-/- 1B.3/-	This is a perennial rhizomatous herb that blooms from July to August, sometimes as late as October. It occurs in granitic soils in montane chaparral, lower and upper montane coniferous forest, and yellow pine forest. It occurs at elevations ranging from approximately 3,609 to 8,202 feet. This species is possibly threatened by recreational activities.	No Potential	There are no CNDDDB occurrences within 10 miles of the BSA. Suitable habitat is absent from the BSA, and the BSA is below the elevation range of this species.
<i>Deinandra mohavensis</i> Mojave tarplant	-/SE 1B.3/-	This is an annual herb that has a typical bloom period of June to October, but can bloom from May through January. It occurs in chaparral, coastal scrub, and riparian scrub habitats; it grows on moist sites, openings in chaparral, desert scrub, and woodland. It occurs at elevations ranging from approximately 2,099 to 5,249 feet. This species is threatened by development, grazing, hydrological alterations, recreational activities, road maintenance, and vehicles.	No Potential	There are three CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 78949) is 7.0 miles northwest of the BSA. This occurrence is from 2010 and presumed extant. Suitable habitat (moist sites, riparian) is absent from the BSA that could support this species.
<i>Delphinium purpusii</i> rose-flowered larkspur	-/- 1B.3/-	This is a perennial herb that blooms from April, sometimes as early as March, to May. It occurs in chaparral, cismontane woodland, and pinyon/juniper woodland, on rocky and often carbonate substrates. This species is endemic to California. It occurs at elevations ranging from approximately 984 to 4,396 feet.	No Potential	There are no CNDDDB occurrences within 10 miles of the BSA. Suitable habitat is absent from the BSA that could support this species.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Ericameria gilmanii</i> Gilman's goldenbush	-/- 1B.3/-	This is a perennial shrub that blooms from August to September. It occurs in subalpine coniferous forest and upper montane coniferous forest habitats. It grows on granitic soils in rocky open conifer forest, generally on limestone. It occurs at elevations ranging from approximately 6,889 to 11,154 feet.	No Potential	There are no CNDDDB occurrences within 10 miles of the BSA. Suitable habitat is absent from the BSA that could support this species.
<i>Erigeron aequifolius</i> Hall's daisy	-/- 1B.3/-	This is a perennial rhizomatous herb that blooms from June to August. It occurs in rocky, granitic soils in broad-leaf upland forest, lower montane coniferous forest, pinyon-juniper woodland, and upper montane coniferous forest habitats. This species is endemic to California. It occurs at elevations ranging from approximately 4,921 to 8,005 feet.	No Potential	There are no CNDDDB occurrences within 10 miles of the BSA. Suitable habitat is absent from the BSA that could support this species.
<i>Eriophyllum mohavense</i> Barstow woolly sunflower	-/- 1B.2/-	This is an annual herb endemic to California that blooms between March and May. It typically occurs in creosote bush scrub, chenopod scrub, Mojavean desert scrub, and playa habitats. It occurs at elevations from approximately 1,640 to 3,150 feet. It is threatened by energy development, road improvements, vehicles, and grazing.	Potential	There is one CNDDDB occurrence within 10 miles of the BSA. This occurrence (EONDX 111389) is approximately 9.0 miles southwest of the BSA. The record is from 2018 and presumed extant. Creosote bush scrub habitat is present within the BSA and could provide suitable habitat for the species.
<i>Layia heterotricha</i> pale-yellow layia	-/- 1B.1/-	This is an annual herb endemic to California that blooms between March and June. It occurs on alkaline and clay soils in cismontane woodland, coastal scrub, pinyon and juniper woodland, and valley and foothill grassland. It occurs at elevations from approximately 980 to 5,595 feet and is mainly found in western mountains and foothills of the San Joaquin Valley from Fresno and San Benito Counties	No Potential	There is one CNDDDB occurrence within 10 miles of the BSA. This occurrence (EONDX 81990) is approximately 8.0 miles southwest of the BSA. The record is from 2010 and presumed extant. Suitable habitat is absent from the BSA that could support this species.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		south to Ventura and possibly Los Angeles Counties, and also in the Tehachapi Mountains. It is threatened by agriculture, vehicles, and competition from non-native plants.		
<i>Lomatium shevockii</i> Owen's Peak lomatium	-/- 1B.2/-	This perennial herb is endemic to California and blooms between April and May. It occurs in rocky habitats in lower and upper montane coniferous forests at elevations between approximately 5,805 and 8,315 feet. It is documented at Owens Peak in Kern County.	No Potential	There are no CNDDDB occurrences within 10 miles of the BSA. Suitable habitat is absent from the BSA, and the BSA is below the elevation range of this species.
<i>Monardella beneolens</i> sweet-smelling monardella	-/- 1B.3/-	This is a perennial rhizomatous herb endemic to California that blooms from June to September. It occurs on granitic substrate within alpine boulder and rock fields, subalpine coniferous forests, and upper montane coniferous forests. It occurs at elevations from approximately 8,120 to 11,482 feet and is known only from the eastern Sierra crest. It is documented to hybridize with flaxleaf monardella (<i>M. linoides</i> ssp. <i>linoides</i>) and pallid mountain monardella (<i>M. odoratissima</i> ssp. <i>pallida</i>). The remoteness of occurrences limits the potential disturbance.	No Potential	There are no CNDDDB occurrences within 10 miles of the BSA. Suitable habitat is absent from the BSA, and the BSA is below the elevation range of this species.
<i>Nemacladus bellus</i> beautiful threadplant	-/- 1B.3/-	This annual herb is endemic to California and blooms between May and July. It occurs in granitic gravel and sandy flats at elevations between approximately 2,624 and 5,905 feet. It is documented at Owens Peak in Kern County.	No Potential	There are no CNDDDB occurrences within 10 miles of the BSA. Suitable habitat (granitic gravel) is absent from the BSA. The BSA occurs outside the known elevational range of this species.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Phacelia nashiana</i> Charlotte's phacelia	-/- 1B.2/-	This is an annual herb endemic to California that blooms from March to June. It usually occurs in granitic or sandy soils within Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland. It occurs at elevations from approximately 1,968 to 7,217 feet and is threatened by grazing and mining.	Potential	There are 14 CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 18227) is approximately 5.0 miles northwest of the BSA. Suitable habitat that could support this species is present in the BSA.
<i>Phacelia novenmillensis</i> Nine Mile Canyon phacelia	-/- 1B.2/-	This is an annual herb endemic to California that that can bloom as early as February but typically blooms from May to June. It occurs in sandy or gravelly substrate and often in leaf litter under canyon live oak (<i>Quercus chrysolepsis</i>) in broad-leaved upland forest, pinyon and juniper woodland, upper montane coniferous forest, and cismontane. It occurs at elevations from approximately 5,364 to 8,300 feet and is threatened by grazing and recreation.	No Potential	There are two CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 64695) is approximately 7.5 miles northwest of the BSA. Suitable habitat is absent from the BSA, and the BSA is below the elevation range of this species.
<i>Saltugilia latimeri</i> Latimer's woodland-gilia	-/- 1B.2/-	This is an annual herb endemic to California that blooms between March and June. It is found on rocky or sandy, often granitic, sometimes limestone, substrates and sometimes washes within chaparral, Mojavean desert scrub, or pinyon and juniper woodland. It occurs at elevations from approximately 1,310 to 6,235 feet. There have been only a few recent collections, and it is possibly threatened by recreation.	Potential	There are two CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 60329) is approximately 5.0 miles northwest of the BSA. Suitable habitat that could support this species is present in the BSA.
Invertebrates				

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Bombus crotchii</i> Crotch's bumble bee	-/SCE -/-	This bee occurs in relatively warm and dry environments, including the inner Coast Range of California and the margins of the Mojave Desert. It inhabits grassland and scrub habitats, where it nests in abandoned rodent burrows, occasionally nesting above ground in tufts of grass, rock piles, or cavities in dead trees. This species is classified as a short-tongued species whose food plants include <i>Asclepias</i> , <i>Chaenactis</i> , <i>Lupinus</i> , <i>Medicago</i> , <i>Phacelia</i> , and <i>Salvia</i> . The species is threatened by habitat loss and degradation, including agricultural intensification and rapid urbanization.	Potential	There are no CNDDDB occurrences within 10 miles of the BSA. Suitable nesting habitat (small mammal burrows) and food plants were present. Low number of food plants will not support a colony but species could be on site as transient forager.
<i>Danaus plexippus plexippus</i> monarch - California overwintering population	FC/- -/-	This butterfly species occurs in various open habitats, including fields, meadows, weedy areas, marshes, and roadsides. Adults make massive migrations from August to October, flying thousands of miles south to hibernate along the California coast and in central Mexico. Eggs are laid, and larvae feed on plants in the milkweed family, primarily <i>Asclepias</i> sp., but also other genera, including <i>Calotropis</i> , <i>Cynanchum</i> , <i>Gonolobus</i> , and <i>Sarcostemma</i> . Adult butterflies typically live from two to six weeks, but overwintering individuals may live as long as nine months. Overwintering migratory adults will roost in large colonies in forested sites in California and Mexico, which must provide protection from the elements and assist with thermoregulation.	No Potential	There are no CNDDDB occurrences within 10 miles of the BSA. Suitable overwintering habitat is absent, and preferred host plants were not observed.
Fish				
<i>Siphateles bicolor mohavensis</i> Mohave tui chub	FE/SE -/FP	This subspecies is a hardy, chunky, large-scaled fish with short, rounded fins. This subspecies is native to the Mojave River basin and is	No Potential	There are no CNDDDB occurrences within 10 miles of the BSA. Suitable

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		specifically adapted to alkaline, mineralized waters. It is now found only in ponds in San Bernardino County, mainly at Soda Springs and Lake Seep Lagoon. It requires deep pools or ponds, and will inhabit both natural and artificial waters, and flowing or standing waters. Spawning takes place in waters less than 5 feet deep, typically over vegetation or algae-covered substrates. It feeds opportunistically on invertebrates, zooplankton, plant matter, and occasionally other smaller fish.		habitat is absent from the BSA that could support this species.
Reptiles				
<i>Anniella campi</i> Southern Sierra legless lizard	-/- -/SSC	This lizard is only found in three locations within the Mojave Desert, Kern, and Inyo counties. These include the Big Spring, Nine Mile Canyon Road in southern Inyo County (north of Big Spring), and south of Big Spring in Kern County. It is found in moist, warm, loose soil with vegetation cover on beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. It can be found under rocks, boards, driftwood, logs, and leaf litter under bushes and trees. Breeding occurs between early spring and July, with the young born between September and November.	No Potential	There are two CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 113898) is approximately 7.0 miles southwest of the BSA. This occurrence is from 2019 and is presumed extant. Suitable habitat is absent from the BSA that could support this species.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Gopherus agassizii</i> desert tortoise	FT/SE -/-	This tortoise is found throughout the Mojave Desert and south along the Colorado River and along the east side of the Salton Basin in the Sonoran Desert. It occurs in arid sandy or gravelly locations along riverbanks, washes, sandy dunes, alluvial fans, canyon bottoms, desert oases, rocky hillsides, creosote flats, and hillsides. It is most active during the day in spring, early summer, and during summer rains, typically in the early mornings or late afternoons. Winter hibernation begins in October or November. Courtship and breeding occur after emergence from their winter hibernation in March and April.	Potential	There are nine CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 114841) is approximately 3.5 miles west of the BSA. This occurrence is from 2019 and is presumed extant. Suitable habitat is present within the BSA that could support the species.
Birds				
<i>Aquila chrysaetos</i> golden eagle	-/- -/FP	This eagle occurs in broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower and upper montane coniferous forests, pinon & juniper woodlands, valley & foothill grassland. It prefers rolling foothills, mountain areas, sage-juniper flats, and desert for foraging. It nests in cliff-walled canyons and isolated large trees in open areas. The elevational range of this species is from sea level to 11,500 feet, and it may desert nest early in the incubation phase if disturbed by humans.	Foraging – Potential Nesting – No Potential	There are three CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 88145) is approximately 6.0 miles northwest of the BSA. This occurrence is from 2012 and is presumed extant. Suitable foraging habitat is present within the BSA that could support the species. No suitable nesting habitat is present within the BSA that could support the species.
<i>Athene cunicularia</i> ssp. <i>hypugaea</i> western burrowing owl	-/SCE -/SSC	This species occupies a variety of open, semi-arid, and arid habitats throughout central and southern California, including desert regions. It prefers open habitats with few shrubs or trees and low-growing vegetation. It is most active around sunrise and sunset and utilizes burrows constructed by mammals year-round for shelter	Potential	There are seven CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 114375) is approximately 4.0 miles west of the BSA. This occurrence is from 2017 and is presumed extant. The occurrence indicated that two adults

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		and nesting. This species is well documented in urban areas where patches of undeveloped areas are present (e.g., canals, airports, drainage basins) and in areas of dense agricultural development, particularly where canals provide burrow habitat. It forages primarily for rodents and insects within several miles of its burrow, usually in open grassy habitats if available. It has been observed hunting bats and insects around parking lot lights. Threats to this species include development resulting in habitat loss/fragmentation.		were flushed from a burrow with whitewash present. There were no burrowing owls observed during the reconnaissance surveys, but suitable habitat for foraging and burrowing is present within the BSA.
<i>Buteo swainsoni</i> Swainson's hawk	-/ST -/-	This species occurs in grassland, desert and agricultural landscapes in the Central Valley and Antelope Valley. These hawks may be resident or migrant, and nest and breed in stands with few trees in juniper-sage flats, riparian areas, and oak savannah habitats. This species has also been observed nesting and breeding in large eucalyptus trees along freeways and in trees over rural residences surrounded by agriculture. Nests are a platform of sticks, bark, and fresh leaves at or near the top of trees. This species breeds from late March to late August. It forages in grassland, open scrub, and grain fields, primarily for rodents	Potential	Although Swainson's hawk has not been reported to the CNDBB, one was observed flying over the site to the north in April 2015 (Circle Mountain Biological Consultants, 2015). Although Swainson's hawk would not nest onsite and probably not forage there (as they tend to prefer fallow agricultural fields and other open areas in the desert), they have been observed resting in similar desert scrub habitats as they migrate through the region. They may be transient foragers in the area, but unlikely to inhabit the site as there are no suitable trees.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
<i>Falco mexicanus</i> prairie falcon	-/- -/WL	This falcon is primarily found in annual grasslands, savannahs, rangeland, some agricultural fields, and desert scrub. It breeds throughout the open county in the West. Nests are built on bluffs and cliffs at elevations ranging from alpine habitat to 11,000 feet. Breeding occurs in grasslands, areas of fixed shrubs, or alpine tundra. It is threatened by pesticides (reproduction failure) and degradation of habitat due to agricultural development.	Foraging – Potential Nesting – No Potential	There are four CNDDDB occurrences within 10 miles of the BSA. This occurrence (EONDX 26078) is approximately 3.5 miles west of the BSA, although it is mapped generally as the exact location has been suppressed from the record. This occurrence is from 1977 and is presumed extant. The BSA lacks suitable nesting habitat, such as bluffs and cliffs, but supports suitable foraging habitat, and the species may occur as a transient.
<i>Lanius ludovicianus</i> loggerhead shrike	-/- -/SSC	This species is a common resident in lowlands and foothills throughout California. It prefers open grassland and pasture habitats with scattered trees, fence posts, utility lines, shrubs, and other perches. This species primarily consumes large insects but will prey upon other small animals. It nests in densely foliated and/or thorny shrubs and trees less than 50 feet above the ground.	Potential	There are no CNDDDB occurrences within 10 miles of the BSA; however, staff have observed this species in the vicinity of the BSA. Suitable foraging and nesting habitat is present in the BSA.
<i>Toxostoma lecontei</i> LeConte's thrasher	-/- -/SSC	This species is an uncommon-to-rare local resident in southern California deserts. It occurs in open desert wash, desert scrub, alkali desert scrub, desert succulent scrub, and Joshua tree habitat with scattered shrubs. It occurs from Mono County south to the Mexican border and in the western and southern San Joaquin Valley. It has rarely been recorded north of Kern County after the 1950s. It feeds on insects and occasionally on seeds, small lizards, and other small vertebrates. It is threatened by loss of habitat due to oil and gas production, overgrazing, and pesticides (DDT).	Foraging and Nesting Potential	There are four CNDDDB occurrences within 10 miles of the BSA. There is one occurrence (EONDX 24544) that overlaps with the BSA. This occurrence is from 1946 and is presumed extant. The Project is located within the known range of the species, and both suitable nesting and foraging habitats are present.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
Mammals				
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	-/- -/SSC	This species occurs in coniferous forests, mixed mesophytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Its distribution is correlated with the availability of caves and cave-like roosting habitat (e.g., mines, tunnels, buildings, or other manmade structures). It occurs in open areas for roosting and typically does not tuck itself into cracks and crevices like many other bat species. It feeds primarily on moths but may also eat beetles and soft-bodied insects. This species is extremely sensitive to disturbance of roosting sites.	No Potential	There are no CNDDDB occurrences within 10 miles of the BSA. No suitable foraging or roosting habitat is present within the BSA to support the species.
<i>Euderma maculatum</i> spotted bat	-/- -/SSC	This species occurs in a wide variety of habitats from arid deserts and grasslands through mixed conifer forests within British Columbia, Canada, south through the western United States and into Mexico. It feeds almost entirely on moths foraging over water and along washes. This species needs rock crevices in cliffs or caves for roosting. Mating occurs in the fall, and the young are born before mid-June.	No Potential	There is one CNDDDB occurrence within 10 miles of the BSA. This occurrence (EONDX 66330) is approximately 7.0 miles east of the BSA. This occurrence is from 1956 and is presumed extant. No suitable foraging or roosting habitat is present within the BSA to support the species.
<i>Taxidea taxus</i> American badger	-/- -/SSC	This species occurs mostly in open, drier stages of shrub, forest, and herbaceous habitats, with friable soils. It feeds mostly on fossorial rodents. It digs burrows for cover and reproduction, and can dig a new den each night. Litters are typically born in March and April. This species can be somewhat tolerant of human activities but generally avoids cultivated agricultural habitats.	Potential	There are three CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 57415) is 3.0 miles southwest of the BSA. This occurrence is from 1970 and is presumed extant. Suitable denning and foraging habitats are present within the BSA. A prey abundance (e.g., rodents) is present that can sustain a foraging individual. This

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
				species is highly mobile and could be present at any time.
<i>Vulpes macrotis arsipus</i> desert kit fox	-/- -/FBM	This species occurs on open desert, creosote bush flats, and sand dunes. Species preys on kangaroo rats, black-tailed jackrabbits, birds, reptiles, and insects. They are nocturnal and will forage near the den during the evening.	Potential	There is a suitable habitat on the Project, and several potential dens were found on adjacent lands. The CNDDDB does not track this species.
<i>Xerospermophilus mohavensis</i> Mohave ground squirrel	-/ST -/-	This squirrel species is rare throughout its range and is only found in the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo counties. It occupies open desert scrub, alkali desert scrub, Joshua tree, and annual grassland habitats. This species is diurnal, that is, active above ground in the spring and early summer. It enters aestivation in July or August and emerges for the active season between March and June. It utilizes burrows at the base of shrubs for cover and aestivation, and it feeds on a variety of green vegetation, seeds, fruits, fungi, and arthropods.	Potential	There are 42 CNDDDB occurrences within 10 miles of the BSA. The closest occurrence (EONDX 110847) is approximately 1,263 feet north of the BSA. This occurrence is from 2015 and is presumed extant. Suitable, albeit low quality habitat to support the species is present within the BSA.

APPENDIX B

REGULATORY SETTING

Regulatory Setting

Federal Laws and Regulations

FEDERAL ENDANGERED SPECIES ACT OF 1973 (USC, TITLE 16, SECTIONS 1531 -1543)

The Federal Endangered Species Act (FESA) and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. The FESA defines species as threatened or endangered and provides regulatory protection for listed species. The FESA provides a program for the conservation and recovery of threatened and endangered species, as well as the protection of designated critical habitat that the USFWS determines is required for the survival and recovery of listed species.

Section 9 lists actions that are prohibited under the FESA. Although take of a listed species is prohibited, it is allowed when it is incidental to an otherwise legal activity. Section 9 prohibits take of listed species of fish, wildlife, and plants without a special exemption. The definition of “harm” includes significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns related to breeding, feeding, or shelter. “Harass” is defined as actions that create the likelihood of injury to listed species by disrupting normal behavioral patterns related to breeding, feeding, and shelter significantly.

Section 7 of the FESA requires federal agencies, in consultation with and assistance from the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction of, or adverse modification of critical habitat for these species. The USFWS and National Marine Fisheries Service (NMFS) share responsibilities for administering the FESA. Regulations governing interagency cooperation under Section 7 are found in the California Code of Regulations (CCR) Title 50, Part 402. If an activity could result in "take" of a listed species as an incident of an otherwise lawful activity, then a biological opinion can be issued with an incidental take statement that exempts the activity from FESA's take prohibitions.

Section 10 provides a means whereby a nonfederal action with the potential to result in take of a listed species can be allowed under an incidental take permit. Application procedures are found at CFR Title 50, Sections 13 and 17 for species under the jurisdiction of USFWS and CFR, Title 50, Sections 217, 220, and 222 for species under the jurisdiction of NMFS. Section 10 would apply to the project if take of a species (as defined in Section 9) were determined to occur.

Section 4(a)(3) and (b)(2) of the FESA requires the designation of critical habitat to the maximum extent possible and prudent based on the best available scientific data and after considering the economic impacts of any designations. Critical habitat is defined in Section 3(5)(A) of the FESA: 1) areas within the geographic range of a species that are occupied by individuals of that species and contain the primary constituent elements (physical and biological features) essential to the conservation of the species, thus warranting special

management consideration or protection; and 2) areas outside of the geographic range of a species at the time of listing but that are considered essential to the conservation of the species.

MIGRATORY BIRD TREATY ACT (USC, TITLE 16, SECTIONS 703 - 711)

The MBTA, first enacted in 1918, is a series of treaties that the United States has with Great Britain (on behalf of Canada), Mexico, Japan, and the former Soviet Union that provide for international migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it shall be unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird” (U.S. Code Title 16, Section 703). The MBTA currently includes several hundred species and includes all native birds.

BALD AND GOLDEN EAGLE PROTECTION ACT OF 1940 (USC, TITLE 16, SECTION 668)

The Bald and Golden Eagle Protection Act (BGEPA) of 1940 protects bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) by prohibiting the taking, possession, and commerce of these species and establishing civil penalties for violation of this act. Take of bald and golden eagles includes to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” To disturb means to agitate or bother a bald or golden eagle to the degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. (Federal Register [FR], volume 72, page 31132; 50 CFR 22.3).

FEDERAL CLEAN WATER ACT (USC, TITLE 33, SECTIONS 1521 - 1376)

The Federal Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation’s waters. Section 401 requires that a project applicant that is pursuing a federal license or permit allowing a discharge to waters of the U.S. to obtain State Certification of Water Quality, thereby ensuring that the discharge will comply with provisions of the CWA. The Regional Water Quality Control Board administers the certification program in California. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S. Section 404 establishes a permit program administered by the United States Army Corps of Engineers (USACE) that regulates the discharge of dredged or fill material into waters of the U.S., including wetlands. The USACE implementing regulations are found in CFR, Title 33, Sections 320 and 330. Guidelines for implementation are referred to as Section 404(b)(1) Guidelines, which were developed by the United States Environmental Protection Agency (EPA) in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Applicable State Laws and Regulations

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CALIFORNIA PUBLIC RESOURCES CODE, SECTIONS 21000 - 21178, AND TITLE 14 CCR, SECTION 753, AND CHAPTER 3, SECTIONS 15000 - 15387)

The California Environmental Quality Act (CEQA) is California's broadest environmental law. CEQA helps guide the issuance of permits and approval of projects. Courts have interpreted CEQA to afford the fullest protection of the environment within the reasonable scope of the statutes. CEQA applies to all discretionary projects proposed to be conducted or approved by a State, County, or city agency, including private projects requiring discretionary government approval.

The purpose of CEQA is to disclose to the public the significant environmental effects of a proposed discretionary project; prevent or minimize damage to the environment through the development of project alternatives, mitigation measures, and mitigation monitoring; disclose to the public the agency decision-making process to approve discretionary projects; enhance public participation in the environmental review process; and improve interagency coordination.

State CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or State list of Protected Species, nonetheless, may be considered rare or endangered for the purpose of CEQA if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals.

CALIFORNIA ENDANGERED SPECIES ACT (CALIFORNIA FISH AND GAME CODE SECTION 2050 ET SEQ.)

The California Endangered Species Act (CESA) establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that State agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would result in take of a species listed under the CESA, a project proponent would need to obtain a take permit under Section 2081(b). Alternatively, the CDFW has the option of issuing a Consistency Determination (Section 2080.1) for projects that would affect a species listed under both the CESA and the FESA, as long as compliance with the FESA would satisfy the “fully mitigate” standard of CESA, and other applicable conditions.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

Under Section 401 of the CWA, the Regional Water Quality Control Board (RWQCB) must certify that actions receiving authorization under Section 404 of the CWA also meet State water quality standards. The RWQCB regulates waters of the State under the authority of the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The RWQCB requires projects to avoid impacts to wetlands whenever feasible and requires that projects not result

in a net loss of wetland acreage or a net loss of wetland function and values. The RWQCB typically requires compensatory mitigation for impacts to wetlands and/or waters of the State. The RWQCB has jurisdiction over waters deemed 'isolated' or not subject to Section 404 jurisdiction under the Solid Waste Agency of Northern Cook County (SWANCC) decision. Dredging, filling, or excavation of isolated waters constitutes a discharge of waste into waters of the State, and such discharges are authorized through an Order of Waste Discharge (or waiver of discharge) from the RWQCB.

VARIOUS SECTIONS OF THE CALIFORNIA STATE FISH AND GAME CODE

Section 460 and Sections 4000-4003

Chapter 5 of the California Fish and Game Code (FGC) describes regulations concerning the take of fur-bearing mammals, including defining methods of take, seasons of take, bag and possession limits, and areas of the State where take is allowed. Section 4000–4003 defines fur-bearing mammals and the issuance of permits by the Department. Sections 460 and 4000 identify fisher, marten, river otter, desert kit fox, and red fox as fur-bearing mammals, and Section 460 prohibits take of these species at any time. This section of the California Fish and Game Code (FGC) has historically been interpreted to apply to restrictions on furbearer trapping permits, but has recently been expanded by CDFW to apply to any form of take and treated as if these species were listed under CESA.

Sections 1600 through 1616

Under these sections of the FGC, a project operator is required to notify CDFW prior to any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Pursuant to the California Code of Regulations, a “stream” is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that has supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial watercourses valuable to fish and wildlife are subject to CDFW jurisdiction. CDFW also has jurisdiction over dry washes that carry water during storm events. Preliminary notification and project review generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement.

Sections 3511, 4700, 5050, and 5515

The protection of fully Protected Species is described in Sections 3511, 4700, 5050, and 5515 of the FGC. These statutes prohibit take or possession of fully Protected Species. CDFW is unable to authorize incidental take of fully Protected Species, except as allowed for in an approved Natural Communities Conservation Plan (NCCP) or through direct legislative action.

Sections 1900 through 1913 - Native Plant Protection Act

California's Native Plant Protection Act (NPPA) requires all State agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provision of the NPPA prohibits the taking of listed plants from the wild and requires notification of CDFW at least 10 days in advance of any change in land use. This allows CDFW to salvage listed plant species that otherwise would be destroyed. A project proponent is required to conduct botanical inventories and consult with CDFW during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

Local and Regional Laws, Regulations, and Policies

COUNTY OF KERN GENERAL PLAN

The County of Kern General Plan identifies the federal, State, and local statutes, ordinances, and policies that govern the conservation of biological resources that must be considered by Kern County during the decision-making process for any Project that could affect biological resources.

The Land Use, Open Space, and Conservation Element of the Kern County General Plan states that the element provides for a variety of land uses for future economic growth while also ensuring the conservation of the County's agricultural, natural, and resource attributes. Section 1.10, "General Provisions," provides goals, policies, and implementation measures that apply to all types of discretionary Projects. In addition, the Kern County General Plan includes specific policies for threatened and endangered species.

Table 1
Chapter 1 – Land Use, Open Space, and Conservation Element

Goal	
Goal 1:	Ensure that the County can accommodate anticipated growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.
Policies	
Policy 27:	Threatened or endangered plant and wildlife species should be protected in accordance with State and Federal laws. Threatened or endangered plant and wildlife species should be protected in accordance with State and Federal laws.
Policy 28:	The County should work closely with State and Federal agencies to ensure that discretionary Projects avoid or minimize impacts on fish, wildlife, and floristic resources.
Policy 29:	The County will seek cooperative efforts with local, State, and Federal agencies to protect listed threatened and endangered plant and wildlife species through the use of

Goal	
	conservation plans and other methods promoting management and conservation of habitat lands.
Policy 30:	The County will promote public awareness of endangered species laws to help educate property owners and the development community of local, State, and Federal programs concerning endangered species conservation issues.
Policy 31:	Under the provisions of CEQA, the County, as lead agency, will solicit comments from the CDFW and USFWS when an environmental document (Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report) is prepared.
Policy 32:	Riparian areas will be managed in accordance with the USACE and the CDFW rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.
Implementation Measures	
Measure Q:	Discretionary Project shall consider effects to biological resources as required by CEQA.
Measure R:	Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary Project subject to CEQA. Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary Project subject to CEQA.
Measure S:	Pursue the development and implementation of conservation programs with State and federal wildlife agencies for property owners desiring streamlined endangered species mitigation programs.
1.10.5 Threatened and Endangered Species	
Policy COS. 27:	Threatened or endangered plant and wildlife species should be protected in accordance with state and federal laws.
Policy COS. 28:	The County should work closely with state and federal agencies to ensure that discretionary Projects avoid or minimize impacts on fish, wildlife, and floristic resources.
Policy COS. 29	The County will seek cooperative efforts with local, state, and federal agencies to protect listed threatened and endangered plant and wildlife species through the use of conservation plans and other methods promoting management and conservation of habitat lands.
Policy COS. 30:	The County will promote public awareness of endangered species laws to help educate property owners and the development community of local, State, and federal

Goal	
	programs concerning endangered species conservation issues.
Policy COS. 31:	Under the provisions of CEQA, the County, as lead agency, will solicit comments from the CDFG and the USFWS when an environmental document (Negative Declaration, Mitigated Negative Declaration, or EIR) is prepared.
Policy COS. 32:	Riparian areas will be managed in accordance with the USACE and the CDFG rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.
Implementation Measures	
Measure Q:	Discretionary Projects shall consider effects to biological resources as required by CEQA.
Measure R:	Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary Project subject to CEQA.

Source: (Kern County 2009)

INYOKERN SPECIFIC PLAN

The entire project site is subject to the provisions of the Inyokern Specific Plan, which contains goals, policies, and standards that are compatible with those of the Kern County General Plan, but are unique to the specific needs of the Inyokern Area. The Land Use, Open Space, and Conservation Element of the Inyokern Specific Plan has the purpose of identifying biological resources within the Plan area. The Inyokern Specific Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development, such as the project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Inyokern Specific Plan are incorporated by reference.

Land Use, Open Space, and Conservation Element

1.5 Industrial

Policy

Policy 7: Direct development away from “sensitive biological resource” areas unless effective mitigation can be implemented.

Implementation Measure

Measure 6: Any discretionary industrial project that disturbs property not previously developed/disturbed or is not substantially surrounded by urban density development, as determined by the Director of the Kern County Department of Planning and Development

Services, shall require submittal of a biological survey for plants and animals as part of the application/permit process; said survey shall be completed in accordance with the most current guidelines prepared by the U.S. Fish and Wildlife Service and/or the State Department of Fish and Game. Any submittal shall also include mitigation measures satisfactory to the requirements of said agencies and the Kern County Department of Planning and Development Services.

1.6 Resource

Policy

Policy 3: Habitats of threatened or endangered species should be protected to the greatest extent possible.

Implementation Measure

Measure 4: Surveys to determine the location, extent, and population sizes of sensitive plants and animals shall be conducted prior to approval of any discretionary land development permits. Mitigation measures identified for species protection shall be incorporated into development proposals

DESERT RENEWABLE ENERGY CONSERVATION PLAN

The California Energy Commission (CEC), CDFW, BLM, and USFWS prepared the Desert Renewable Energy Conservation Plan (DRECP), which was finalized in 2016. The DRECP plan area encompasses the Mojave and Colorado Desert regions in California, including all or a portion of Kern, Los Angeles, San Bernardino, Inyo, Riverside, Imperial, and San Diego counties.

The DRECP is a joint State and federal NCCP and part of one or more HCPs that are intended to provide for effective protection and conservation of desert ecosystems while allowing for the appropriate development of renewable energy Projects. It is anticipated to provide long-term endangered species permit assurances to renewable energy developers and provide a process for conservation funding to implement the DRECP. It would also serve as the basis for one or more HCPs under the FESA. The final plan is still in the development stage and has not been adopted by any agency.

CALIFORNIA DESERT NATIVE PLANTS ACT

The California Native Desert Native Plants Act protects certain species of native desert plants from unlawful harvesting on both public and private lands within the Counties of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego. In order to harvest, transport, or possess any of the protected species, a person must possess a valid permit and required tags.

APPENDIX C

REPRESENTATIVE PHOTOGRAPHS



Photograph 1: Representative view of the Project site from southwest corner.
GPS coordinates: 35.647624, -117.811611, facing northeast.
Photograph taken by Karissa Denney on August 26, 2025.



Photograph 2: Representative view of the Project site from northeast corner.
GPS coordinates: 35.651917, -117.808365, facing southwest.
Photograph taken by Eric Madueno on August 26, 2025.



Photograph 3: Representative view of the Project site from the northwest corner.
GPS coordinates: 35.652080, -117.812308, facing southeast.
Photograph taken by Karissa Denney on August 26, 2025.



Photograph 4: Representative view of the Project site from the southeast corner.
GPS coordinates: 35.651917, -117.808365, facing northwest.
Photograph taken by Eric Madueno on August 26, 2025.



Photograph 5: Representative view of alkali desert scrub habitat and commercial development along the southern portion of the Project site.

GPS coordinates: 35.648326, -117.809066, facing west.
Photograph taken by Karissa Denney on August 26, 2025.



Photograph 6: Representative view of desert scrub habitat.

GPS coordinates: 35.651917, -117.808365, facing west.
Photograph taken by Eric Madueno on August 26, 2025.



Photograph 7: Representative view of RB Inyokern solar field north of the Project site.
GPS coordinates: 35.652080, -117.812308, facing southeast.
Photograph taken by Karissa Denney on August 26, 2025.



Photograph 8: Representative view of residential development west of the Project site.
GPS coordinates: 35.652080, -117.812308, facing southeast.
Photograph taken by Karissa Denney on August 26, 2025.



Photograph 9: Representative view of potential MGS burrow.
GPS coordinates: 35.651992, -117.812011, facing south.
Photograph taken by Eric Madueno on August 26, 2025.



Photograph 10: Representative view of potential desert kit fox den.
GPS coordinates: 35.649410, -117.809972, facing south.
Photograph taken by Eric Madueno on August 26, 2025.



Photograph 11: View of proposed gen-tie route from POI.
GPS coordinates: 35.648463, -117.801197, facing west.
Photograph taken by Eric Madueno on November 5, 2025.



Photograph 12: View of proposed POI location.
GPS coordinates: 35.648463, -117.801197, facing north.
Photograph taken by Eric Madueno on November 5, 2025.



Photograph 13: View of ephemeral water feature.
GPS coordinates: 35.649005, -117.805684, facing east.
Photograph taken by Eric Madueno on November 5, 2025.

APPENDIX D

PLANT AND ANIMAL SPECIES OBSERVED WITHIN THE BIOLOGICAL SURVEY AREA

Table D-1
Plant Species Observed within the Biological Study Area
RB Inyokern Data Center Project, Kern County, California

Scientific Name	Common Name	Status	Native or Introduced	Site Observed Data Center	Gen-tie and POI
Shrubs					
<i>Ambrosia dumosa</i>	burrobush		Native	☐	☒
<i>Ambrosia Salsola</i>	cheesebush		Native	☒	☒
<i>Atriplex polycarpa</i>	allscale saltbush		Native	☒	☒
<i>Ericameria nauseosa</i>	rubber rabbitbrush		Native	☒	☒
<i>Larrea tridentata</i>	creosote bush		Native	☒	☒
Herbs					
<i>Ambrosia acanthicarpa</i>	annual bursage		Native	☐	☒
<i>Amsinckia sp.</i>	fiddleneck		Native	☐	☒
<i>Artemisia ludoviciana</i>	white sagebrush		Native	☒	☐
<i>Camissonia campestris</i>	field sun cup		Native	☐	☒
<i>Chaenactis carphoclinia</i>	pebble pincushion		Native	☒	☐
<i>Chylismia claviformis</i>	brown eyed primrose		Native	☐	☒
<i>Cryptantha barbiger</i>	Bearded cryptantha		Native	☒	☐
<i>Cryptantha nevadensis</i>	Nevada forget me not		Native	☒	☒
<i>Cryptantha pterocarya</i>	Wingnut cryptantha		Native	☒	☒
<i>Datura wrightii</i>	jimsonweed		Native	☐	☒
<i>Erodium cicutarium</i>	red-stemmed filaree	CAL-IPC: Limited	Introduced	☐	☒
<i>Eriophyllum wallacei</i>	Wallace eriophyllum		Native	☐	☒
<i>Eschscholzia minutiflora</i>	pygmy poppy		Native	☐	☒
<i>Lasthenia gracillis</i>	needle goldfields		Native	☐	☒
<i>Lycium cooperi</i>	Cooper's box thorn		Native	☐	☒
<i>Salsola tragus</i>	Russian thistle	CAL-IPC: Limited	Introduced	☐	☒
<i>Salvia carduacea</i>	thistle sage		Native	☒	☒
Grasses					
<i>Bromus tectorum</i>	downy chess	CAL-IPC: High	Introduced	☒	☒
<i>Eriogonum sp.</i>	buckwheat		Native	☒	☐
<i>Schismus arabicus</i>	Arabian schismus	CAL-IPC: Limited	Introduced	☐	☒

*Cal-IPC = California Invasive Plant Council.

Rating system: **High** = several ecological impacts; **Moderate** = substantial but not severe ecological impacts; **Limited** = minor ecological impacts or not enough information to justify higher score; **Alert** = species ranked as High or Moderate with limited distribution, but potential to spread; **Watch** = could pose a high risk of becoming invasive in the future.

Table D-2
Animal Species Observed within the Biological Study Area
RB Inyokern Data Center Project, Kern County, California

Scientific Name	Common Name	Native or Introduced	Site Observed Data Center	Gen-tie and POI
Birds				
<i>Corvus corax</i>	Raven	Native	☒	☒
<i>Eremophila alpestris ammophila</i>	Mohave horned lark	Native	☐	☒
<i>Haemorhous mexicanus</i>	house finch	Native	☐	☒
Reptiles				
<i>Aspidoscelis tigris</i>	western whiptail	Native	☒	☐
<i>Uta stansburiana</i>	side-blotched lizard	Native	☐	☒
Mammals				
<i>Ammospermophilus leucurus</i>	White-tailed antelope squirrel	Native	☒	☐
<i>Lepus californicus</i>	Black-tailed jackrabbit	Native	☒	☒
<i>Vulpes macrotis arsipus</i> *	desert kit fox	Native	☒	☒
<i>Canis latrans</i> *	coyote	Native	☐	☒
<i>Ovis aries</i> *	domestic sheep	N/A	☐	☒

*Observed sign only, i.e., scat, tracks, prey remains, den, burrow, etc.

FE Federally Endangered
SE State Endangered
ST State Threatened
SCT State Candidate Threatened
SSC State Species of Special Concern
SFP State Fully Protected

APPENDIX E

PROTOCOL-LEVEL FLORISTIC SURVEY FIELD DATA SHEETS



Plant Survey Form

GENERAL PROJECT INFORMATION				
Client: Dimension			Date: 03.29.24	
Project / Site Name: Mission Clean Energy			Project Number: 240076	
GPS Coordinates:				
APN 084-010-48				
Project Size and Description: Mostly Undeveloped lot south of SR 178				
Biologist (s): Eric Madueno, William Ryan, Rob Vovilla				
PURPOSE OF SITE VISIT				
☐ Daily Monitoring	☐ Weekly Monitoring	☐ Follow Up Visit	☐ WEAP Training	☐ Nest Check
☐ Preconstruction Clearance Survey	☐ Reconnaissance Survey		☐ Preconstruction Clearance Survey	
☒ Protocol Level Survey	Floristic Survey			
☐ Wetland Delineation	☐ BNLL	☐ Swainson's hawk	☐ Burrowing owl	☐ SJKF
☐ Other - Explain:				
GENERAL SITE CONDITIONS				
Current Weather Conditions: overcast				
Start temp: 53		End temp: 60	Wind: 5-10	
Start time: 0920		End time: 1100		
Other:				
Present Land Use(s) of Site: Undeveloped				
Site Disturbance? ☒ Yes; ☐ No; Approximately % Disturbed 15 %				
Adjacent Land Use(s): Hwy 178/Inyokern Rd, SR 395				
Dominant Vegetation (ie. Valley Saltbush Scrub, Valley Sink Scrub, Non-native Grasslands, Exposed Soil, Ruderal, Abandoned Agriculture, Alkali Desert Scrub)				
Topography: Flat				
Slopes	☒ Flat to Slight	☐ Moderate	☐ Severe	Aspect: ☐ North; ☐ East; ☐ South; ☐ West
HABITAT CONDITIONS:				
Undeveloped lot with minor disturbances (i.e. dirt access roads around perimeter). Most of the flora is native.				

Plant Survey Form

Project:

Date:

Biologist:

OBSERVED SPECIES LIST										
Plant										
Creosote										
Ambrosia dumosa										
Red stem filaree										
Pincushion										
Browneyes Evening primrose										
Desert dandelion										
Fiddleneck										
Schismus										
Chess brome										
Red brome										
Gold fields										
Pectorya										
Red white buckwheat										
Wingnut cryptantha										
Field primrose/ field suncup										
Hare barley										
Pepper grass										
Poppy sp										
Mustard sp.										
Atriplex polycarpa										



Plant Survey Form

Project:

Date:

Biologist:

Downy brome										
Red maids										
Snake weed?										
Thistle sage										
Nevada forget me nots										
Desert calico?										
Cholla										
Desert primrose										
Lupin sp.										
Ambrosia salsola										
Sunflower desert ?										
Desert holly										
Rubber rabbit brush										
Atriplex spinofoa										
Tansy mustard										
Parry's linanthus										
Phacelia vallis-mortae										
Desert pepperweed										
Booth's evening primrose.										
Leptosyne bigelovii										



Plant Survey Form

Project:

Date:

Biologist:

[illegible]

Plant Survey Form

Project:

Date:

Biologist:

[illegible]

OBSERVED SPECIES LIST

Wildlife

Wildlife	

Plant Survey Form

Project:

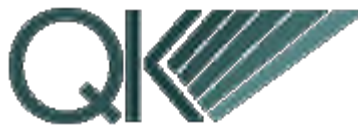
Date:

Biologist:

[illegible]

METHODS/NOTES

Silver cholla present. Some small mammal burrows that are potentially suitable for MGS.



Plant Survey Form

GENERAL PROJECT INFORMATION				
Client: Dimension			Date: 04.08.24	
Project / Site Name: Monache			Project Number: 160268.03	
GPS Coordinates:				
APN: 084-010-43, 084-010-44, and 084-010-45				
Project Size and Description: Mostly undeveloped lot north of SR 178				
Biologist (s): Eric Madueno, William Ryan, Rob Vovilla				
PURPOSE OF SITE VISIT				
☐ Daily Monitoring	☐ Weekly Monitoring	☐ Follow Up Visit	☐ WEAP Training	☐ Nest Check
☐ Preconstruction Clearance Survey	☐ Reconnaissance Survey		☐ Preconstruction Clearance Survey	
☒ Protocol Level Survey	Floristic Survey			
☐ Wetland Delineation	☐ BNLL	☐ Swainson's hawk	☐ Burrowing owl	☐ SJKF
☐ Other - Explain:				
GENERAL SITE CONDITIONS				
Current Weather Conditions: sunny and clear				
Start temp: 57		End temp: 61	Wind: 10-20	
Start time: 0915		End time: 1130		
Other:				
Present Land Use(s) of Site: Undeveloped land				
Site Disturbance? ☒ Yes; ☐ No; Approximately % Disturbed 15 %				
Adjacent Land Use(s): Residential, commercial and urban development				
Dominant Vegetation (ie. Valley Saltbush Scrub, Valley Sink Scrub, Non-native Grasslands, Exposed Soil, Ruderal, Abandoned Agriculture, Desert scrub)				
Topography: Flat				
Slopes	☒ Flat to Slight	☐ Moderate	☐ Severe	Aspect: ☐ North; ☐ East; ☐ South; ☐ West
HABITAT CONDITIONS:				
Desert scrub habitat with mostly native species				

Plant Survey Form

Project:

Date:

Biologist:

OBSERVED SPECIES LIST										
Plant										
Nevada forget me not										
Red stem filaree										
Fremont pincushion										
atriplex polycarpa h										
Mustard sp. with long pods										
Russian thistle										
Desert dandelion										
Brown eyes,										
Booths evening primrose										
Tamarisk										
Creosote										
Snake weed										
Horduem										
Ambrosia dumosa										
Lupin sp										
tall Pectorya										
Wing nut crypantha										
Fourwing saltbushn										
Schismus										
Goldfields										

Plant Survey Form

Project:

Date:

Biologist:

Ambrosia salsola										
Astragalus sp.freckeled										
Desert peppergrass										
Rose white buckwheat										
brittlebrish.										
Golden bush.										
Little white flower										
Dove weed										
Thistle sage										
Unknown spurge										
Small gold fields lookin. Wallace										
Field primrose										
Desert evening primrose										
Three mustards sp										
Red brome										
Cheat brome?										
Red maiden/ sand mat										
Pussy paws										
Blazing star										
Gilia sp.										
Spiny flower										



Plant Survey Form

Project:

Date:

Biologist:

[illegible]

Plant Survey Form

Project:

Date:

Biologist:

[illegible]

Plant Survey Form

Project:

Date:

Biologist:

[illegible]

OBSERVED SPECIES LIST

[illegible]

METHODS/NOTES

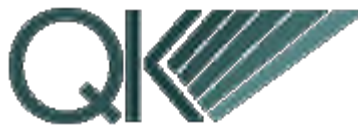
Silver cholla present. Some small mammal burrows that are potentially suitable for MGS.

Plant Survey Form

Project:

Date:

Biologist:



Plant Survey Form

GENERAL PROJECT INFORMATION				
Client: Dimension			Date: 05.10.24	
Project / Site Name: Monache			Project Number: 160268.03	
GPS Coordinates:				
APN: 084-010-43, 084-010-44, and 084-010-45				
Project Size and Description: Mostly undeveloped lot north of SR 178				
Biologist (s): Eric Madueno, Denver-Rose Harmon				
PURPOSE OF SITE VISIT				
☐ Daily Monitoring	☐ Weekly Monitoring	☐ Follow Up Visit	☐ WEAP Training	☐ Nest Check
☐ Preconstruction Clearance Survey	☐ Reconnaissance Survey		☐ Preconstruction Clearance Survey	
☒ Protocol Level Survey	Floristic Survey			
☐ Wetland Delineation	☐ BNLL	☐ Swainson's hawk	☐ Burrowing owl	☐ SJKF
☐ Other - Explain:				
GENERAL SITE CONDITIONS				
Current Weather Conditions: sunny and clear				
Start temp: 72		End temp: 76		Wind: 0-5
Start time: 0940			End time: 1100	
Other:				
Present Land Use(s) of Site: Undeveloped land				
Site Disturbance? ☒ Yes; ☐ No; Approximately % Disturbed 15 %				
Adjacent Land Use(s): Residential, commercial and urban developement				
Dominant Vegetation (ie. Valley Saltbush Scrub, Valley Sink Scrub, Non-native Grasslands, Exposed Soil, Ruderal, Abandoned Agriculture, Desert scrub)				
Topography: Flat				
Slopes	☒ Flat to Slight	☐ Moderate	☐ Severe	Aspect: ☐ North; ☐ East; ☐ South; ☐ West
HABITAT CONDITIONS:				
Desert scrub habitat with mostly native species				

Plant Survey Form

Project:

Date:

Biologist:

OBSERVED SPECIES LIST										
Plant										
Bearded crypantha or Nevada forget me nots										
Red stem filaree										
Fremont pincushion										
atriplex polycarpa										
Mustard sp. with long pods										
Russian thistle										
Desert dandelion										
Brown eyes,										
Booths evening primrose										
Tamarisk										
Creosote										
Snake weed										
Ambrosia dumosa										
Schismus										
Golden heads.										
Thistle sage										
Annual bursage										
Wire lettuce										
Desert Christmas tree										
Jimson weed										
Suncup sp.										



Plant Survey Form

Project:

Date:

Biologist:

[illegible]

Plant Survey Form

Project:

Date:

Biologist:

[illegible]

OBSERVED SPECIES LIST

Wildlife



Plant Survey Form

Project:

Date:

Biologist:

[illegible]

METHODS/NOTES

Silver cholla present. Some small mammal burrows that are potentially suitable for MGS.

APPENDIX F

ADDITIONAL SURVEYS REPORTS



October 13, 2023

Kari Daniska
California Department of Fish and Wildlife 1234 El Shaw Ave.
Fresno, California 93710

Subject: Pre-activity Survey Results for RB Inyokern Solar Project

Dear David:

This letter provides the results of a pre-activity survey conducted on October 9, 2023, for the RB Inyokern Solar Project (Project), as required by the California Department of Fish and Wildlife (CDFW) Incidental Take Permit (ITP, No. 2081-2020-001-04). Completion of this pre-construction survey satisfies Condition of Approval (COA) 6.10 'Covered Species Pre-activity Surveys and Burrow Mapping' of the ITP, as outlined below.

Per COA 6.10 of the ITP: *Covered Species Pre-Activity Surveys and Burrow Mapping. The Designated Biologist shall perform pre-activity surveys for Covered Species no more than 14 calendar days prior to beginning Covered Activities in a Work Area, including access roads, within the Project Area. The pre-activity surveys shall cover the Work Area and 50 feet beyond the limits of the Work Area to identify Covered Species and flag all potential burrows used by Covered Species, whether they appear active or inactive. Permittee shall provide the pre-activity surveys results and burrow map in a written report via email to CDFW's Regional Representative and Regional Office identified in Condition of Approval 5.4 above at least 5 days prior to beginning Covered Activities in the Project Area. The Pre-Activity Survey report shall include, but not be limited to, methodology, date and time of survey, results, discussion and map of the locations of each potential Covered Species burrow, and an estimated date of Covered Species relocation plans, if any, as described in Conditions of Approval 5.9 and 5.10.*

Background Information

The Project is located in Inyokern, Kern County, California (Figure 1 in Attachment A). The Project is located east of Brown Road, north of State Route (SR) 178 and west of US 395. Dimension Renewable Energy (permittee) intends to construct an approximately 32 megawatt (MW) photovoltaic (PV) solar project on approximately 166.5 acres of Mojave creosote bush scrub (*Larrea tridentata* alliance), allscale scrub (*Atriplex polycarpa* alliance), and non-native grassland habitats (Project site). Construction consists of revegetation removal, rough cut/grade, excavating and/or trenching for electrical infrastructure, backfilling, and installing solar panels and other infrastructure. Construction is expected to begin on or around October 25, 2023.

A pre-activity survey was conducted, as required by ITP COA 6.10 on October 9, 2023, to detect the presence of special-status plant and wildlife species on or near the Project site. The primary focus of the survey was detecting the presence of covered species desert tortoise (*Gopherus agassizii*) and Mohave ground squirrel (*Spermophilus mohavensis*). The results of the survey are outlined in this letter report.

Survey Methodology

A preconstruction survey was conducted by QK biologists Karissa Denney, Eric Madueno, Mitch Wayman, and Lauren Fah on October 9, 2023. The survey was conducted between 9:00AM and 2:00PM and conditions were sunny and clear, with temperatures ranging between 83 to 88 degrees Fahrenheit and wind speeds between one to five miles per hour. The survey consisted of meandering pedestrian transects, with spacing adjusted for vegetation height and density as needed, throughout the Project site. The surveys included 100% visual coverage of the Project site and a 50-foot survey buffer, where feasible. Where access to adjacent properties is limited or prohibited, the areas were visually inspected from publicly accessible locations to the extent feasible. The surveys were conducted during the daytime when there was a high probability of detecting targeted species.

All small mammal burrows and potential dens encountered within the Project site were mapped, flagged and inspected for activity. The presence (or lack thereof) of tracks, scat, pellets, prey remains, whitewash, and other animal activity at or near burrows or dens was noted. All potential dens and burrows were mapped using ESRI ArcGIS Field Maps installed on an iPad. Small mammal burrows were all flagged using pin flags whether they appeared active or inactive. Representative photographs were taken to document site conditions at the time of the survey (see Photographs in Attachment B) and an inventory of all plant and wildlife species encountered on-site was compiled (see Plant and Wildlife Observed On-Site in Attachment C).

Survey Results

There were no potential desert tortoise burrows (displaying characteristic burrow morphology) or sign of desert tortoise (scat, tracks, etc.) observed during the preconstruction survey.

All small mammal burrows were assessed for potential covered species past and present usage within the Project site. None of the small mammal burrows present on the Project site displayed habitation of Mohave ground squirrel or other special status burrow dwelling animals. All burrows present appeared weathered and/or partially collapsed and not in current use by wildlife.

There were no passerine bird nests present during the preconstruction survey. However, an inactive stick nest was observed approximately 70 feet northeast of the northern boundary of the Project site located on a utility pole within a fenced water retention facility. This nest is likely a common raven (*Corvus corax*) nest from prior nesting season(s).

October 13, 2023

Conclusion

No sign of desert tortoise or Mohave ground squirrel, including suitable potential burrows, were observed during the pre-activity survey. As required by ITP COA 6.10, all active small mammal burrows were mapped and flagged.

Per ITP COA 4.4 all personnel working on the Project site shall receive Worker Environmental Awareness Training prior to performing work. Per ITP COA 6.1 all activities that may result in the take of Covered Species will be monitored by a Designated Biologist.

If you have any questions regarding this report or require additional information, please contact Jaymie Brauer or Dave Dayton at (661) 616-2600.

Sincerely,

Dave Dayton
Principal Environmental Scientist

Enclosures:

Attachment A. Project Figures
Attachment B. Representative Photographs
Attachment C. Plant and Wildlife Species Observed

cc: file
220309.04

ATTACHMENT A

PROJECT FIGURES

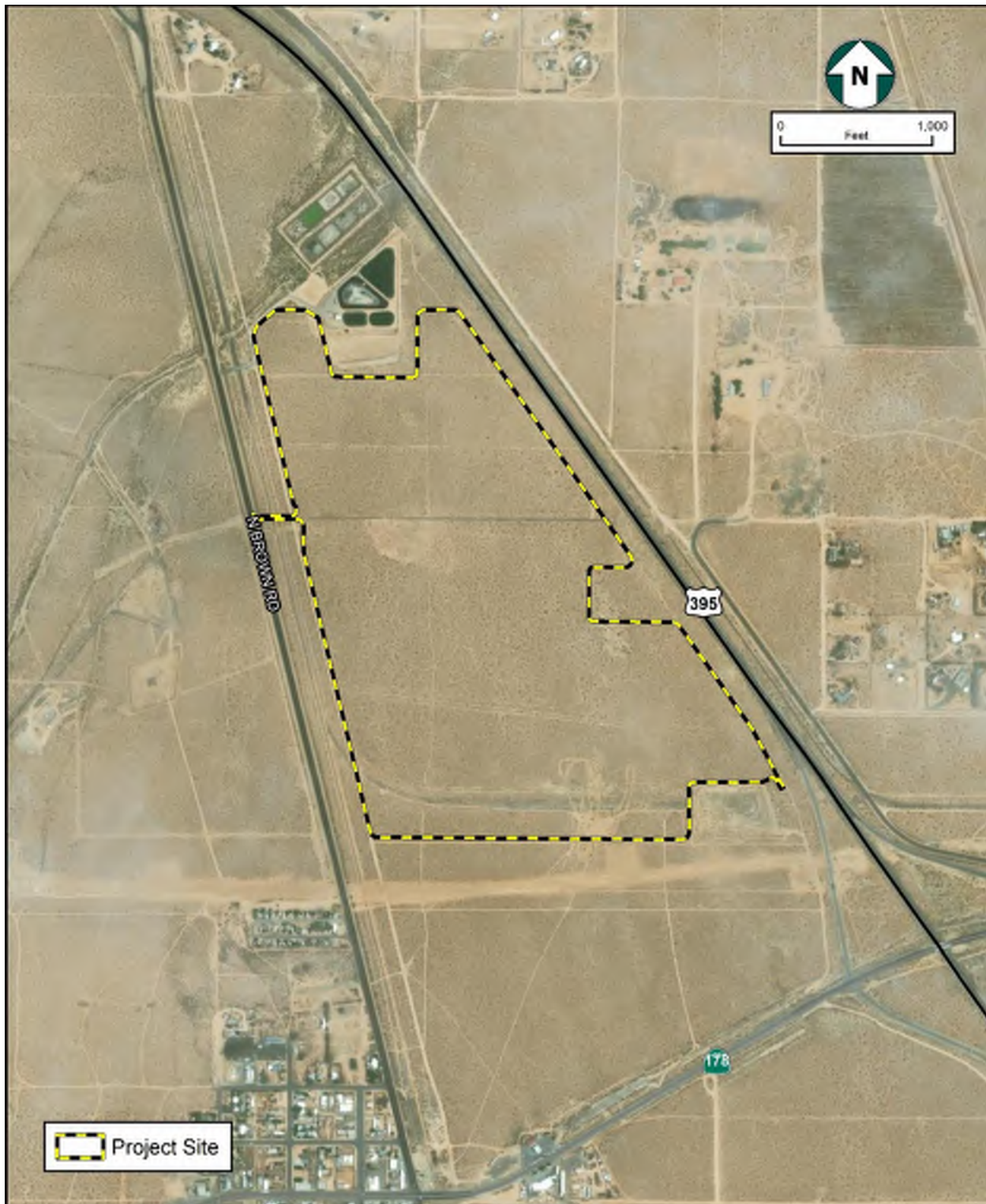


	Figure -1 Project Location Map RB Inyokern Solar Project, Kern County, California



 **Figure -1**
Preconstruction Survey Results
RB Inyokern Solar Project, Kern County, California

ATTACHMENT B

REPRESENTATIVE PHOTOGRAPHS



Photo 1: Representative photo of Project site taken from southeast corner facing west.
GPS Coordinates: 35.654588, -117.804246.
Taken by Eric Madueno on October 9, 2023.



Photo 2: Representative photo of Project site taken from northwest corner facing southeast.
GPS Coordinates: 35.662607, -117.815881.
Taken by William Ryan on October 9, 2023.



Representative Photographs



Photo 3: Representative photo of Project site taken from northeast corner facing south.
GPS Coordinates: 35.663568, -117.812090.
Taken by Mitch Wayman on October 9, 2023.



Photo 4. Representative photo of Project site taken from southwest corner facing northeast.
GPS Coordinates: 35.653455, -117.813322.
Taken by Eric Madueno on October 9, 2023.



Representative Photographs



Photo 5: Representative photo of active raven nest.
GPS Coordinates: 35.662786, -117.814237.
Taken by Mitch Wayman on October 9, 2023.



ATTACHMENT C

PLANT AND WILDLIFE OBSERVED

Table C-1
Wildlife Species Observed within the Project Site.
RB Inyokern Solar Project, Inyokern, Kern County, California

Scientific Name	Common Name	Status
Birds		
<i>Buteo lineatus</i>	red-shouldered hawk	least concern
<i>Corvus corax</i>	common raven	least concern
<i>Eremophila alpestris</i>	horned lark	least concern
<i>Mimus polyglottos</i>	northern mockingbird	least concern
Mammals		
<i>Ammospermophilus leucurus</i>	white-tailed antelope squirrel	least concern
<i>Lepus californicus</i>	black-tailed jackrabbit	least concern
<i>Vulpes macrotis</i>	desert kit fox	least concern
Squamata		
<i>Dipsosaurus dorsalis</i>	desert iguana	least concern
<i>Sceloporus occidentalis</i>	western fence lizard	least concern

* Indicates that only sign (e.g., tracks, scat, burrows, dens, vocalizations) of the species was observed.

Table C-2
Plant Species Observed within the Project Site.
RB Inyokern Solar Project, Inyokern, Kern County, California

Scientific Name	Common Name	Status
Shrubs		
<i>Ambrosia dumosa</i>	burrobush	native
<i>Cylindropuntia echinocarpa</i>	Silver cholla	native
<i>Larrea tridentata</i>	creosote bush	native
Herbs		
<i>Ambrosia artemisiifolia</i>	common ragweed	non-native
<i>Amsinckia menziesii</i>	fiddleneck	native
<i>Calandrinia menziesii</i>	red maids	native
<i>Camissonia campestris</i> ssp. <i>campestris</i>	field suncup	native
<i>Chaenactis fremontii</i>	Fremont pincushion	native
<i>Chylismia claviformis</i> ssp. <i>claviformis</i>	browneyes	native
<i>Croton setigerus</i>	turkey mullein	native
<i>Datura stramonium</i>	jimsonweed	non-native
<i>Daucus pusillus</i>	rattlesnake weed	native
<i>Erodium cicutarium</i>	redstem filaree	invasive non-native
<i>Linanthus dichotomus</i>	eveningsnow	native
<i>Loeseliastrum matthewsii</i>	desert calico	native
<i>Malacothrix californica</i>	California dandelion	native

Scientific Name	Common Name	Status
<i>Malva parviflora</i>	cheeseweed	non-native
<i>Pectis papposa</i>	chinch weed	native
<i>Pectocarya penicillate</i>	winged pectocarya	native
<i>Salvia carduacea</i>	thistle sage	native
<i>Salvia columbariae</i>	chia sage	native
Grasses		
<i>Avena sativa</i>	common oats	non-native

*Indicates that only sign (e.g., tracks, scat, burrows, dens, vocalizations) of the species was observed

*Cal-IPC = California Invasive Plant Council.

Rating system: **High** = several ecological impacts; **Moderate** = substantial but not severe ecological impacts; **Limited** = minor ecological impacts or not enough information to justify higher score.



December 12, 2023

Kari Daniska
California Department of Fish and Wildlife
1234 El Shaw Ave.
Fresno, California 93710

Subject: Pre-activity Survey Results for RB Inyokern Solar Project

Dear Ms. Daniska:

This letter provides the results of a pre-activity survey conducted on December 12, 2023, for the RB Inyokern Solar Project (Project), as required by the California Department of Fish and Wildlife (CDFW) Incidental Take Permit (ITP, No. 2081-2020-001-04). Completion of this pre-activity survey satisfies Condition of Approval (COA) 6.10 'Covered Species Pre-activity Surveys and Burrow Mapping' of the ITP, as outlined below.

Per COA 6.10 of the ITP: *Covered Species Pre-Activity Surveys and Burrow Mapping. The Designated Biologist shall perform pre-activity surveys for Covered Species no more than 14 calendar days prior to beginning Covered Activities in a Work Area, including access roads, within the Project Area. The pre-activity surveys shall cover the Work Area and 50 feet beyond the limits of the Work Area to identify Covered Species and flag all potential burrows used by Covered Species, whether they appear active or inactive. Permittee shall provide the pre-activity surveys results and burrow map in a written report via email to CDFW's Regional Representative and Regional Office identified in Condition of Approval 5.4 above at least 5 days prior to beginning Covered Activities in the Project Area. The Pre-Activity Survey report shall include, but not be limited to, methodology, date and time of survey, results, discussion and map of the locations of each potential Covered Species burrow, and an estimated date of Covered Species relocation plans, if any, as described in Conditions of Approval 5.9 and 5.10.*

Background Information

The Project is located in Inyokern, Kern County, California (Figure 1 in Attachment A). The Project is located east of Brown Road, north of State Route (SR) 178 and west of US 395. Dimension Renewable Energy (permittee) intends to construct an approximately 32 megawatt (MW) photovoltaic (PV) solar project on approximately 166.5 acres of Mojave creosote bush scrub (*Larrea tridentata* alliance), allscale scrub (*Atriplex polycarpa* alliance), and non-native grassland habitats (Project site). Construction consists of revegetation removal, rough cut/grade, excavating and/or trenching for electrical infrastructure, backfilling, and installing solar panels and other infrastructure. Construction was tentatively anticipated to start on October 25, 2023; however,

construction activities have been delayed, and the previous pre-activity survey results have expired. Construction activities are anticipated to start on or around December 18, 2023.

A pre-activity survey was conducted on December 12, 2023, to detect the presence of covered species listed in the ITP (No. 2081-2020-001-04) on or near the Project site. The primary focus of the survey was detecting the presence of desert tortoise (*Gopherus agassizii*) and Mohave ground squirrel (*Spermophilus mohavensis*). The results of the survey are outlined in this letter report.

Survey Methodology

A pre-activity survey was conducted by QK biologists Eric Madueno, Mitch Wayman, Will Ryan and Jeff Erway, a designated and authorized desert tortoise and Mohave ground squirrel biologist on December 12, 2023. The surveys were conducted between 10:00AM and 1:40PM and conditions were sunny and clear, with temperatures ranging between 53 to 63 degrees Fahrenheit and wind speeds between zero and five miles per hour. The surveys consisted of meandering pedestrian transects, with spacing adjusted for vegetation height and density as needed and no further than 10 meters apart, throughout the Project site and included a 50-foot survey buffer. The surveys included 100% visual coverage of the Project site and a 50-foot survey buffer, where feasible. Where access to adjacent properties is limited or prohibited, the areas were visually inspected from publicly accessible locations to the extent feasible. The surveys were conducted during the daytime when there was a high probability of detecting targeted species.

All small mammal burrows and potential dens encountered within the Project site, if present, were mapped, flagged and inspected for activity. The presence (or lack thereof) of tracks, scat, pellets, prey remains, whitewash, and other animal activity at or near burrows or dens was noted. All potential dens and burrows were mapped using ESRI ArcGIS Field Maps installed on an iPad. Representative photographs were taken to document site conditions at the time of the survey (see Photographs in Attachment B).

Survey Results

There were no potential desert tortoise burrows (displaying characteristic burrow morphology) or sign of desert tortoise (scat, tracks, etc.) observed during the survey.

All small mammal burrows were assessed for potential covered species past and present usage within the Project site. None of the small mammal burrows present on the Project site displayed habitation of Mohave ground squirrel or other special status burrow dwelling animals. All burrows were too small in size and shape for Mohave ground squirrel.

Conclusion

No sign of desert tortoise or Mohave ground squirrel, including suitable potential burrows, were observed during the survey. There were no potential burrows used by Covered Species found on the Project.

Per ITP COA 4.4 all personnel working on the Project site shall receive Worker Environmental Awareness Training prior to performing work. Per ITP COA 6.1 all activities that may result in the take of Covered Species will be monitored by a Designated Biologist.

If you have any questions regarding this report or require additional information, please contact Jaymie Brauer or Dave Dayton at (661) 616-2600.

Sincerely,



Dave Dayton
Principal Environmental Scientist

Enclosures:

Attachment A. Project Figures

Attachment B. Representative Photographs

cc: file

220309.04

ATTACHMENT A
PROJECT FIGURES

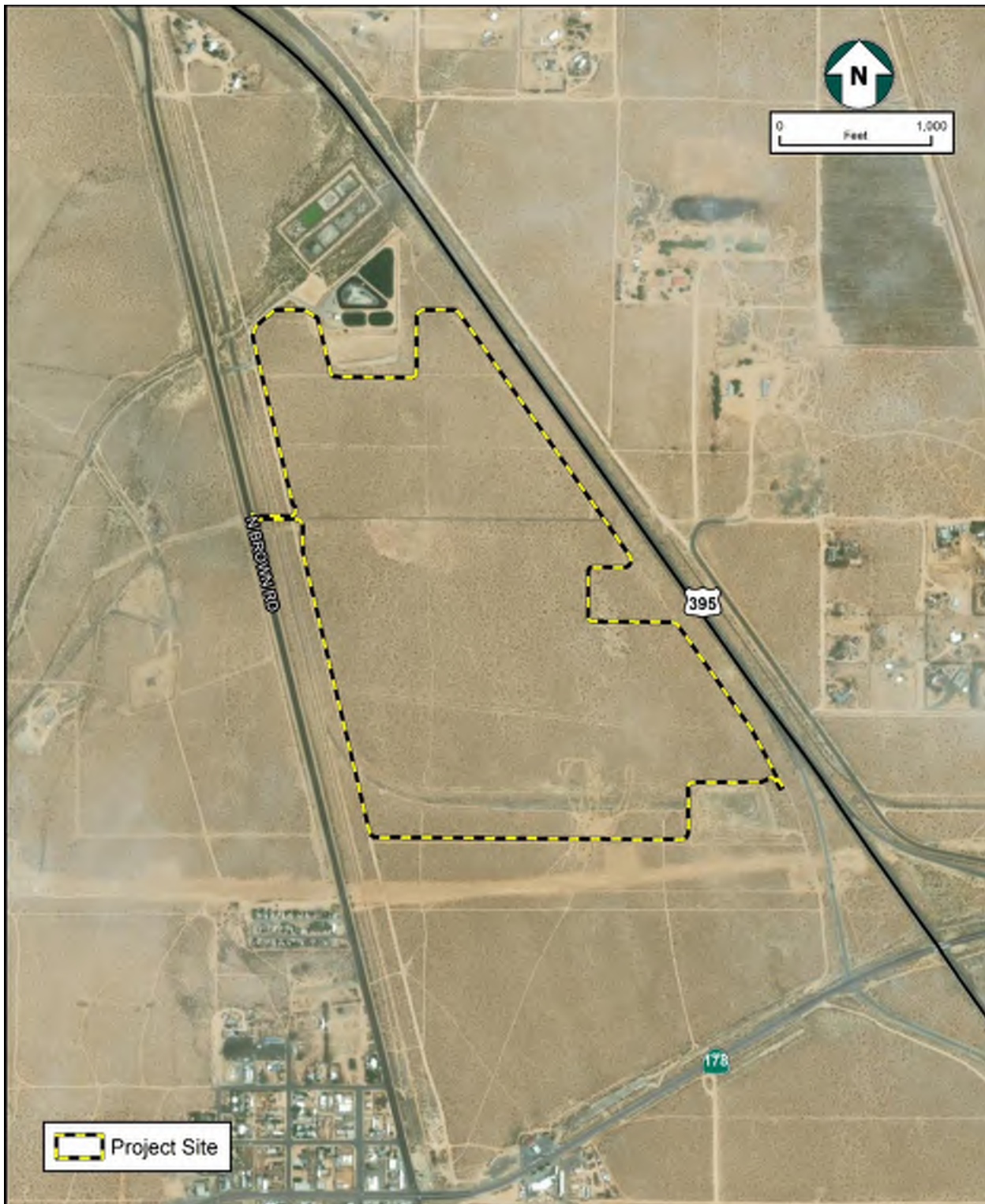


Figure -1
Project Location Map
RB Inyokern Solar Project, Kern County, California

ATTACHMENT B

REPRESENTATIVE PHOTOGRAPHS



Photo 1. View of Project area from southwest corner.
GPS coordinates: 35.653420, -117.813363, facing northeast.
Taken by Mitch Wayman on December 12, 2023.



Photo 2. View of Project area from western central boundary.
GPS coordinates: 35.656275, -117.814099, facing east.
Taken by Mitch Wayman on December 12, 2023.



Representative Photographs



Photo 3. View of Project site from eastern central boundary.
GPS coordinates: 35.660662, -117.809479, facing west southwest.
Taken by Mitch Wayman on December 12, 2023.



Photo 4. View of Project site from northeast corner.
GPS coordinates: 35.660662, -117.809479, facing southwest.
Taken by Mitch Wayman on December 12, 2023.



Representative Photographs



November 8, 2023

Kari Daniska
California Department of Fish and Wildlife
1234 El Shaw Ave.
Fresno, California 93710

Subject: Pre-activity Survey Results for RB Inyokern Solar Project

Dear Ms. Daniska:

This letter provides the results of a pre-activity survey conducted on November 7 and 8, 2023, for the RB Inyokern Solar Project (Project), as required by the California Department of Fish and Wildlife (CDFW) Incidental Take Permit (ITP, No. 2081-2020-001-04). Completion of this pre-activity survey satisfies Condition of Approval (COA) 6.10 'Covered Species Pre-activity Surveys and Burrow Mapping' of the ITP, as outlined below.

Per COA 6.10 of the ITP: *Covered Species Pre-Activity Surveys and Burrow Mapping. The Designated Biologist shall perform pre-activity surveys for Covered Species no more than 14 calendar days prior to beginning Covered Activities in a Work Area, including access roads, within the Project Area. The pre-activity surveys shall cover the Work Area and 50 feet beyond the limits of the Work Area to identify Covered Species and flag all potential burrows used by Covered Species, whether they appear active or inactive. Permittee shall provide the pre-activity surveys results and burrow map in a written report via email to CDFW's Regional Representative and Regional Office identified in Condition of Approval 5.4 above at least 5 days prior to beginning Covered Activities in the Project Area. The Pre-Activity Survey report shall include, but not be limited to, methodology, date and time of survey, results, discussion and map of the locations of each potential Covered Species burrow, and an estimated date of Covered Species relocation plans, if any, as described in Conditions of Approval 5.9 and 5.10.*

Background Information

The Project is located in Inyokern, Kern County, California (Figure 1 in Attachment A). The Project is located east of Brown Road, north of State Route (SR) 178 and west of US 395. Dimension Renewable Energy (permittee) intends to construct an approximately 32 megawatt (MW) photovoltaic (PV) solar project on approximately 166.5 acres of Mojave creosote bush scrub (*Larrea tridentata* alliance), allscale scrub (*Atriplex polycarpa* alliance), and non-native grassland habitats (Project site). Construction consists of revegetation removal, rough cut/grade, excavating and/or trenching for electrical infrastructure, backfilling, and installing solar panels and other infrastructure. Construction was tentatively anticipated to start on October 25, 2023; however,

construction activities have been delayed, and the previous pre-activity survey results have expired. Construction activities are anticipated to start on or around November 16, 2023.

A pre-activity survey was conducted on October 7 and 8, 2023, to detect the presence of special-status plant and wildlife species on or near the Project site. The primary focus of the survey was detecting the presence of covered species desert tortoise (*Gopherus agassizii*) and Mohave ground squirrel (*Spermophilus mohavensis*). The results of the survey are outlined in this letter report.

Survey Methodology

A pre-activity survey was conducted by QK biologists Karissa Denney, Eric Madueno, and Will Ryan on November 7, 2023. A desert tortoise and Mohave ground squirrel pre-activity survey was conducted by QK biologists Jeff Erway and Curtis Uptain, both authorized desert tortoise and Mohave ground squirrel biologists, on November 8, 2023. The surveys were conducted between 9:00AM and 2:00PM and conditions were sunny and clear, with temperatures ranging between 63 to 66 degrees Fahrenheit and wind speeds between five and ten miles per hour. The surveys consisted of meandering pedestrian transects, with spacing adjusted for vegetation height and density as needed, throughout the Project site and included a 50-foot survey buffer. The surveys included 100% visual coverage of the Project site and a 50-foot survey buffer, where feasible. Where access to adjacent properties is limited or prohibited, the areas were visually inspected from publicly accessible locations to the extent feasible. The surveys were conducted during the daytime when there was a high probability of detecting targeted species.

All small mammal burrows and potential dens encountered within the Project site, if present, were mapped, flagged and inspected for activity. The presence (or lack thereof) of tracks, scat, pellets, prey remains, whitewash, and other animal activity at or near burrows or dens was noted. All potential dens and burrows were mapped using ESRI ArcGIS Field Maps installed on an iPad. Representative photographs were taken to document site conditions at the time of the survey (see Photographs in Attachment B) and an inventory of all plant and wildlife species encountered on-site was compiled (see Plant and Wildlife Observed On-Site in Attachment C).

Survey Results

There were no potential desert tortoise burrows (displaying characteristic burrow morphology) or sign of desert tortoise (scat, tracks, etc.) observed during the pre-activity survey.

All small mammal burrows were assessed for potential covered species past and present usage within the Project site. None of the small mammal burrows present on the Project site displayed habitation of Mohave ground squirrel or other special status burrow dwelling animals. All burrows present appeared weathered and/or partially collapsed and not in current use by wildlife.

There were no passerine bird nests present during the pre-activity survey. Previously, QK identified an inactive stick nest approximately 70 feet northeast of the northern boundary of the Project site located on a utility pole within a fenced water treatment facility. However, this nest is no longer

November 8, 2023

present. At the base of the utility pole, QK biologists observed multiple sticks. Most likely the stick nest was blown off during a recent windstorm.

Conclusion

No sign of desert tortoise or Mohave ground squirrel, including suitable potential burrows, were observed during the survey. There were no potential burrows used by Covered Species found on the Project.

Per ITP COA 4.4 all personnel working on the Project site shall receive Worker Environmental Awareness Training prior to performing work. Per ITP COA 6.1 all activities that may result in the take of Covered Species will be monitored by a Designated Biologist.

If you have any questions regarding this report or require additional information, please contact Jaymie Brauer or Dave Dayton at (661) 616-2600.

Sincerely,



Dave Dayton
Principal Environmental Scientist

Enclosures:

Attachment A. Project Figures
Attachment B. Representative Photographs
Attachment C. Plant and Wildlife Species Observed

cc: file
220309.04

ATTACHMENT A

PROJECT FIGURES

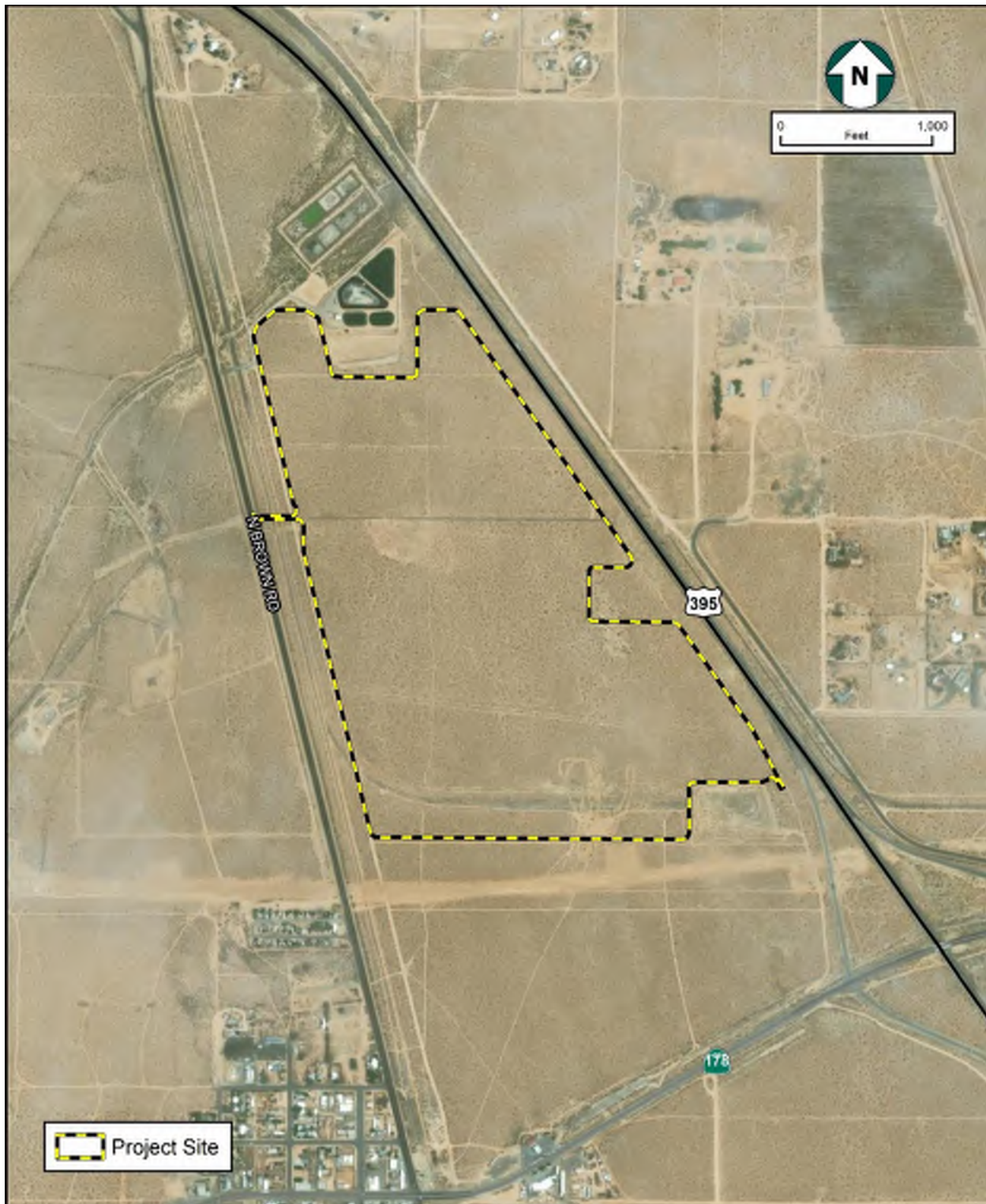


	Figure -1 Project Location Map RB Inyokern Solar Project, Kern County, California

ATTACHMENT B

REPRESENTATIVE PHOTOGRAPHS



Photo 1: Representative photo of Project site taken from southeast corner facing west.
GPS Coordinates: 35.654588, -117.804246.
Taken by William Ryan on November 7, 2023.



Photo 2: Representative photo of Project site taken from northwest corner facing south.
GPS Coordinates: 35.662607, -117.815881.
Taken by Karissa Denney on November 7, 2023.



Representative Photographs



Photo 3: Representative photo of Project site taken from northeast corner facing south.
GPS Coordinates: 35.663568, -117.812090.
Taken by Eric Madueno on November 7, 2023.



Photo 4. Representative photo of Project site taken from southwest corner facing east.
GPS Coordinates: 35.653455, -117.813322.
Taken by William Ryan on November 7, 2023.



Representative Photographs



Photo 5: Representative photo of absent raven nest.
GPS Coordinates: 35.662786, -117.814237.
Taken by Eric Madueno on November 7, 2023.



Representative Photographs

ATTACHMENT C

PLANT AND WILDLIFE OBSERVED

Table C-1
Wildlife Species Observed within the Project Site.
RB Inyokern Solar Project, Inyokern, Kern County, California

Scientific Name	Common Name	Status
Birds		
<i>Corvus corax</i>	common raven	least concern
<i>Mimus polyglottos</i>	northern mockingbird	least concern
<i>Zenaida macroura</i>	mourning dove	least concern
Mammals		
<i>Lepus californicus</i>	black-tailed jackrabbit	least concern
Squamata		
<i>Sceloporus occidentalis</i>	western fence lizard	least concern

* Indicates that only sign (e.g., tracks, scat, burrows, dens, vocalizations) of the species was observed.

Table C-2
Plant Species Observed within the Project Site.
RB Inyokern Solar Project, Inyokern, Kern County, California

Scientific Name	Common Name	Status
Shrubs		
<i>Ambrosia dumosa</i>	burrobush	native
<i>Cylindropuntia echinocarpa</i>	Silver cholla	native
<i>Larrea tridentata</i>	creosote bush	native
Herbs		
<i>Ambrosia artemisiifolia</i>	common ragweed	non-native
<i>Amsinckia menziesii</i>	fiddleneck	native
<i>Calandrinia menziesii</i>	red maids	native
<i>Camissonia campestris</i> ssp. <i>campestris</i>	field suncup	native
<i>Chaenactis fremontii</i>	Fremont pincushion	native
<i>Chylismia claviformis</i> ssp. <i>claviformis</i>	browneyes	native
<i>Croton setigerus</i>	turkey mullein	native
<i>Datura stramonium</i>	jimsonweed	non-native
<i>Daucus pusillus</i>	rattlesnake weed	native
<i>Erodium cicutarium</i>	redstem filaree	invasive non-native
<i>Linanthus dichotomus</i>	eveningsnow	native
<i>Loeseliastrum matthewsii</i>	desert calico	native
<i>Malacothrix californica</i>	California dandelion	native
<i>Malva parviflora</i>	cheeseweed	non-native
<i>Pectis papposa</i>	chinch weed	native
<i>Pectocarya penicillate</i>	winged pectocarya	native
<i>Salvia carduacea</i>	thistle sage	native

Scientific Name	Common Name	Status
<i>Salvia columbariae</i>	chia sage	native
Grasses		
<i>Avena sativa</i>	common oats	non-native

*Indicates that only sign (e.g., tracks, scat, burrows, dens, vocalizations) of the species was observed

*Cal-IPC = California Invasive Plant Council.

Rating system: **High** = several ecological impacts; **Moderate** = substantial but not severe ecological impacts; **Limited** = minor ecological impacts or not enough information to justify higher score.



May 10, 2024

Travis Tolliver
Senior Biologist / Environmental Project Manager
Montrose Environmental
Long Beach, CA

Subject: SCE Pole Replacement and Upgrades to Support the RB Inyokern Solar Project, Inyokern, California

Dear Mr. Tolliver

This report provides information about biological survey and monitoring activities conducted by Quad Knopf, Inc. (QK) during upgrades of the SCE Sawmill 33kV transmission line (Project), associated with the RB Inyokern Solar Project. Upgrades to the transmission line included replacement of poles, replacement of arms, adding additional anchors, and reconductoring the electrical transmission lines.

The Project is located north of west of Inyokern Road and east of State Route (SR) 395 in Inyokern, California (Figures 1 and 2 in Attachment A). The Project connects the RB Inyokern Solar Project to the existing SCE Inyokern substation. Seventeen poles were upgraded and or replaced to support the new electrical cables. The entire transmission line upgrade project was conducted on property under the jurisdiction of the Department of Defense China Lake Naval Air Weapons Station, in Ridgecrest, California.

A Categorical Exclusion (CatEx, SER PR241/342 dated 11 August 2022) was prepared by the Department of the Navy prior to the start of the Project. Environmental Requirements (ESF # 349883) were also issued by Southern California Edison (SCE) for the Project. The CatEx and Environmental Requirements (ER) focused specifically on reducing impacts to two wildlife species, the Mojave desert tortoise (*Gopherus agassizii*). The SCE ERs identified the Mojave desert tortoise as well as the Mohave ground squirrel (*Xerospermophilus mohavensis*) as the focus species.

Methods

Preconstruction Clearance Surveys

Pre-construction clearance surveys were conducted within 24 hours of the start of any ground disturbance work and consisted of walking each work area plus an area extending approximately 100 feet around each work area. The surveys focused on detecting diagnostic signs of the Mojave desert tortoise but other sensitive resources such as the Mohave ground squirrel and nesting birds were also a focus of the pre-construction surveys. The desert tortoise is a federally and California State endangered species, the Mojave ground squirrel is a State of California threatened species, and nesting birds are protected by the federal Migratory Bird Treaty Act.

Construction Monitoring

Construction monitoring was conducted by QK Environmental Scientists Curtis Uptain, Danielle Temple, Karissa Denney, and Brittany Gummo. As the United States Fish and Wildlife Service (USFWS) Approved Biologist for the Project, Curtis Uptain was on site during all activities.

The Project activities occurred during daytime hours when pole work could be accomplished while the transmission line was fully powered. The majority of the work was conducted at night to allow the electrical power to be shut off to replace poles and string cable. Monitoring was conducted during these periods: April 13-14, April 21, April 24-25, and May 1-2 (Table 1). Daily monitoring forms are provided in Attachment C.

Table 1
Monitoring Personnel and Dates

Date	Personnel	Time	Condition	Weather	
				Temperature (F)	Wind Speed (mph)
04/13/2024	Curtis Uptain, Karrisa Denney	0700-1620	clear	49	0 - 5
04/14/2024	Curtis Uptain	0130-1530	clear	41-55	5-20
04/21/2024	Curtis Uptain	0700-1730	clear	56-93	0 - 5
04/24and 25/2024	Curtis Uptain, Danielle Temple	1830-0700	clear	70 - 56	0 - 5
05/01 and 02/2024	Curtis Uptain, Brittany Gummo	1900-0830	clear	82 - 61	0 - 5

Results

SCE Pole replacement and Upgrade work started on April 13, 2024, with five (5) of the seventeen (17) poles (2025110, 2025115E, 2025116E, 2025117E, and 2025118E). Faith Electric installed anchors and replacement pole forms using backhoes and hand tools. Curtis Uptain and Karissa Denning conducted clearance surveys and monitoring; no special status species were located.

On April 14, 2024, work was conducted overnight as the power was shut off to remove cable for the pole replacement installations. The line was reenergized the following morning. Equipment used were aerial lifts, various trailers, and wire cable. Curtis Uptain conducted the clearance survey and monitoring. No special status species were found during the initial site clearance or during monitored activities.

On April 21 work was conducted during daylight hours. Faith Electric replaced or upgraded poles 2025113E, 2025109E, 441836E, 2025114E, and 2025148E using aerial lifts and auger. Curtis Uptain conducted the clearance surveys and construction monitoring. No special status species were found.

April 24, 2024, consisted of night work to accommodate cable stringing. Poles being upgraded or replaced on this date were 441836E, 2025115E, 2024113E, 2025112E, 2025148E, 4418306E, and 2025114E. The work was conducted using aerial lifts and an auger. Curtis Uptain and Danielle Temple conducted the clearance surveys and construction monitoring. No special status species were found.

On May 1 and 2, 2024, work was conducted overnight to complete the wire stringing. Arms were replaced on pole 4028512E, and electrical wire was strung. Curtis Uptain and Brittany Gummo conducted clearance sweeps and construction monitoring. No special status species were found. Pole replacement and upgrades were completed on the morning of May 2, 2024.

Habitat Disturbance

Access to the poles was taken from existing roads but several poles required offroad travel to enter the work area or required work to be accomplished from outside of the designated work area because of existing obstructions such as existing anchors or extensive debris. Those areas were cleared by the approved biologist prior to vehicles or equipment entering those areas. Once the equipment was removed, the crew would return to hand-rake the areas of disturbance to eliminate tracks and re-contour the work area. An EOS Arrow 100 Geographic Positioning System (GPS) unit with a spatial accuracy of between 5 and 50 centimeters was used to map the areas of habitat disturbance. Environmental Scientists Curtis Uptain and Brittany Gummo walked polygons around the disturbed habitat. The total area disturbed was less than 0.5 acre (Table 2). The total disturbance is within the allowed disturbance of 0.5 acres. Work activities were expected to take place within a 20-foot buffer around each pole, however obstacles such as pole anchors and debris were encountered that required equipment and vehicles to utilize alternative routes outside the work area. Additionally, all new anchors were required to be placed 18 to 35 feet away from the base of each pole.

Figures 3 through 8 show the of the habitat disturbance polygons at each pole and representative photographs of the habitat disturbance can be found in Attachment B. There was no ground disturbance around poles that are not listed in Table 2.

Table 2
SCE Pole Replacement and Upgrades with Habitat Disturbance,
Inyokern, California

Pole	Habitat Disturbance Square feet (sq ft)
2025118E	4,932.3
2025117E	2,324.3
2025116E	3,456.0
2025115E	1,334.5
2025114E	957.5
2025113E	747.4
2025110E	267.9
2025109E	641.0
2025148E	1182.5
4028512E	259.6
4028513E	732.2
1997904E	3,708.3
Misc	324.7
Total	20,136 sq ft (0.46 acre)

There were no adverse effects to special status species or habitat during the entirety of the SCE Sawmill 33kV transmission line upgrade and pole replacement.

Please contact us at (559) 449-2400 if you have any questions or need additional information. It has been a pleasure to assist you with this Project.

May 2024

Sincerely,



Curtis Uptain
Principal Environmental Scientist



Brittany Gummo
Associate Environmental Scientist

Cc: Dimension Renewable Energy

Enclosures:

Attachment A: Figures

Attachment B: Representative Photographs of Habitat Disturbance

Attachment C: Daily Monitoring Forms

References

Department of Defense. (2022). *Record of Categorical Exclusion for Southern California Edison to Replace 9 Distribution Poles (No. TD1248757).*

Southern California Edison. (nd). *Environmental Requirements for Southern California Edison to Replace 9 Distribution Poles.*

ATTACHMENT A

FIGURES



Figure 1
Regional Map
SCE Pole Replacement and Upgrades in Support of RB Inyokern Solar Project,
Kern County, California

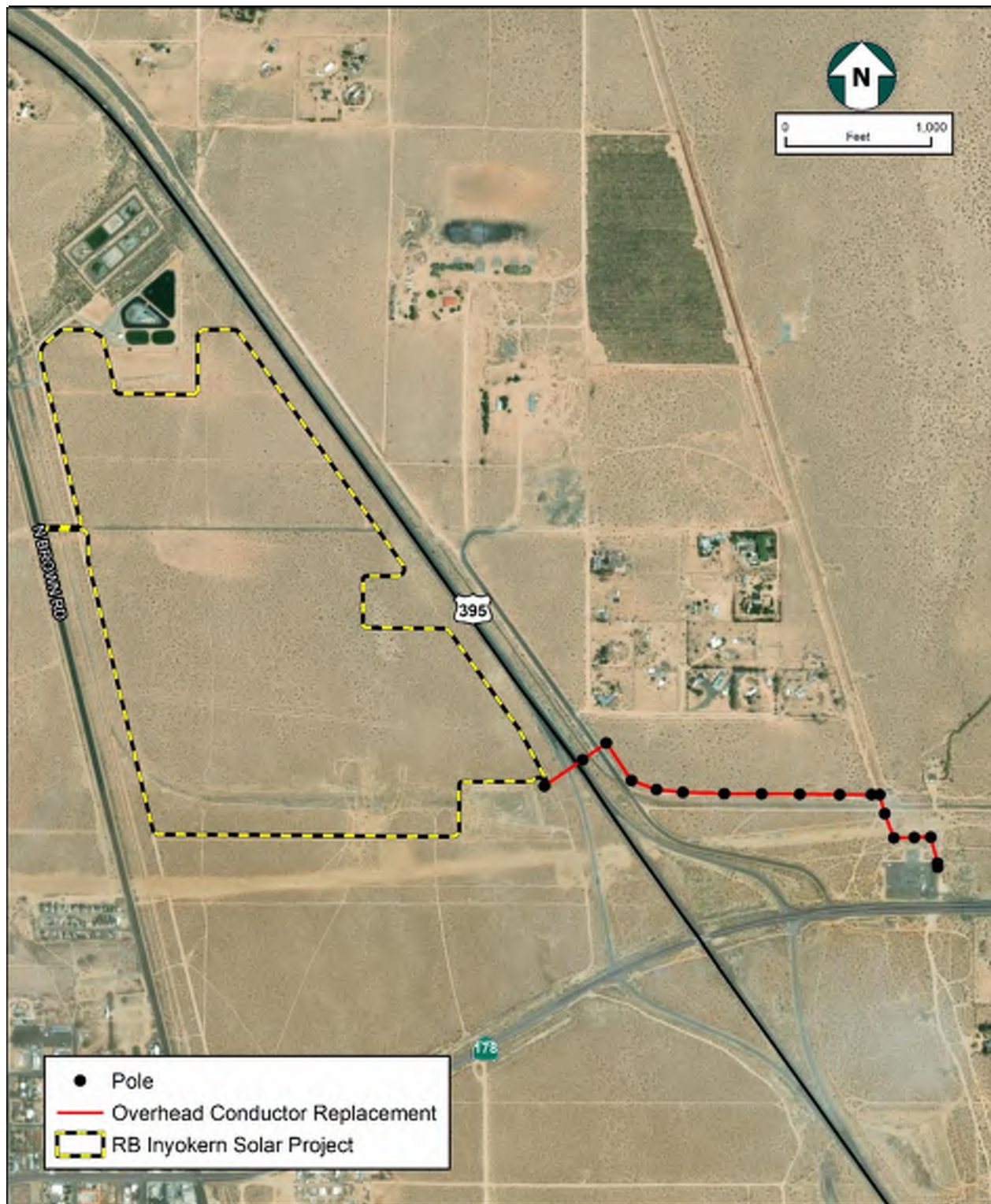


Figure 2
Vicinity
SCE Pole Replacement and Upgrades in Support of RB Inyokern Solar
Project, Kern County, California



Figure 3
Project Site
SCE Pole Replacement and Upgrades in Support of RB Inyokern Solar
Project, Kern County, California.

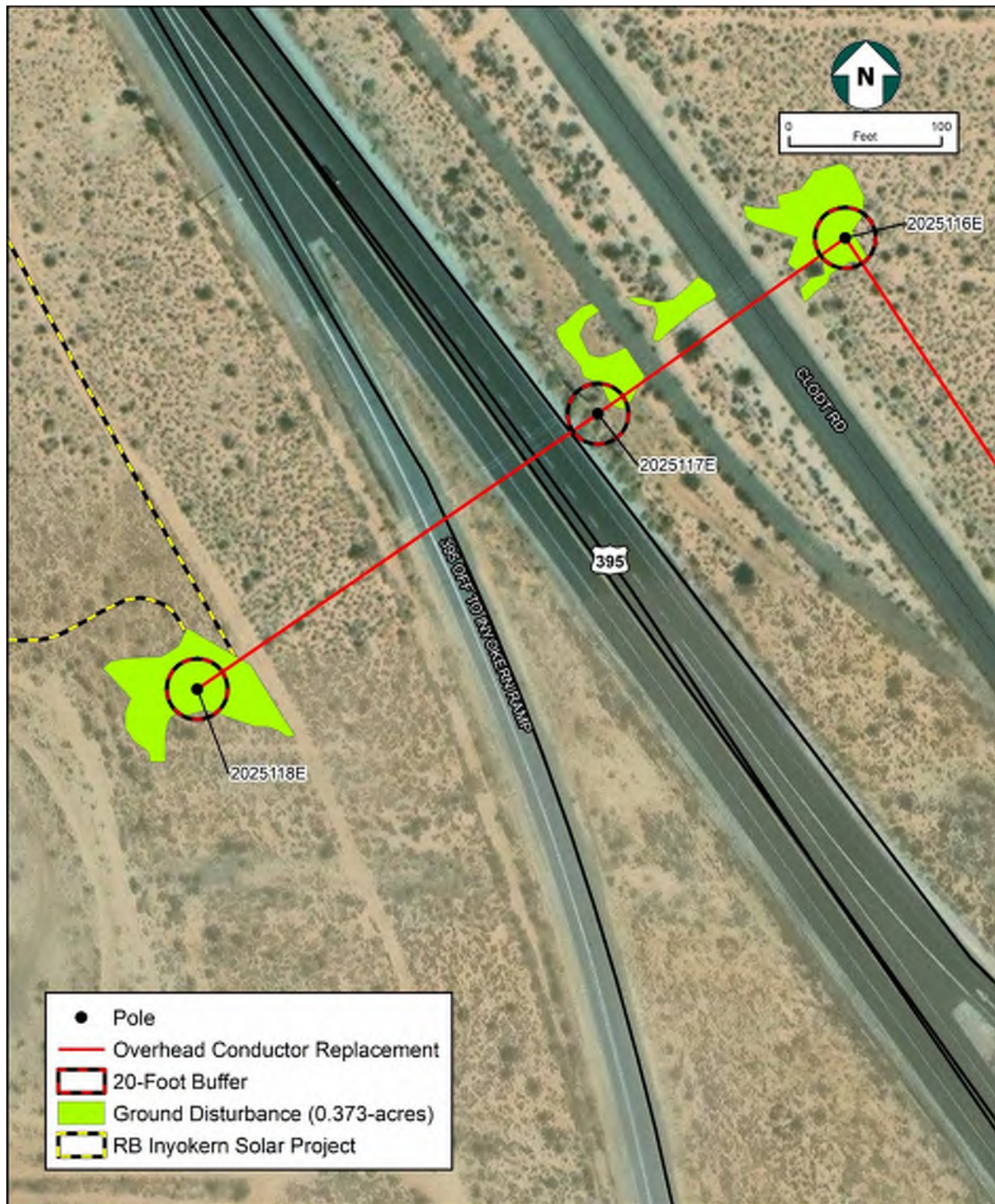


Figure 4
Habitat Disturbance
SCE Pole Replacement and Upgrades in Support of RB Inyokern Solar
Project, Kern County, California.

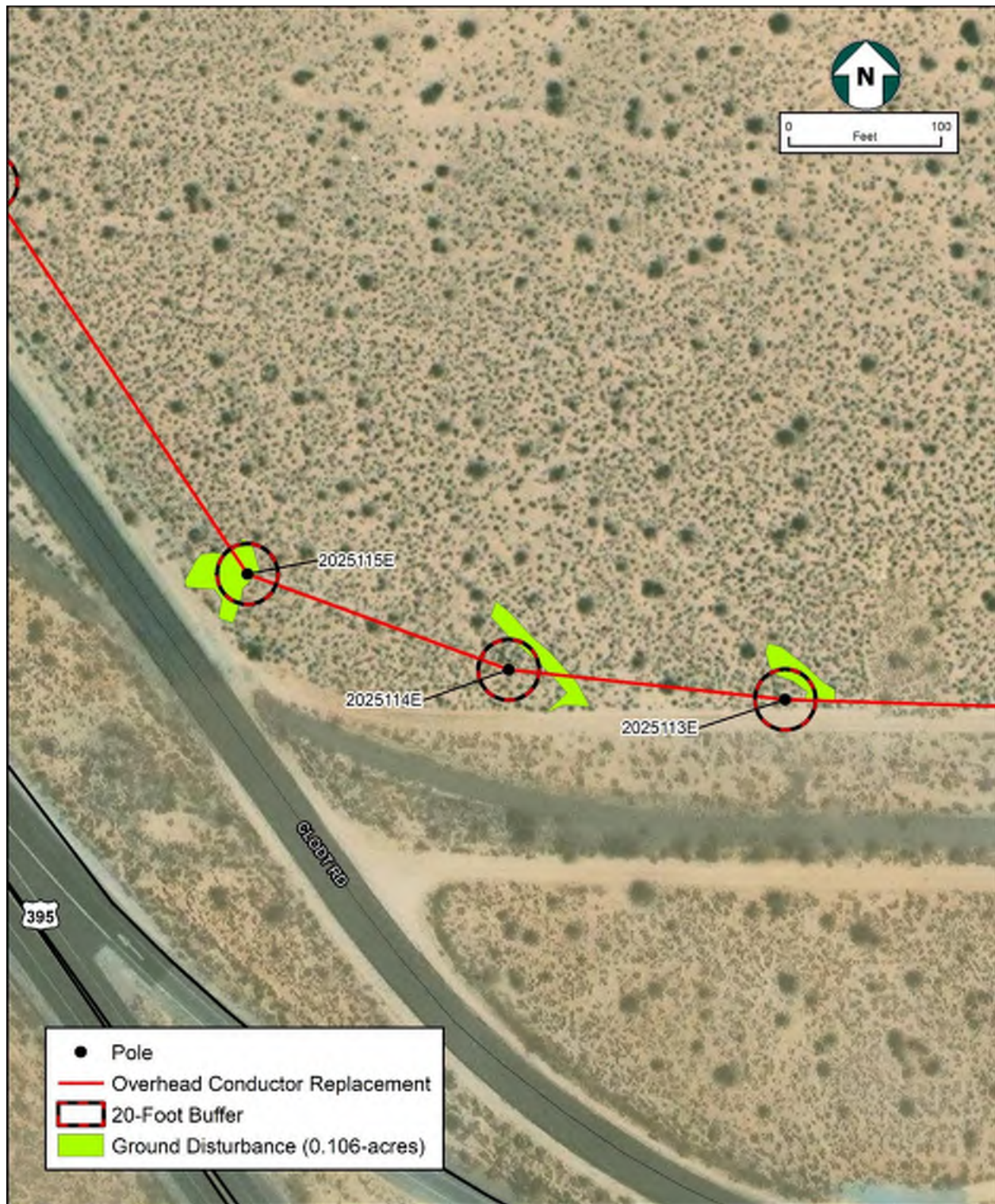


Figure 5
Habitat Disturbance
SCE Pole Replacement and Upgrades in Support of RB Inyokern Solar
Project, Kern County, California.

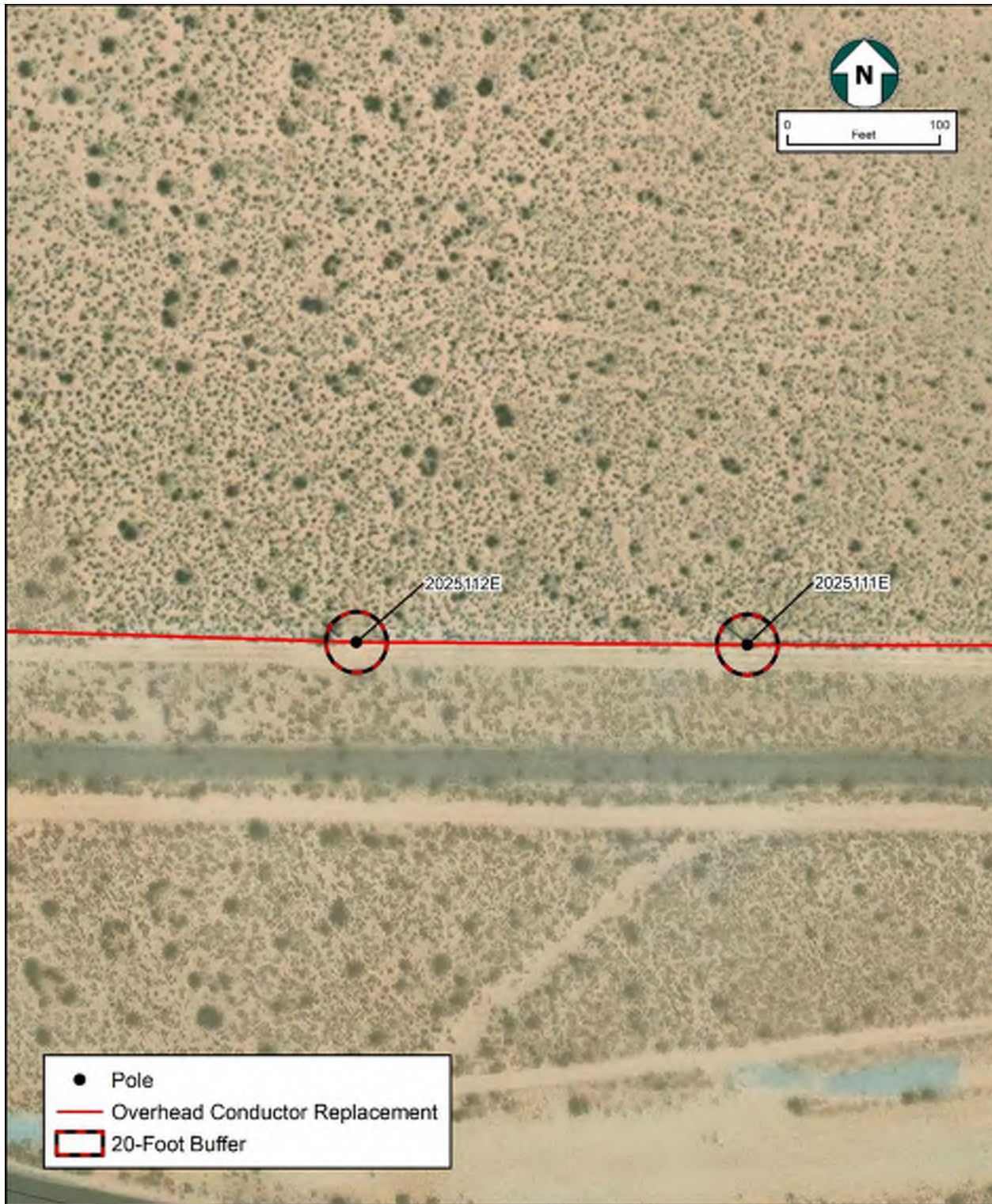


Figure 6
Habitat Disturbance
SCE Pole Replacement and Upgrades in Support of RB Inyokern Solar
Project, Kern County, California.

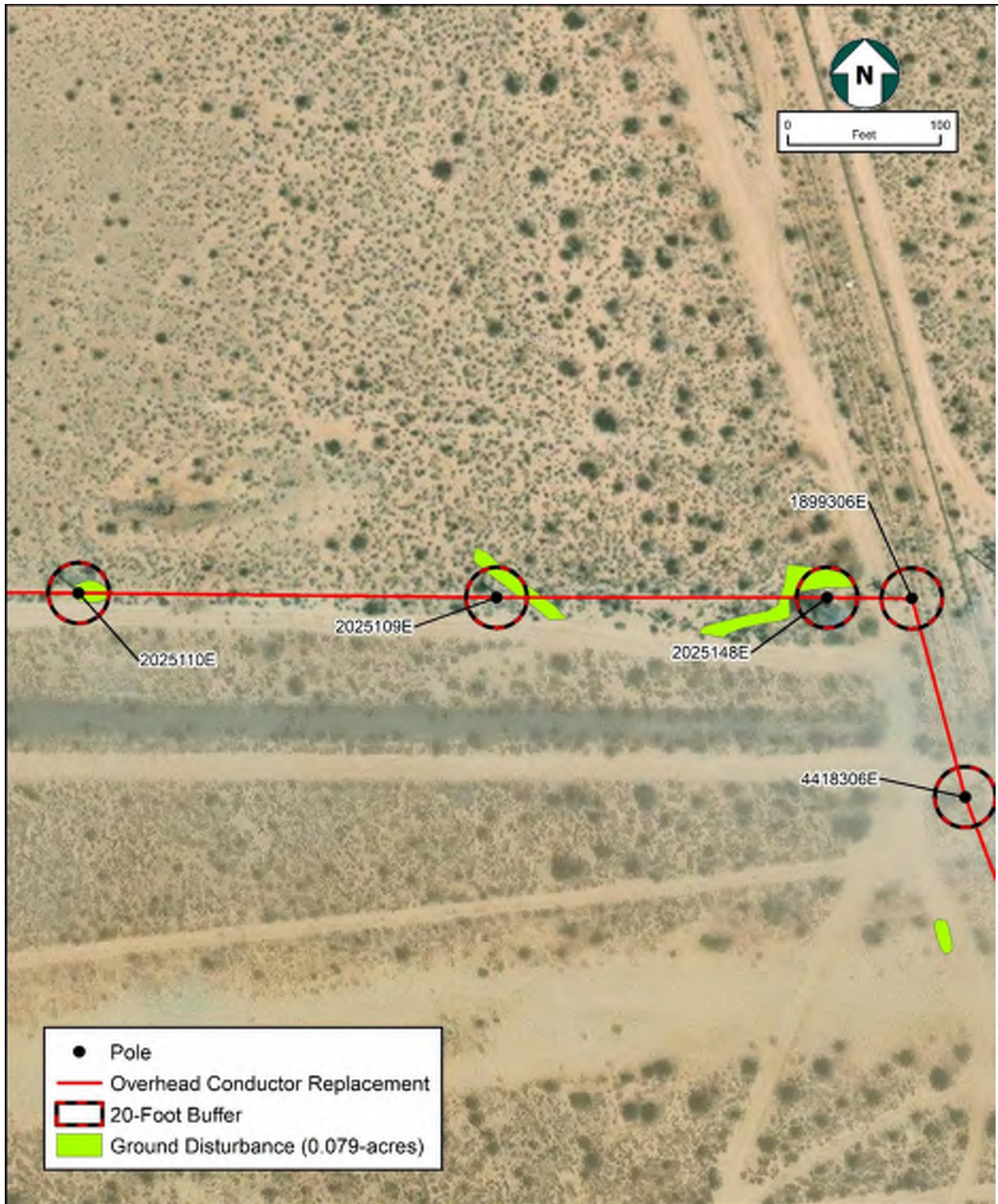


Figure 7
Habitat Disturbance
SCE Pole Replacement and Upgrades in Support of RB Inyokern Solar
Project, Kern County, California.



Figure 8
Habitat Disturbance
SCE Pole Replacement and Upgrades in Support of RB Inyokern Solar
Project, Kern County, California.

ATTACHMENT B

REPRESENTATIVE PHOTOGRAPHS OF HABITAT DISTURBANCE



Photograph 1. Representative photograph of habitat disturbance at pole 1997904E.
35.6533861°N -117.795625°W, facing southwest.
Taken by Curtis Uptain on May 02, 2024.



Photograph 2. Representative photograph of habitat disturbance at pole 4028513E
35.653392 °N -117.795211 °W, facing Southwest.
Taken by Curtis Uptain on May 02, 2024.



Photograph 3. Representative photograph of habitat disturbance at pole 22025108E
35.6541833°N, -117.7973944°W, facing northwest.
Taken by Curtis Uptain on April 22, 2024.



Photograph 4. Representative photograph of habitat disturbance at pole 22025110E
35.6541222°N, -117.7983778°W, facing north.
Taken by Curtis Uptain on April 15, 2024.



Photograph 5. Representative photograph of habitat disturbance at pole 22025114E
35.6542972°N -117.8012556°W, facing east.
Taken by Curtis Uptain on April 22, 2024.



Photograph 6. Representative photograph of habitat disturbance at pole 22025115E
35.6549211°N, -117.8029874°W, facing northeast.
Taken by Curtis Uptain on April 15, 2024.



Photograph 7. Representative photograph of habitat disturbance at pole 22025116E
35.6559271°N, -117.8029279°W, facing northeast.
Taken by Curtis Uptain on April 15, 2024.



Photograph 8. Representative photograph of habitat disturbance at pole 2025148E
35.6542639°N, -117.7967611°W, facing southwest.
Taken by Curtis Uptain on April 22, 2024.



Photograph 9. Representative photograph of habitat disturbance at pole 22025117E
35.6588829°N, -117.8006006°W, facing west.
Taken by Curtis Uptain on April 15, 2024.



Photograph 10. Representative photograph of habitat disturbance at pole 22025118E
35.6543806°N, -117.8041528°W, facing west.
Taken by Curtis Uptain on April 15, 2024.

Attachment C
Daily Monitoring Forms



RB INYOKERN SOLAR PROJECT
Compliance Form

Date: 4/13/2024	Monitor(s): Curtis Uptain and Karissa Denney	Start Time: 0700	End Time: 1620
Location: RB Inyokern Solar, SCE Power-pole installation			
Weather Conditions: Clear ☒ Overcast ☐ Partly Cloudy ☐ Rain ☐	Wind: 0 ☐ < 5 ☒ 5-20 ☐ >20 ☐	Air Temp: 49 °F (Start) / °F (End)	

Construction Activities: Faith Electrical installing new power poles and wiring for RB Inyokern Solar Project	Construction Equipment in Use: Backhoe, hand tools, construction vehicles, i
Observations: 0700- begin Pre-construction clearance survey for 5 poles (110, 115, 116, 117, and 118). 0820 – survey complete. No biological resources located. 0830- foreman and SCE representative discuss cutting and looping wiring on power poles not being worked on today. Karissa monitored excavation and installation of anchor using backhoe at pole 117E from 0830 to 0915 while Curtis was with Jason and Greg reviewing/discussing other parts of the project. Curtis monitored activity at pole 116E, from 0915 to 1245. Two anchors were and the form for the new pole were installed. During this period checked on the hand-crew several times. The hole for the pole form collapsed and needed to be cleaned out to install the form. Curtis monitored the installation of one anchor and pole form installation at pole 115E from 1245 to 1435. Moved crew to pole 118E and monitored installation of one anchor and install of a form for the pole replacement until 1620.	Monitoring Checklist Yes No N/A ☒ ☐ ☐ Site clearance survey prior to daily activity ☒ ☐ ☐ Equipment staged in ROW ☒ ☐ ☐ Staging/storage outside of riparian habitat/water body ☒ ☐ ☐ No pets/firearms on-site ☒ ☐ ☐ All trash contained in closed, animal-proof containers ☒ ☐ ☐ Vehicle speeds do not exceed 15 mph ☒ ☐ ☐ Ingress/egress clearly marked ☐ ☐ ☒ ESA/Wildlife Exclusion Fence intact ☒ ☐ ☐ Excavations covered or have escape ramps ☐ ☐ ☒ Construction lighting avoids Covered Species habitat ☒ ☐ ☐ No rodenticides in use ☒ ☐ ☐ Vehicle fluid leaks contained ☐ ☐ ☒ Vegetation removal monitored by Designated Biologist ☒ ☐ ☐ Stockpiles placed so they cannot pass into aquatic habitats ☒ ☐ ☐ WEAT training for new employees
	Special Status Species: none but did see a baby coachwhip at pole 116E.
	Compliance Concerns: None
	Construction Plans for Remainder of Week and Next: replacing poles and stringing line at poles 115, 116, 117, and 118 tomorrow.



Photo 1. Crew digging an 8ft hole at 2025117E for a new anchor point.
Taken by Karissa Denney on April 23, 2024.



Photo 2. Crew digging pit at pole 2025116E for anchor, north.
Taken by Curtis Uptain on 04/13/2024.



Photo 3. Crew hand-digging hole for replacement of pole 2025110E, facing east.
Taken by Curtis Uptain on April 12, 2024.



Photo 4. Excavating for anchor installation at pole 2025118E, facing northwest.
Taken by Curtis Uptain on April 12, 2024.



RB INYOKERN SOLAR PROJECT
Compliance Form

Date: 20240414	Monitor(s): Curtis Uptain	Start Time: 0130	End Time: 1530
Location: RB Inyokern Solar			
Weather Conditions: Clear ☒ Overcast ☐ Partly Cloudy ☒ Rain ☐		Wind: 0 ☐ < 5 ☐ 5-20 ☒ >20 ☐	Air Temp: 41°F (Start) , 55 (end)

Construction Activities: shutting off power to the line, removing cable, replacing poles, re-energizing line, etc.	Construction Equipment in Use: 12 crane trucks, various types of trailers hauling poles, wire cable, and other equipment, at least 5 pickups, 3 Edison trucks and at least 2 Edison pickups, 4 to 6 CHP, 4 crews in pickups for road closure.
Observations: Arrived on site at 0130. At least 15 trucks on site. Coordinated with Jason, then conducted sweeps of each site. 0230 – began monitoring activities. Travelled between the 3 main work areas. The 3 concentrated area of work were at pole 110E, poles 115E 116E and 117E, and pole 118E. Rotated between them all morning until finished. Work at Pole 110E was complete and crew was gone by 1130. Disturbance area was about 10 feet by 20 feet. Disturbance at 115E = 10 x 20 + 20 x 35. Disturbance at 116E = 10 x 20 + 10 x 40 + 10 x 20. Disturbance at 117E = 30x40+20x20. Disturbance on 118E = 10x20+30x80+40x40. Crews leaving and I took last photo of pole 116E and left at 1515.	Monitoring Checklist Yes No N/A ☒ ☐ ☐ Site clearance survey prior to daily activity ☐ ☒ Equipment staged in ROW ☐ ☒ Staging/storage outside of riparian habitat/water body ☒ ☐ ☐ No pets/firearms on-site ☒ ☐ ☐ All trash contained in closed, animal-proof containers ☒ ☐ ☐ Vehicle speeds do not exceed 15 mph ☐ ☒ Ingress/egress clearly marked ☐ ☒ ESA/Wildlife Exclusion Fence intact ☒ ☐ ☐ Excavations covered or have escape ramps ☒ ☐ ☐ Construction lighting avoids Covered Species habitat ☒ ☐ ☐ No rodenticides in use ☒ ☐ ☐ Vehicle fluid leaks contained ☒ ☐ ☐ Vegetation removal monitored by Designated Biologist ☒ ☐ ☐ Stockpiles placed so they cannot pass into aquatic habitats ☒ ☐ ☐ WEAT training for new employees
	Special Status Species: none
	Compliance Concerns: none
	Construction Plans for Remainder of Week and Next: none



Photo 1. Work crew staged along Clodt road preparing to start work, north.
Taken by Curtis Uptain on April 14, 2024.



Photo 2. Line removal at poles 115E, 116E, and 117E, facing north.
Taken by Curtis Uptain on April 14, 2024.



Photo 3. Pole replacement at 118E, facing north.
Taken by Curtis Uptain on April 14, 2024.



Photo 4. Pole replacement at 110E, facing north.
Taken by Curtis Uptain on April 14, 2024.



RB INYOKERN SOLAR PROJECT
Compliance Form

Date: 20240421	Monitor(s): Curtis Uptain	Start Time: 0700	End Time: 1730
Location: RB Inyokern Solar			
Weather Conditions: Clear ☒ Overcast ☐ Partly Cloudy ☒ Rain ☐		Wind: 0 ☐ < 5 ☒ 5-20 ☐ >20 ☐	Air Temp: 56°F (Start) , 93 (end)

Construction Activities: Replacing pole 2025148E, replace upper arm on pole 441836E, replacing upper arm on 2025109E, and changing arms on 2025113E and 2025114E. All work can be done from existing road except replacing the pole.	Construction Equipment in Use: 2 crane trucks, one with lift and one with auger, one trailer with pole, one pickup.
Observations: Arrived at site at 0630, met crew at 0709 and had tailboard. Conducted preconstruction survey for pole 148E and preconstruction for pole 441836 by 0750. Finished arm replacement on pole 836E at 0905. Began replacing pole 148E at 0910. First spread the lines on lower arm then on upper arm while new hole was augured for new pole. Put arms on new pole and raised pole into position at 0955. I cleared pole 109E at 1145. They completed pole installation and removal of 148E at 1200 and began arm replacement at 109E at 1210. Cleared 113E at 1230 and they began working on arm replacement at 1245. Took a while for them to scope it out because the anchor line was in the way. Went back to pole 109E to take post work photo. Back to monitor 113E at 1315 and they finished that arm replacement at about 1515. I cleared pole 114E at 1445 to 1500, took post arm replacement photo at 113E, then got them going at 114E. Installed the lower arm only, the upper arm will be replaced on Wednesday. Cleared for them to leave, but with no recontouring because they will need the same route for Wednesday. Also no photo for same reason. Finished at 1730. Note – in some photos I mistakenly named 109E as 108E so that needs to be fixed.	Monitoring Checklist Yes No N/A ☒ ☐ ☐ Site clearance survey prior to daily activity ☐ ☒ Equipment staged in ROW ☐ ☒ Staging/storage outside of riparian habitat/water body ☒ ☐ ☐ No pets/firearms on-site ☒ ☐ ☐ All trash contained in closed, animal-proof containers ☒ ☐ ☐ Vehicle speeds do not exceed 15 mph ☐ ☒ Ingress/egress clearly marked ☐ ☒ ESA/Wildlife Exclusion Fence intact ☒ ☐ ☐ Excavations covered or have escape ramps ☐ ☒ Construction lighting avoids Covered Species habitat ☐ ☒ No rodenticides in use ☒ ☐ ☐ Vehicle fluid leaks contained ☒ ☐ ☐ Vegetation removal monitored by Designated Biologist ☒ ☐ ☐ Stockpiles placed so they cannot pass into aquatic habitats ☒ ☐ ☐ WEAT training for new employees
	Special Status Species: none
	Compliance Concerns: none
	Construction Plans for Remainder of Week and Next: Reconductor the line from pole 441836 to pole 2025115E on 04/24/24.



Photo 1. Pole replacement at 2025148E, facing northwest.
Taken by Curtis Uptain on April 22, 2024.



Photo 2. Arm replacement at pole 109E, facing east.
Taken by Curtis Uptain on April 22, 2024.



Photo 3. Arm replacement at 113E, facing west.
Taken by Curtis Uptain on April 22, 2024.



Photo 4. Arm replacement at pole 836E, facing northeast.
Taken by Curtis Uptain on April 22, 2024.



RB INYOKERN SOLAR PROJECT
Compliance Form

Date: 20240424	Monitor(s): Curtis Uptain	Start Time: 1830	End Time: 0700
Location: RB Inyokern Solar transmission line			
Weather Conditions: Clear ☒ Overcast ☐ Partly Cloudy ☒ Rain ☐	Wind: 0 ☐ < 5 ☒ 5-20 ☐ >20 ☐	Air Temp: 70°F (Start) , 56° (end)	

Construction Activities: Reconductoring line from pole 306E to pole 114E.	Construction Equipment in Use: 6 crane trucks, one with line trailer and one with equipment trailer. 6 pickups.
Observations: Arrived at site at 1830 with Danielle. I took her on a tour of the line and filled her in on the work that had been completed and the plans for tonight. We did a precon of some areas where there could be some off road travel needed. Met with the alighting crew and set up one light at pole 306E, then drove back to Clodt road for tailboard at 2000. Finished laying line at 2140. Got the power turned off at about 2245. Worked on reconductoring the entire line until 0700 am on 4/25/24.	Monitoring Checklist Yes No N/A ☒ ☐ ☐ Site clearance survey prior to daily activity ☐ ☐ ☒ Equipment staged in ROW ☐ ☐ ☒ Staging/storage outside of riparian habitat/water body ☒ ☐ ☐ No pets/firearms on-site ☒ ☐ ☐ All trash contained in closed, animal-proof containers ☒ ☐ ☐ Vehicle speeds do not exceed 15 mph ☐ ☐ ☒ Ingress/egress clearly marked ☐ ☐ ☒ ESA/Wildlife Exclusion Fence intact ☒ ☐ ☐ Excavations covered or have escape ramps ☐ ☐ ☒ Construction lighting avoids Covered Species habitat ☐ ☐ ☒ No rodenticides in use ☒ ☐ ☐ Vehicle fluid leaks contained ☒ ☐ ☐ Vegetation removal monitored by Designated Biologist ☒ ☐ ☐ Stockpiles placed so they cannot pass into aquatic habitats ☒ ☐ ☐ WEAT training for new employees
	Special Status Species: none
	Compliance Concerns: none
	Construction Plans for Remainder of Week and Next: Conductor the line from pole 441836 to the substation on May 1, 2024.



Photo 1. Laying cable from pole 306 to the west, facing north.
Taken by Curtis Uptain on April 24, 2024.



Photo 2. Laying cable from pole 306 to the west.
Taken by Curtis Uptain on April 24, 2024.



RB INYOKERN SOLAR PROJECT
Compliance Form

Date: 20240424	Monitor(s): Danielle Temple	Start Time: 1830	End Time: 0700
Location: RB Inyokern Solar			
Weather Conditions: Clear ☒ Overcast ☐ Partly Cloudy ☒ Rain ☐		Wind: 0 ☐ < 5 ☒ 5-20 ☒ >20 ☐	Air Temp: 60°F (Start), 50(end)

Construction Activities: Replacing pole 2025148E, replace upper arm on pole 441836E, replacing upper arm on 2025109E, and changing arms on 2025113E and 2025114E. Replace wire starting at western most pole and working west. All work can be done from existing road except replacing the pole.	Construction Equipment in Use: 4 crane trucks with lift and one with auger, four pickup.
Observations: Arrived at site at 1830. Met with Uptain and toured site. Conducted clearance survey at poles 2025111E 2025112E. No sensitive resources found. Crew arrived at 2015 and had tailboard. Conducted precon survey for pole 148E and precon for pole 441836 by 0750. Began replacing pole 114E at 2120. Crew used existing access track to access and park a bucket truck. Reframing of this pole was completed and work stopped at 2300. 2200 attended tailboard and gave quick environmental reg summary 2330 cleared pole 2025148e. Extended crane truck with bucket had to access pole and couldn't go other way because of reframing work on end pole. Crew did need to drive over large bushes. At the end of the night, Curt covered the track with dirt and debris, 0030 to truck went pole to pole stringing the top line: 2025110E, I cleared the area because crew thought they would need to pull off but ended up not needing to. 0300 cleared pole 2025115E with Curt to allow for truck to move over veg. Truck entered on mostly previously disturbed area. Truck was used to tighten wire. 0400 crews began stringing powerline starting at 2025115E and working west. Trucks were placed on highway at intervals located at poles were wire connections and tightening needed to take place. 0615 crews finished the line and began moving out of the site. Uptain and Temple checked under the vehicles before they moved off site. No special status species were present. Temple and Uptain worked with the crews to cover the tracks into the habitat adjacent to the road with dirt and veg debris. 0700 left the project after all crews were finished and off the project site for the day.	Monitoring Checklist Yes No N/A ☒ ☐ ☐ Site clearance survey prior to daily activity ☐ ☐ ☒ Equipment staged in ROW ☐ ☐ ☒ Staging/storage outside of riparian habitat/water body ☒ ☐ ☐ No pets/firearms on-site ☒ ☐ ☐ All trash contained in closed, animal-proof containers ☒ ☐ ☐ Vehicle speeds do not exceed 15 mph ☐ ☐ ☒ Ingress/egress clearly marked ☐ ☐ ☒ ESA/Wildlife Exclusion Fence intact ☐ ☐ ☒ Excavations covered or have escape ramps ☐ ☐ ☒ Construction lighting avoids Covered Species habitat ☐ ☐ ☒ No rodenticides in use ☒ ☐ ☐ Vehicle fluid leaks contained ☐ ☐ ☒ Vegetation removal monitored by Designated Biologist ☐ ☐ ☒ Stockpiles placed so they cannot pass into aquatic habitats ☐ ☐ ☒ WEAT training for new employees
	Special Status Species: none
	Compliance Concerns: none
	Construction Plans for Remainder of Week and Next: Reconductor the line from pole 441836 to pole 2025115E on 04/24/24.



Photo 1. Truck parked before reframing at 2025114E.
GPS coordinates 35.654169°N, -117.801639°W, facing northwest.
Taken by Danielle Temple on April 24, 2024.



Photo 2. Stringing line from start point at pole 2025115E.
GPS coordinates 35.654107°N, -117.801974°W, facing northeast.
Taken by Danielle Temple on April 24, 2024.



Photo 3. Access road into pole 2025114e before access track was repaired.
GPS coordinates 35.654282°N, -117.802255°W, facing northwest.
Taken by Danielle Temple on April 24, 2024.



Photo 4. Access road into pole 2025114E after access track was repaired.
GPS coordinates 35.654282°N, -117.802255°W, facing northwest.
Taken by Danielle Temple on April 24, 2024.



Photo 5. Access road into pole 2025115E after access track was repaired.
GPS coordinates 35.654282°N, -117.802255°W, facing northwest.
Taken by Danielle Temple on April 24, 2024.



RB INYOKERN SOLAR PROJECT
Compliance Form

Date: 2024.05.01	Monitor(s): Curtis Uptain	Start Time: 1900	End Time: 0830
Location: RB Inyokern Solar transmission line			
Weather Conditions: Clear ☒ Overcast ☐ Partly Cloudy ☒ Rain ☐		Wind: 0 ☐ < 5 ☒ 5-20 ☐ >20 ☐	Air Temp: 82°F (Start) , 61 ° (end)

Construction Activities: upgrading 3 poles on west side of fence, upgrading 3 poles and installing anchors within CLNWC. replacing 2 poles to the east of the substation outside the fence line. Reconductoring the line on these poles ending at the substation.	Construction Equipment in Use: about 9 trucks, various pickups, backhoe, light trailers, etc.
Observations: conducted preconstruction survey of the area to the west of the fence from 12 to 1PM. At 1900 met Brittany and took her on a tour of the site. Part of the crew had already arrived. Spoke with the foreman to get an idea of the nights plan. Tailboard meeting at 2000. Security showed up a little before 2000, but returned about 2030 because they decided to post security all night so that they would not have to lock us in. From 2030 to 2100 I brought the trucks in one at a time to clear the areas they needed to get to, then examined a broader area of about 200 feet beyond the work areas. Cleared areas for staging equipment and monitored work activities throughout the night until they left at about 0700 on 5/2/2024. Worked with Brittany to GPS areas of disturbance at all poles to document post-construction disturbance areas, then left site at 0830 to meet with Dave at RB Inyokern site and then drove back to Clovis.	Monitoring Checklist Yes No N/A ☒ ☐ ☒ Site clearance survey prior to daily activity ☒ ☐ ☐ Equipment staged in ROW ☐ ☒ ☐ Staging/storage outside of riparian habitat/water body ☒ ☐ ☐ No pets/firearms on-site ☒ ☐ ☐ All trash contained in closed, animal-proof containers ☒ ☐ ☐ Vehicle speeds do not exceed 15 mph ☒ ☐ ☐ Ingress/egress clearly marked ☐ ☐ ☒ ESA/Wildlife Exclusion Fence intact ☐ ☐ ☒ Excavations covered or have escape ramps ☒ ☐ ☐ Construction lighting avoids Covered Species habitat ☐ ☐ ☒ No rodenticides in use ☐ ☐ ☒ Vehicle fluid leaks contained ☒ ☐ ☐ Vegetation removal monitored by Designated Biologist ☐ ☐ ☒ Stockpiles placed so they cannot pass into aquatic habitats ☒ ☐ ☐ WEAT training for new employees
	Special Status Species: none
	Compliance Concerns: none
	Construction Plans for Remainder of Week and Next week: None – project completed.



Photo 1. Work area east of substation, facing northwest.
Photograph taken by Curtis Uptain on May 1, 2024.



Photo 2. Work area N of substation, facing north.
Photograph taken by Curtis Uptain on May 1, 2024.



RB INYOKERN SOLAR PROJECT
Compliance Form

Date: 2024.05.02	Monitor(s): Brittany Gummo	Start Time: 8:00pm	End Time: 6:15AM
Location: RB Inyokern Solar transmission line			
Weather Conditions: Clear ☒ Overcast ☐ Partly Cloudy ☐ Rain ☐	Wind: 0 ☐ < 5 ☒ 5-20 ☐ >20 ☒	Air Temp: 68°F (Start), 54° (end)	

Construction Activities: Power pole arm replacement on 4028512E, pulling & installing power cable. Installation of reflector tape on poles.	Construction Equipment in Use: Aerial lifts, pickup trucks, stingers, equipment trailer.
Observations: The work went smoothly. Areas of road were cleared prior to construction use.	Monitoring Checklist Yes No N/A ☒ ☐ ☐ Site clearance survey prior to daily activity ☒ ☐ ☐ Equipment staged in ROW ☐ ☐ ☒ Staging/storage outside of riparian habitat/water body ☒ ☐ ☐ No pets/firearms on-site ☒ ☐ ☐ All trash contained in closed, animal-proof containers ☒ ☐ ☐ Vehicle speeds do not exceed 15 mph ☒ ☐ ☐ Ingress/egress clearly marked ☐ ☐ ☒ ESA/Wildlife Exclusion Fence intact ☐ ☐ ☒ Excavations covered or have escape ramps ☒ ☐ ☐ Construction lighting avoids Covered Species habitat ☐ ☐ ☒ No rodenticides in use ☐ ☐ ☒ Vehicle fluid leaks contained ☒ ☐ ☐ Vegetation removal monitored by Designated Biologist ☐ ☐ ☒ Stockpiles placed so they cannot pass into aquatic habitats ☐ ☐ ☒ WEAT training for new employees
	Special Status Species: none
	Compliance Concerns: none
	Construction Plans for Remainder of Week and Next week: Night work construction complete



Photo 1. Replacing cross arms on pole 4028512E, facing north.
GPS Coordinates: 35.65296, -117.79603.
Taken by Brittany Gummo, 05/02/2024.



Photo 2. Pulling and Stringing power cable, facing northeast.
GPS Coordinates: 35.65334, -117.79651
Photograph taken by Brittany Gummo on May 2, 2024.

APPENDIX G
RESUMES



Curtis Uptain

Principal Biologist

QK Principal Biologist, Mr. Curtis Uptain has conducted over 1,500 miles of protocol-level tortoise transects. He has participated in a number of mark-recapture studies on desert tortoise and he has conducted pre-construction clearance surveys. He has processed (captured, weighted, measured and sometimes installed radio transmitters on) approximately 50 individual tortoises and has handled over 100 tortoises (including processing of recaptures).

From July 1981 to July 1983, Curtis was the resident field naturalist at the Desert Tortoise Natural Area located in California City, Kern County, Ca. While in this position he interacted with members of the Desert Tortoise Preserve Committee, conducted public tours of the natural area, maintained the boundary fence, kept records of public use of the site, assisted with tortoise research at permanent study plots on the natural area, and gathered and analyzed data on hatchling tortoise mortality related to raven predation.

TORTOISE-SPECIFIC PROJECT EXPERIENCE

- Evaluated habitat for desert tortoise and Mojave ground squirrel, prepared a Biological Assessment that was submitted to the US. Bureau of Land Management for use in a Section 7 consultation with the USFWS, and prepared a State 2081(b) Incidental Take Permit Application for the Bowman Road project, Ridgecrest, CA. 2012. Kern County Roads Department
- Performed approximately 50 miles of tortoise transects while describing sensitive flora and fauna at North Edwards and Inyokern, Kern County, CA for use in evaluating changes to zoning ordinances. August 1988. Kern County Planning Department
- Performed approximately 150 miles of tortoise transects during a biological survey for sensitive plants and wildlife at Rosamond for a proposed 1280 acre housing development. Kern County, Ca. May- June 1989. Kern County Planning Department
- Performed approximately 50 miles of tortoise transects to determine the relative abundance of desert tortoise at a proposed off-road vehicle park near Ridgecrest, Kern County, Ca. April 1988. Kern County Planning Department
- Performed approximately 150 miles of tortoise transects and marked and processed approximately 10 tortoises. Information was used to determine habitat evaluation and obtain density estimates of the desert tortoise for the Harper Lake Solar Cogeneration Facility's Application For Certification to the California Energy Commission, San Bernardino County, Ca. April to June 1988, April to June 1989, and April 1990. ENSR
- Performed approximately 150 miles of tortoise transects and marked and processed approximately 7 tortoises. Information was used to determine habitat evaluations and density estimates of the desert tortoise for the Kramer Junction Solar Cogeneration Facility's application for certification to the California Energy Commission, San Bernardino County, Ca. April to June 1987. ENSR
- Performed desert tortoise surveys totaling approximately 950 transect miles along approximately 350 miles of the Mojave Pipeline from Topoc Arizona to Mojave and along 60 miles of a pipeline spur between Kramer Junction and Ridgecrest. April 1989 to November 1992. Woodward Clyde Consultants



- Performed habitat surveys and determined the distribution of sensitive flora and fauna (including the desert tortoise) along the LADWP McCollough-Victorville/Adelanto Transmission Line, Riverside County, CA and Clark County, Nv. November to December 1984. No tortoise transects were walked, but habitat was evaluated and spot searched for tortoise sign to provide an indication of distribution along the route. Dames and Moore Consultants, Inc.
- Assisted with a mark-recapture study of tortoises at the proposed Ward Valley nuclear waste site near Needles, California in 1988. Captured, processed, and installed radio transmitters and conducted radio-tracking on 30 tortoises.
- Conducted approximately 40 miles of tortoise transects and conducted pre-construction clearance surveys for tortoises for the Mesquite gold mine near Brawley, California in 1991. Removed 7 tortoises from the construction area.
- Performed approximately 20 miles of tortoise transects (triangular census transects) within Joshua Tree National monument in 1991.

MOHAVE GROUND SQUIRELL EXPERIENCE

Mr. Uptain has extensive experience working with Mohave ground squirrels and other small mammals in the arid southwest United States. In the mid-1980's he was approved by the California Department of Fish and Game as an instructor in the CHIEF method of determining habitat quality for Mohave ground squirrels. Mr. Uptain has conducted numerous protocol-level Mohave ground squirrel trapping efforts (for details see attached resume) including:

- The Southern California Edison Victorville-Kramer Junction transmission line,
- the Los Angeles Department of Water and Power McCollough – Victorville/Adelanto Transmission line,
- the Mohave Pipeline,
- the Harper Lake solar energy facility,
- the Shumake mine expansion project,
- the Queenstake mine project
- a gravity wave detector at Edwards Air Force base,
- a 1,280 acre housing development near Rosamond

During execution of these projects, he has handled numerous Mohave ground squirrels. Most of these captures were reported under special permits held by other principal investigators, however he was issued a special permit to trap Mohave ground squirrels in 1990, and that permit is currently valid. Since the mid-1980's Mr. Uptain has served on a technical advisory committee (MGSTAC) that reviewed the status of the Mohave ground squirrel for the Mojave Desert Plan and continues to provide expertise to the wildlife agencies. Mr. Uptain gave testimony to the Wildlife Conservation Board concerning a petition to de-list the Mohave ground squirrel. He has extensive experience capturing and handling similar species including the white-tailed antelope squirrel (*Ammospermophilus leucurus*) and the San Joaquin antelope squirrel (*A. nelsoni*) and a wide variety of kangaroo rat and other small mammals, including many other listed species.



David L. Dayton

Principal Environmental Scientist

AREAS OF EXPERTISE

- Protocol-level Special Status Species Plant and Wildlife Surveys
- Project Management
- Environmental Permitting and Monitoring
- NEPA and CEQA Document Preparation

EDUCATION

- BA., Biology University of California, Santa Cruz,
- AA, Cabrillo College,

REGISTRATIONS / CERTIFICATIONS

- MBHCP Qualified Biologist for San Joaquin Kit Fox, Burrowing Owl and San Joaquin Antelope Squirrel
- EDF Big Beau Solar LLC. Project, Kern County and California Department of Fish and Wildlife Designated Biologist for Desert kit fox, Swainson's hawk, Joshua tree, raptors, burrowing owl and special-status plants for the implementation of the Mitigation Measure Monitoring Program
- Occidental Petroleum Gunslinger Project California Department of Fish and Wildlife Designated Biologist for San Joaquin Kit Fox, Blunt-nosed Leopard Lizard, Burrowing Owl and San Joaquin Antelope Squirrel
- Caltrans Project California Department of Fish and Wildlife Designated Biologist for Tehachapi Slender Salamander
- California Department of Fish and Wildlife, Level II Blunt-nosed Leopard Lizard Surveyor
- Black-footed Ferret Surveyor, Rawlins, Wyoming, US Fish and Wildlife Service
- Mexican Spotted Owl Surveyor, Moab, Utah, US Fish and Wildlife Service
- Desert Tortoise Survey Techniques Training, Dr. Claudia Luke and Dr. Jim Andre, 1989, Barstow, Ca
- Desert Tortoise Survey Training, Desert Tortoise Council, 2017 Ridgecrest, Ca

Mr. Dayton has extensive and diversified experience as a Senior Environmental Scientist and Project Manager since 1988. He interacts with clientele, state and federal agencies, conducts business development and contracting, conducts hiring and training of staff, prepares and conducts document production and oversight, project design, budgeting and operations reporting. His professional biological experience includes project management of wildlife and botanical surveys, habitat assessments, technical document preparation, environmental, health and safety monitoring and environmental reclamation and mitigation. He is an expert conducting field surveys for State and federally threatened and endangered species and other sensitive wildlife and plant species and their habitats in habitats throughout the western U.S..

PROFESSIONAL EMPLOYMENT

2017 – Present	QK, Principal Environmental Scientist
2014 – 2017	Dayton Consulting, Principal Scientist
2006 – 2014	Stantec Consulting, Senior Biologist
2003 – 2006	ATC Associates, Senior Scientist
1998 – 2003	JBR Environmental, Biologist
1995 – 1998	KEA Environmental, Biologist
1989 – 1995	BioSystems Analysis, Biologist

PROJECT EXPERIENCE

BLUNT-NOSED LEOPARD LIZARD (*Gambelia sila*)

Mojave Pipeline | Dagget, CA to McKittrick, CA. (04/1991 – 02/1993) Biologist.

Conducted sensitive species surveys for desert tortoise, Joshua tree, sensitive plants, desert and San Joaquin kit fox, BNLL BUOW, San Joaquin and Mojave antelope squirrel. Monitored active desert tortoise burrows, monitored San Joaquin kit fox dens and mapped and collapsed dens prior to construction. Monitored construction activities for biological and environmental compliance according to CDFG and USFWS permitting.

Bechtel Mojave Gas Pipeline – Riverside and Kern Counties, CA. Senior Biologist/ Environmental Monitoring.

Conducted desert tortoise, desert kit fox, BNLL, SJKF, SJAS surveys for the Mojave gas pipeline project from Barstow to Taft, California. Captured and transported for a study (Dr. Germano, CSUB) BNLL along the right-of-way for relocation. Conducted species surveys and daily environmental monitoring for compliance within state and federal permits for the duration of the project.



- Utah Department of Transportation Certified Erosion Control Monitor
- Union Pacific Rail road Safety Training
- PASSPORT training renewed yearly
- CPR, AED and First Aid Training and Certification

PROFESSIONAL ORGANIZATIONS

- Member, American Society of Mammologists
- Member, The Wildlife Society (TWS), TWS Western Section, San Joaquin Valley Chapter and Central Coast Chapter

PGT-PGE Gas Pipeline – Oregon and California. *Senior Biologist/Environmental Monitoring.*

Conducted Special Status Species Surveys including northern goshawk, golden eagle, osprey, bald eagle, sage grouse, sand hill crane, tri-colored blackbird, Swainson's hawk, SJKF, BNLL, BUOW, and conducted Biological Monitoring for a large-scale gas pipeline construction project from Oregon to central California over a 2-year period. Biological monitoring included: monitoring Special Status species nests located along the right of-way, trapping, banding, and relocation of burrowing owls, endangered plant species, and monitoring construction activities for compliance within the state and federal permits. Duties included pre-construction surveys for federal and/or state listed plant and animal species, construction and maintenance of exclusion zones to protect resources including nest sites, plant populations, and sensitive soil areas; monitoring of construction crews during construction to ensure compliance with state and federal permits at water body crossings, wetlands, and compliance at exclusion zones that included sensitive cultural sites; conducting worker education programs to instruct construction personnel regarding compliance for state and federal permits and sensitive areas; coordinating with the state and federal stakeholders to ensure that permit requirements were met throughout the project.

Mount Poso North Pipeline, Kern-Tulare Water District – Kern County, CA. (November 2017 – Current) *Senior Environmental Scientist.*

Assisted with the reconnaissance survey of an approximate 8-mile proposed oil field water reuse pipeline. Conducted protocol-level BNLL surveys. Potential special-status species in the vicinity included: SJKF, BNLL, BUOW and special-status plant species. Conducted protocol-level BNLL surveys, maintained a complete record of all species observed and contributed to final reporting.

Occidental Gunslinger Project (10Z, 11Z and 12Z) – McKittrick, CA. (04/2010 – 12/2012) *Senior Biologist/CDFW Designated Biologist.*

CDFW Designated Biologist for Occidental HCP sensitive species surveys, trapping and re-location of species for oil well pad and roadway development. Conducted and supervised surveys for San Joaquin kit fox, blunt-nosed leopard lizard, San Joaquin antelope squirrel, giant kangaroo rat and burrowing owl. Supervised the preparation and trapping and relocation plans and assisted in the trapping and relocation of 3 Sections of potential oil development areas. Under the supervision of permitted USFWS and CDFW biologists (Larry Saslaw and Bill VanHerwig) set baited traps, assisted with handling and transporting 162 giant kangaroo rats for relocation. Supervised construction and relocation of giant kangaroo rats Supervised and conducted monitoring during construction activities as according to the CDFW 2081 incidental take permit. Lead author in the monitoring, biological survey and reporting to the state and federal agencies.

SR 33/ SR 119 Rumble Strip Project (TO#17), Caltrans – Taft, CA. May 2018. Associate Environmental Scientist.

Conducted a pre-construction survey for six Traffic Element Count Stations (TCS) project site locations on two state highway projects. Conducted pre-construction surveys state and federally listed plant and wildlife species including SJAS, SJKF, BNLL and BUOW. Conducted daily sweeps on the project sites for threatened or endangered species or their sign. Maintained a complete record of all species observed and contributed to final reporting.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. (August 2017 – Current) *Senior Environmental Scientist*

Conducted a reconnaissance survey on a 2,550-acre parcel of the Hopkins Lease to identify the presence or absence of special-status species or their habitat. Potential special-status species in the vicinity included SJKF, BNLL, GKR, SJAS, BUOW and plant special-status species. Conducted protocol-level BNLL and special status plant species surveys and prepared final reporting.

PGE Pipeline Project – Malin, OR to Panoche, CA. (12/1995 – 06/1997) *Senior Biologist.*

Conducted sensitive species surveys from Oregon/CA border to Panoche for nesting birds and raptors, goshawk, sage grouse, Swainson's hawk, golden eagle, bald eagle, sand hill crane, southwestern will flycatcher, bank swallow, tri-colored blackbird, yellow-billed cuckoo, burrowing owl, red-legged frog, San Joaquin kit fox, Sierra Nevada red fox, blunt-nosed leopard lizard and sensitive plant species. Monitored scent and camera stations for fur bearers, monitored San Joaquin kit fox dens, spotlighted, mapped and collapsed San Joaquin kit fox dens, trapped and banded burrowing owls and created artificial burrows. Monitored construction activities for biological and environmental compliance according to CDFG and USFWS permitting.

Mojave Pipeline | Dagget, CA to McKittrick, CA. (04/1991 – 02/1993) *Biologist.*

Conducted sensitive species surveys for desert tortoise, Joshua tree, sensitive plants, desert and San Joaquin kit fox, BNLL, BUOW, San Joaquin and Mojave antelope squirrel. Monitored active desert tortoise burrows, monitored San Joaquin kit fox dens and mapped and collapsed dens prior to construction. Monitored construction activities for biological and environmental compliance according to CDFG and USFWS permitting.

CRC Blunt-nosed Leopard Lizard and Special Status Species Surveys – McKittrick, Taft, Kettleman City, CA. (06/2012 – 09/2014) *Senior Biologist.*

Planned and conducted sensitive species surveys for all or parts of 27 sections of CRC owned or administered property for oil and gas exploration and development. Conducted protocol and presence/absence surveys for BNLL, SJKF, SJAS, BUOW and sensitive plant species. Conducted peer review and QA/QC on

biological survey results, construction monitoring reports for BLM, CDFW and USFWS.

Protocol-level Blunt-nosed Leopard Lizard Surveys, Solari Sand and Gravel Mine Project, Granite Construction Company – Arvin, CA. Senior Environmental Scientist.

Conducted adult and juvenile BNLL protocol-level surveys as a Level II BNLL Surveyor on 270 to 540 acres of previously disturbed habitat and grazeland.

Protocol-level Blunt-nosed Leopard Lizard Surveys, Cherry Avenue Revegetation and Drainage Project, Caltrans – Kern County, CA. Senior Environmental Scientist.

Conducted adult and juvenile BNLL protocol-level surveys as a Level II BNLL Surveyor for a 2.5-mile stretch of the SR 119, west of Bakersfield, CA and east of Taft, CA.

Kern-Tulare Water District Pipeline, Kern-Tulare Water District – Kern County, CA. November 2017 – Current. Senior Environmental Scientist.

Conducted protocol level surveys of an approximate 12-mile proposed oil field water reuse pipeline for BNLL, SJKF, BUOW, and other special-status species. Drafted and finalized, Drafted CEQA documents (i.e. BAR) for the CEQA permitting.

Bechtel Mojave Gas Pipeline – Riverside and Kern Counties, CA. Senior Biologist/ Environmental Monitoring.

Conducted desert tortoise, desert kit fox, BNLL, SJKF, SJAS surveys for the Mojave gas pipeline project from Barstow to Taft, California. Captured and transported for a study (Dr. Germano, CSUB) BNLL along the right-of-way for relocation. Conducted species surveys and daily environmental monitoring for compliance within state and federal permits for the duration of the project.

Chevron Pipeline Company Midway/Sunset, Biological Opinion, NEPA Environmental Assessment, CEQA Environmental Assessment – Kern County, CA. Senior Biologist/Contributory Author.

Prepared BAR and CEQA EIR for a pipeline replacement project on BLM lands in Kern County, CA. Conducted protocol-level surveys for state and federal listed plants, BNLL, BUOW and SJKF.

California Coastal Aqueduct Phase II Special Status Species Surveys, Trapping and Relocation, and Environmental Monitoring – Kern and San Luis Obispo Counties, CA. Biologist/Environmental Monitoring.

Conducted Special Status species surveys including: SJKF, BNLL, BUOW, Nesting raptors, Swainson's hawk and golden eagle for a large water pipeline project over a 3-year project timeline. Trapped and relocated BNLL along the right-of-way prior to construction. Conducted daily environmental monitoring for compliance within state and federal permits during the entire project and instructed the environmental awareness course to construction personnel.

SAN JOAQUIN KIT FOX (*Vulpes macrotis mutica*)

Mojave Pipeline | Dagget, CA to McKittrick, CA. (04/1991 – 02/1993) Biologist.

Conducted sensitive species surveys for desert tortoise, Joshua tree, sensitive plants, desert and San Joaquin kit fox, BNLL BUOW, San Joaquin and Mojave antelope squirrel. Monitored active desert tortoise burrows, monitored San Joaquin kit fox dens and mapped and collapsed dens prior to construction. Monitored construction activities for biological and environmental compliance according to CDFG and USFWS permitting.

Bechtel Mojave Gas Pipeline – Riverside and Kern Counties, CA.

Senior Biologist/ Environmental Monitor.

Conducted desert tortoise, desert kit fox, BNLL, SJKF, SJAS surveys for the Mojave gas pipeline project from Barstow to Taft, California. Captured and transported for a study (Dr. Germano, CSUB) BNLL along the right-of-way for relocation. Conducted species surveys and daily environmental monitoring for compliance within state and federal permits for the duration of the project.

PGT-PGE Gas Pipeline – Oregon and California. *Senior Biologist/ Environmental Monitor.*

Conducted Special Status Species Surveys including northern goshawk, golden eagle, osprey, bald eagle, sage grouse, sand hill crane, tri-colored blackbird, Swainson's hawk, SJKF, BNLL, BUOW, and conducted Biological Monitoring for a large-scale gas pipeline construction project from Oregon to central California over a 2-year period. Biological monitoring included: monitoring Special Status species nests located along the right of-way, trapping, banding, and relocation of burrowing owls, endangered plant species, and monitoring construction activities for compliance within the state and federal permits. Duties included pre-construction surveys for federal and/or state listed plant and animal species, construction and maintenance of exclusion zones to protect resources including nest sites, plant populations, and sensitive soil areas; monitoring of construction crews during construction to ensure compliance with state and federal permits at water body crossings, wetlands, and compliance at exclusion zones that included sensitive cultural sites; conducting worker education programs to instruct construction personnel regarding compliance for state and federal permits and sensitive areas; coordinating with the state and federal stakeholders to ensure that permit requirements were met throughout the project.

Mount Poso North Pipeline, Kern-Tulare Water District – Kern County, CA. (November 2017 – Current) *Senior Environmental Scientist.*

Assisted with the reconnaissance survey of an approximate 8-mile proposed oil field water reuse pipeline. Conducted protocol-level BNLL surveys. Potential special-status species in the

vicinity included: SJKF, BNLL, BUOW and special-status plant species. Conducted protocol-level BNLL surveys, maintained a complete record of all species observed and contributed to final reporting.

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Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. (August 2017 – Current) Senior Environmental Scientist

Conducted a reconnaissance survey on a 2,550-acre parcel of the Hopkins Lease to identify the presence or absence of special-status species or their habitat. Potential special-status species in the vicinity included SJKF, BNLL, GKR, SJAS, BUOW and plant special-status species. Conducted protocol-level BNLL and special status plant species surveys and prepared final reporting.

PGE Pipeline Project – Malin, OR to Panoche, CA. (12/1995 – 06/1997) Senior Biologist.

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trapped and banded burrowing owls and created artificial burrows. Monitored construction activities for biological and environmental compliance according to CDFG and USFWS permitting.

Mojave Pipeline | Dagget, CA to McKittrick, CA. (04/1991 – 02/1993) Biologist.

Conducted sensitive species surveys for desert tortoise, Joshua tree, sensitive plants, desert and San Joaquin kit fox, BNLL, BUOW, San Joaquin and Mojave antelope squirrel. Monitored active desert tortoise burrows, monitored San Joaquin kit fox dens and mapped and collapsed dens prior to construction. Monitored construction activities for biological and environmental compliance according to CDFG and USFWS permitting.

CRC Blunt-nosed Leopard Lizard and Special Status Species Surveys – McKittrick, Taft, Kettleman City, CA. (06/2012 – 09/2014) Senior Biologist.

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Kern-Tulare Water District Pipeline, Kern-Tulare Water District – Kern County, CA. November 2017 – Current. Senior / Environmental Scientist.

Conducted protocol level surveys of an approximate 12-mile proposed oil field water reuse pipeline for BNLL, SJKF, BUOW, and other special-status species. Drafted and finalized, Drafted CEQA documents (i.e. BAR) for the CEQA permitting.

Bechtel Mojave Gas Pipeline – Riverside and Kern Counties, CA. Senior Biologist/ Environmental Monitoring.

Conducted desert tortoise, desert kit fox, BNLL, SJKF, SJAS surveys for the Mojave gas pipeline project from Barstow to Taft, California. Captured and transported for a study (Dr. Germano, CSUB) BNLL along the right-of-way for relocation. Conducted species surveys and daily environmental monitoring for compliance within state and federal permits for the duration of the project.

Chevron Pipeline Company Midway/Sunset, Biological Opinion, NEPA Environmental Assessment, CEQA Environmental Assessment – Kern County, CA. Senior Biologist/Contributory Author.

Prepared BAR and CEQA EIR for a pipeline replacement project on BLM lands in Kern County, CA. Conducted protocol-level surveys for state and federal listed plants, BNLL, BUOW and SJKF.

California Coastal Aqueduct Phase II Special Status Species Surveys, Trapping and Relocation, and Environmental Monitoring – Kern and San Luis Obispo Counties, CA. Biologist/Environmental Monitor.

Conducted Special Status species surveys including: SJKF, BNLL, BUOW, Nesting raptors, Swainson's hawk and golden eagle for a large water pipeline project over a 3-year project timeline. Trapped and relocated BNLL along the right-of-way prior to construction. Conducted daily environmental monitoring for compliance within state and federal permits during the entire project and instructed the environmental awareness course to construction personnel.

BURROWING OWL (*Athene cunicularia*)

PGT-PGE Gas Pipeline – Oregon and California. *Senior Biologist/Environmental Monitor.*

Conducted Special Status Species Surveys including northern goshawk, golden eagle, osprey, bald eagle, sage grouse, sand hill crane, tri-colored blackbird, Swainson's hawk, SJKF, BNLL, BUOW, and conducted Biological Monitoring for a large-scale gas pipeline construction project from Washington to central California over a 2-year period. Biological monitoring included: monitoring Special Status species nests located along the right of-way, trapping, banding, and relocation of burrowing owls, endangered plant species, and monitoring construction activities for compliance within the state and federal permits. Duties included pre-construction surveys for federal and/or state listed plant and animal species, construction and maintenance of exclusion zones to protect resources including nest sites, plant populations, and sensitive soil areas; monitoring of construction crews during construction to ensure compliance with state and federal permits at water body crossings, wetlands, and compliance at exclusion zones that included sensitive cultural sites; conducting worker education programs to instruct construction personnel regarding compliance for state and federal permits and sensitive areas; coordinating with the state and federal stakeholders to ensure that permit requirements were met throughout the project.

Mount Poso North Pipeline, Kern-Tulare Water District – Kern County, CA. (November 2017 – Current) *Senior Environmental Scientist.*

Assisted with the reconnaissance survey of an approximate 8-mile proposed oil field water reuse pipeline. Conducted protocol-level BNLL surveys. Potential special-status species in the vicinity included: SJKF, BNLL, BUOW and special-status plant species. Conducted protocol-level BNLL surveys, maintained a complete record of all species observed and contributed to final reporting.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. (August 2017 – Current) *Senior Environmental Scientist*

Conducted a reconnaissance survey on a 2,550-acre parcel of the Hopkins Lease to identify the presence or absence of special-status species or their habitat. Potential special-status species in the vicinity included SJKF, BNLL, GKR, SJAS, BUOW and plant special-status species. Conducted protocol-level BNLL and special status plant species surveys and prepared final reporting.

CRC Blunt-nosed Leopard Lizard and Special Status Species Surveys – McKittrick, Taft, Kettleman City, CA. (06/2012 – 09/2014) *Senior Biologist.*

Planned and conducted sensitive species surveys for all or parts of 27 sections of CRC owned or administered property for oil and gas exploration and development. Conducted protocol and presence/absence surveys for BNLL, SJKF, SJAS, BUOW and sensitive plant species. Conducted peer review and QA/QC on biological survey results, construction monitoring reports for BLM, CDFW and USFWS.

San Jose International Airport Special Status Species Surveys – San Jose, CA. *Senior Biologist.*

Conducted burrowing owl surveys at the airport, trapped and banded owls, and constructed artificial nesting locations to reduce owl/aircraft collisions.

Kern River Bike Path Rehabilitation Project (MBHCP), City of Bakersfield – Bakersfield, CA. (December 2017) *Senior Environmental Scientist.*

Conducted a reconnaissance survey for covered species along an approximate 3-mile existing paved bike path. Potential special-status species in the vicinity included: SJKF, TKR, BUOW, and other special-status species. Maintained a complete record of all species observed and photographs taken during the survey. Monitored potential SJKF dens for occupancy according to protocol. Conducted a total of four consecutive nights of SJKF den monitoring before den exclusion.

Big Beau Solar Project– Kern County. August 2020- Present.

Principal Environmental Scientist/Designated Biologist.

Provided biological monitoring during the Big Beau Joshua tree removal Project. Focused on detecting the presence of special status species that includes the desert tortoise, desert kit fox, American badger, Swainson's hawk, golden eagle, burrowing owl, western Joshua tree, and nesting migratory birds and raptors. Project scope included the removal or harvesting of all Joshua trees located within the project boundaries.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. (August 2017 – Current) *Senior Environmental Scientist*

Conducted a reconnaissance survey on a 2,550-acre parcel of the Hopkins Lease to identify the presence or absence of special-status species or their habitat. Potential special-status species in the vicinity included SJKF, BNLL, GKR, SJAS, BUOW and plant special-status species. Conducted protocol-level BNLL and special status plant species surveys and prepared final reporting

compliance according to CDFG and USFWS permitting.

Kern River Bike Path Rehabilitation Project (MBHCP), City of Bakersfield – Bakersfield, CA. (December 2017) *Senior Environmental Scientist.*

Conducted a reconnaissance survey for covered species along an approximate 3-mile existing paved bike path. Potential special-status species in the vicinity included: SJKF, TKR, BUOW, and other special-status species. Maintained a complete record



of all species observed and photographs taken during the survey. Monitored potential SJKF dens for occupancy according to protocol. Conducted a total of four consecutive nights of SJKF den monitoring before den exclusion.

Tract 6520 (MBHCP), K. Hovnanian Companies of California, Inc. – Bakersfield, CA. (August 2017, October -November 2017)
Senior Environmental Scientist.

Conducted a reconnaissance and pre-construction survey for covered species including SJKF, SJAS and BUOW prior to a land purchase. Maintained a complete record of all species observed and photographs taken during the surveys. Conducted four nights of potential SJKF den monitoring on the Project site

Cottonwood East Rehab Project (Caltrans Contract No 06A2126, Task Order 57) – Bakersfield, CA. *Sr. Environmental Scientist.*

Conducted pre-construction special status species for a highway expansion project. Species included SJKF, BUOW and nesting birds. Conducted active and potential SJKF den monitoring, and weekly inspections and reporting. The project has been delayed with anticipated preconstruction surveys for San Joaquin kit fox and nesting birds to occur in early March 2018, followed by night monitoring.



Eric Madueno

Senior Environmental Scientist

AREAS OF EXPERTISE

- Special-Status Species Protocol and Non-Protocol Surveys in San Joaquin Valley and Eastern Sierra
- Environmental Construction Compliance Monitoring
- Wetland and Non-Wetland Delineations and Permitting
- Worker Environmental Awareness Training for Construction Personnel for numerous Projects

EDUCATION

- BS, Biology, California State University, Bakersfield

REGISTRATIONS / CERTIFICATIONS

- California Department of Fish and Wildlife, Certified Level II Blunt-Nosed Leopard Lizard Surveyor.
- United States Fish and Wildlife Service (USFWS) and California Department of Wildlife (CDFW) approved biologist.
- CRAM Certified Practitioner
- Part 107 Certified sUAS Pilot
- Advanced Open Water Certification, Professional Association of Diving
- UPRR Safety Training Certification
- CPR, AED, and First Aid Certification renewed every three years.
- PASSPORT/OPL training, renewed annually

PERMITS

Mr. Madueno is a graduate of California State University, Bakersfield (CSUB), with a Bachelor of Science in Biology. He brings over nine years of experience in environmental consulting, specializing in the ecology of the San Joaquin Valley, western Mojave Desert, and Eastern Sierras. Mr. Madueno has expertise in conducting United States Fish Wildlife Service (USFWS) and California Department of Wildlife (CDFW) protocol level surveys, construction monitoring, worker environmental awareness training, vegetation removal oversight, and compliance monitoring. He has led wetland delineations and functional assessments to obtain jurisdictional determinations for both state and federal permits, covering hundreds of acres of wetlands and non-wetland waters. Throughout his career, he has supported a wide range of projects, including housing developments, solar and wind energy installations, habitat restoration, and infrastructure projects such as pipelines and bridges. Mr. Madueno has also written and edited reports supporting CEQA and NEPA compliance.

PROFESSIONAL EMPLOYMENT

2025– present	QK, Senior Environmental Scientist
2023– 2025	QK, Senior Associate Environmental Scientist
2018 –2023	QK, Associate Environmental Scientist
2015 –2018	QK, Assistant Environmental Scientist

PROJECT EXPERIENCE

Herpetofauna

Mr. Madueno has several years of experience surveying and identifying herpetofauna. Throughout his career, he has handled a diverse range of species, including thirty seven California tiger salamander (*Ambystoma californiense*) larvae, nine California red legged frogs (*Rana draytonii*), two northwestern pond turtles (*Actinemys marmorata*), five legless lizards (*Anniella* sp.), three western spadefoots (*Spea hammondi*), three red-sided garter snakes (*Thamnophis sirtalis infernalis*), three Mohave green rattlesnakes (*Crotalus scutulatus*), one southern Pacific rattlesnake (*Crotalus oreganus helleri*), two Mohave shovel-nosed snakes (*Chionactis occipitalis*), a desert horned lizard (*Phrynosoma platyrhinos*), and 10 side-blotched lizards (*Uta stansburiana*). Mr. Madueno is a CDFW approved designated biologist for blunt-nosed leopard lizard and has excavated 172 BNLL burrows, one of which contained one BNLL adult.



PROFESSIONAL ORGANIZATIONS

- Member, The Wildlife Society, San Joaquin Valley Chapter

PROTOCOL-LEVEL SURVEYS

- Blunt-nosed leopard lizard Level II Surveyor
- San Joaquin Kit Fox and Desert Kit Fox
- Western Burrowing Owl
- Legless Lizard
- Giant and Tipton Kangaroo Rat
- San Joaquin Antelope Squirrel
- Swainson's Hawk
- Desert Tortoise
- Rare Plants
- Wetland and Non-Wetland Waters Delineations

PRESENTATIONS

- The Western Section of The Wildlife Society, Natural Communities Conference, March 2019, Bakersfield, CA. Road Rehabilitation Biology.
- The Western Section of The Wildlife Society, Natural Communities Conference, March 2025, Bakersfield, CA. Successfully Excluding Cliff Swallow Nesting on a Bridge Structure.

BLUNT-NOSED LEOPARD LIZARD

(Gambelia sila)

Mr. Madueno has over 9 years of experience surveying and monitoring for BNLL. He has conducted over 100 protocol level surveys (300+ survey hours) and over 500 day of compliance monitoring for BNLL. He has positively identified 20+ BNLL individuals and has attended several BNLL workshops and studied/worked under Dr. Germano. Below are several Projects Mr. Madueno has worked that involved BNLL.

Blackwells corner CAPM– Kern County, CA (September 2024 to Present)

Senior Associate Environmental Scientist.

Approved Designated Biologist for San Joaquin antelope squirrel, blunt-nosed leopard lizard, San Joaquin kit fox and Kern mallow under Incidental Take Permit #2081-2023-029-04, USFWS Permit #2022-0023965-S7-002, LSA #EPIMS-KER-37203-R4, USACE 404 Permit No. 0710-0003, and Regional Water Quality Control Board 401 WDID Permit #5C15CR00130. Excavated 172 BNLL burrows, one of which contained an BNLL adult, and 100+ San Joaquin antelope squirrel burrows over 13 days. Provided two days of construction monitoring along right-of-way work areas. Assisted with San Joaquin antelope squirrel trapping during which Mr. Madueno handled a total of 4 specimens (3 adults and 1 juvenile).

NLC Energy Project, California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist. (2024 - Current).

Conducted a reconnaissance survey on approximately 75-acres of partially disturbed saltbush scrub habitat. Several potential special-status plant and wildlife species including San Joaquin kit fox, San Joaquin antelope squirrel, Crotch's bumblebee, blunt-nosed leopard lizard, western burrowing owl, giant and short-nosed kangaroo rats, Tulare grasshopper mouse, American badger, Kern mallow, California jewelflower, recurved larkspur, San Joaquin woollythreads, and oil neststraw. Mr. Madueno observed one western burrowing owl and a potential owl burrow, eight San Joaquin antelope squirrels, and eight potential San Joaquin kit fox dens. Drafted the Biological Analysis Report.

Caltrans District 6: Blackwell's Corner CAPM Project (TO#28), Caltrans – Kern County, CA. Senior Associate/ Associate Environmental Scientist. (2023).

Conducted 11 protocol level blunt-nosed leopard lizard surveys (58 hours) for a 8.0-mile stretch of State Route 33, within western Kern County, CA. Surveys were conducted in potential habitat for several other special-status species including San Joaquin kit fox, burrowing owl, San Joaquin antelope squirrel, Swainson's hawk, and nesting birds Observed a total of one San Joaquin antelope squirrel and one adult blunt-nosed leopard lizard during blunt-nosed leopard lizard surveys. No San Joaquin kit fox, burrowing owl, Swainson's hawk or nesting birds were observed during the BNLL surveys.

CONTINUING EDUCATION

- Advanced California Tiger Salamander Aquatic Survey Workshop, Santa Rosa, Sonoma County, CA. 2026.
- California Tiger Salamander Terrestrial Ecology Workshop, Laguna de Santa Rosa Foundation, Santa Rosa, Sonoma County, CA. 2026.
- Rare Pond Species Survey Techniques Workshop, Laguna de Santa Rosa Foundation, March 6-8, 2026, Santa Rosa, CA.
- California Bumble Bee Atlas Training, Xerces Society, 2024
- CRAM Training, October 2024
- Los Cerritos Wetlands Habitat Restoration, Tidal Influence, 2022-2023
- Green Sea Turtle Monitoring/Training, San Gabriel River Sea Turtle Monitoring, 2022-2023
- Desert Tortoise Workshop, Dr. Paul Delaney (Copper Mountain College), 2022
- Conservation Lecture Series: Conservation of endangered Buena Vista Lake Shrews through investigation of taxonomic status, distribution, and use of non-invasive survey methods; December 20, 2021; Webinar, CA.
- Rattlesnake Safety and Handling Workshop, Central Coast Snake Services, taught by Emily Taylor, October 2021
- California Rare Bumble Bee Workshop, Rich Hatfield and Leif Richardson, Xerces Society, 2021.
- Introduction to Desert Tortoises and Field Techniques, November 6-7, 2020, Online webinar.
- Wetland Delineation Training, Richard Chinn, 2019
- The Blunt-Nosed Leopard Lizard (*Gambelia sila*) Identification Workshop, 2018

Caltrans District 6: Panoche Hills CAPM Project (TO#09/TO#14) – Fresno County, CA. *Senior Associate Environmental Scientist.* (2022 – 2023)

Conducted protocol level blunt-nosed leopard lizard surveys, botanical survey, and small mammal trapping (XL Sherman Traps) for giant kangaroo rat, and other wildlife species in the vicinity, for a 12.0-mile stretch of the Interstate 5 (I-5), within western Fresno County, CA. No BNLL was observed during the BNLL or botanical surveys. Excavated over 200 small mammal burrows.

Carbon Terravault I Project, California Resources Corporation (CRC) – Kern County, CA. *Senior Associate Environmental Scientist* (2022-Current).

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂) capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. The Project would inject the captured CO₂ into these well sites for sequestration into the ground for importunity as part of the goal to reduce CO₂ emissions for the State of California. Several special-status plant species have the potential to occur on site including heartscale, Lost Hills crownscale, California jewelflower, recurved larkspur, Kern mallow, Temblor buckwheat, Tejon poppy, showy golden madia, San Joaquin woollythreads, and oil neststraw. In addition, several special-status wildlife species have the potential to occur on site including Crotch's bumblebee, California glossy snake, blunt-nosed leopard lizard, San Joaquin coachwhip, temblor legless lizard, coast horned lizard, burrowing owl, Swainson's hawk, prairie falcon, loggerhead shrike, LeConte's thrasher, San Joaquin antelope squirrel, giant kangaroo rat, short-nosed kangaroo rat, Tulare grasshopper mouse, San Joaquin pocket mouse, American badger, and San Joaquin kit fox. No special-status plant species were observed during the reconnaissance surveys. Observed one adult blunt-nosed leopard lizard, two potential burrowing owl burrows, one loggerhead shrike, two LeConte's thrashers, ten potential San Joaquin kit fox dens, 10 San Joaquin antelope squirrels, potential giant kangaroo rat burrows with the appropriate size characteristics, potential kangaroo rat burrows with appropriate size characteristics for short-nosed kangaroo rats, and five stick nests that could be utilized by nesting birds. Assisted with the drafting of the Biological Analysis Report and associated figures

Gas Company Road Solar Project, Apex Energy Solutions, LLC – Kern County, CA. *Senior Associate/ Associate Environmental Scientist.* (2021-2022)

Conducted 4 protocol blunt-nosed leopard lizard (28 hours) and floristics surveys, and small mammal trapping for giant kangaroo rat on approximately 58 acres, in Taft, California. Special status plant species with the potential to occur include heartscale and Kern mallow. No direct observation of a blunt-nosed leopard lizard or any special-status plant species. Observed approximately 15 San Joaquin antelope squirrels during the field surveys. Small mammal trapping (XL Sherman

Traps) for 2 nights for giant kangaroo rat. No giant kangaroo rat captured during the small mammal trapping effort.

Caltrans District 6: Reward CAPM (TO#60/TO#10) – Kern County. *Senior Associate /Associate Environmental Scientist.* (2021-2022).

Conducted 5 protocol blunt-nosed leopard lizard surveys (21 hours), protocol floristic surveys, monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on State Route 58 between Post Mile (PM) 6.0 and 15.4 near McKittrick, California. Observed 15 inactive and active stick nests occupied by American crows or ravens, 30 potential San Joaquin kit fox dens, and three active American badger dens. No direct observation of a blunt-nosed leopard lizard, San Joaquin kit fox, burrowing owl, American badger, or special-status plant species. Observed 15 SJAS within the Project boundary. Drafted weekly summaries, pre-construction survey reports, and provided associated GIS figures for reports.

Caltrans District 6: Lost Hills Rubber Rehabilitation Project (TO#20/TO#31/TO#42/TO#07) – Caltrans. *Senior Associate/Associate Environmental Scientist* (2019 to 2023).

Conducted three seasons of blunt-nosed leopard lizard protocol level surveys for a 5-mile stretch of the I-5, and associated laydown areas, north of Lost Hills, CA. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed two adult Swainson's hawks, a deceased American badger, and variety of other raptors and bird species. Conducted San Joaquin kit fox protocol den monitoring for nine potential dens over the course of two years. Drafted 2019 and 2020 Blunt-nosed Leopard Lizard Survey Reports and monthly Pre-construction Survey Reports and used ArcMap to produce map figures for the client

Caltrans District 6: Grapevine Culvert Repair Project (TO#32), Bakersfield, CA. *Associate Environmental Scientist* (2019 to 2020).

Conducted 14 protocol-level blunt-nosed leopard lizard surveys (41 hours) in areas of potential suitable habitat for the species. No direct observation of a blunt-nosed leopard lizard. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Caltrans District 6: Cherry Avenue Revegetation and Drainage Project (TO#21/#28) – Kern County, CA. *Associate Environmental Scientist* (2019).

Conducted blunt-nosed leopard lizard protocol level surveys, protocol-level San Joaquin kit fox den monitoring for 19 potential dens and temporarily excluding all 19 dens, small mammal trapping (XL Sherman Traps and Tomahawk Traps) for giant kangaroo rat, San Joaquin antelope squirrel, and other wildlife species in the vicinity, and daily construction monitoring for a 2.5-mile stretch of the State Route 119, west of Bakersfield, CA and east of Taft, CA. Hand excavated approximately 50 small mammal burrows that could potential be used San Joaquin antelope squirrel or blunt-nosed leopard lizard. Observed over 20

sightings of San Joaquin antelope squirrels during construction monitoring. Maintained a complete record of all species observed and trapped, photographs taken, and GPS points of biological resources. Drafted blunt-nosed leopard lizard survey report and used ArcMap to produce map figures for the client. All activities were conducted under mitigation measures within Incidental Take Permit No. 2081-2014-082-04 and Biological Opinion No. 2009-0143-R008-1.

Calgren Dairy Biofuels Project, Mass Energy – Tulare, Tulare County, CA. Associate Environmental Scientist (2018).

Conducted a reconnaissance survey for approximately 20-miles of low-pressure HDPE biogas gathering lines. The survey was conducted specifically looking for small mammal burrows and federally-listed special-status species. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed one adult blunt-nosed leopard lizard during the reconnaissance survey.

Lost Hills Project – Kern County, CA. Assistant Environmental Scientist (2017-2018).

Conducted one (1) protocol-level survey for BNLL (adult) on a proposed 4.7-mile road rehabilitation Project. Collected, submitted data, and assisted on final report.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. Assistant/Associate Environmental Scientist. (2017 to 2018).

Conducted a reconnaissance survey on a 2,550-acre parcel of the Hopkins Lease to identify the presence or absence of special-status species or their habitat. Potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. Conducted floristic surveys and blunt-nosed leopard lizard protocol level surveys. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed two San Joaquin kit foxes, one active San Joaquin kit fox natal den, tracks, and scat, 10 giant kangaroo complexes, and 15 San Joaquin antelope squirrels.

Kern-Tulare Water District Pipeline, Kern-Tulare Water District – Kern County, CA. Assistant/Associate Environmental Scientist (2017 to 2019).

Conducted a reconnaissance survey and pre-construction survey of an approximate 12-mile proposed oil field water reuse pipeline located in suitable blunt-nosed leopard lizard, San Joaquin kit fox, burrowing owl, and Swainson's hawk habitat. Conducted 21 protocol level BNLL surveys (115 hours) and maintained a complete record of all species observed, photographs taken, biological resources GPS points, and data sheets for the surveys.

Hopkins Lease, Sentinel Peak – Kern County, CA. Assistant Environmental Scientist (2017).

Conducted surveys for San Joaquin antelope squirrel, blunt-nosed leopard lizard, San Joaquin kit fox, giant kangaroo rat, Tipton kangaroo rat and burrowing owl on a 2,550-acre site. Observed 20+ San Joaquin antelope squirrels during the surveys.

Solari Sand and Gravel Project, Granite Construction Company – Arvin, CA. Assistant Environmental Scientist (2017-2019).

Conducted 15 protocol-level surveys for BNLL (60 hours; adult and juvenile) on a proposed 550-acre sand and gravel extraction project site. Collected, submitted data and assisted on final report.

Breitbart Linn Connector Line, Kern County, CA. Assistant Environmental Scientist (2017).

Conducted a biological pre-construction clearance survey of the Project site to identify the presence or absence of special-status species or their habitat as required by the adopted Kern County Gas and Oil Zoning Ordinance Environmental Impact Report Mitigation Monitoring and Reporting Program (MMRP). Monitored construction activities and provided worker environmental awareness training for threatened and endangered species. Observed and monitored three BNLL during construction activities.

Trafalgar Solar Project, Lend Lease Energy Development, LLC. - Kings County, CA. Assistant Environmental Scientist (2016).

Conducted a reconnaissance survey of the site located in potential San Joaquin kit fox, blunt-nosed leopard lizard, and giant kangaroo rat habitat. Conducted blunt-nosed leopard lizard protocol level surveys (total of 55 hours) and giant kangaroo rat trapping (XL Sherman Traps) to determine the presence or absence of the species.

Holmes Western Disturbance Reclamation Project, Energy Project Solutions, LLC. – Maricopa, CA. Assistant Environmental Scientist (2016).

Observed one BNLL individual during construction monitoring.

Caltrans District 6: Cherry Avenue Road Widening (TO#37), Caltrans – Bakersfield, Kern County, CA. Assistant Environmental Scientist (2016).

Provided biological monitoring during ground disturbance in areas of known San Joaquin kit fox, San Joaquin antelope squirrel, blunt-nosed leopard lizard, giant kangaroo rat, burrowing owl, short-nosed kangaroo rat, Kern mallow, California jewelflower, and San Joaquin woollythreads habitat. Implemented Incidental Take Permit #2081-2014-082-04 mitigation measures, Biological Opinion #81420-2009-F-0143-R003-2 mitigation measures, and Lake and Streambed Alteration Agreement #1600-2014-0216-R4 during the construction phase of the Project. Attended daily safety meetings with the crew and provided WEAT (Worker Environmental Awareness Training) to all field employees involved during construction. Maintained a complete record of all construction related activities, T&E trained personnel, species observed, and monitoring photos taken. Assisted with small

mammal trapping for short-nosed kangaroo rat, San Joaquin antelope squirrel, and giant kangaroo rat for a total of 3 nights. Handled a total of two Heermann's kangaroo rats under the guidance of authorized biologist Curtis Uptain. Observed one deceased adult San Joaquin kit fox and 33 San Joaquin antelope squirrels.

Plains All American Pipeline Anomaly Repair Projects (2016-2019)

Conducted pre-activity surveys and biological monitoring for several anomaly repair locations on sensitive environmental lands with a potential for protected, threatened and endangered species. Projects are conducted under a no-take, complete avoidance process except for a few projects that had specific permits. Protected, threatened and endangered with the potential to occur on site included San Joaquin kit fox, blunt-nosed leopard lizard, Tipton kangaroo rat, short-nosed kangaroo rat, burrowing owl, San Joaquin antelope squirrel, American badger, raptors and nesting birds and Bakersfield cactus. Over the course of time Mr. Madueno observed multiple raptors, several San Joaquin antelope squirrels, San Joaquin kit fox tracks, and burrowing owls. Drafted multiple reports and used ArcMap to produce map figures. A complete list of Projects is listed below.

- **Line 304, Line 314 Derby Acres to Ten Section Anomaly Repair, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
- **Line 2000 Dig 13 on DWR ROW Anomaly Repair, Bakersfield, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
 - Department of Water Resources Encroachment Permit No. 1074-A
- **Line 915 Anomaly Repairs, Lost Hills, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
- **Line 904 Belridge to Pentland Anomaly Repair, Kern County, CA.** *Assistant Environmental Scientist.* (2016 to 2017).
- **Line 903 Sisquoc to Pentland Anomaly Repairs, Cuyama and New Cuyama, CA.** *Assistant Environmental Scientist.* (2017).
 - California Department of Fish and Wildlife Carrizo Plains Ecological Reserve Permission Letter: 8/25/17 to 12/31/17
- **Line 2000 Emidio to Wilmington Anomaly Repairs, Kern County, CA.** *Assistant Environmental Scientist.* (2017).
- **Line 56 Replacement Pipeline near CA Aqueduct, Kern County, CA.** *Assistant Environmental Scientist.* (2017)
 - Biological Opinion Permit #1-8-94-F-27
- **Line 2000 Angeles National Forest Anomaly Repairs, Los Angeles County, CA.** *Assistant Environmental Scientist.* (2017).
- **Line 62 Wind Wolves Preserve Anomaly Repairs, Kern County, CA.** *Associate Environmental Scientist.* (2018).
- **Line 307/308 Wind Wolves Preserve Anomaly Repairs, Kern County, CA.** *Associate Environmental Scientist.* (2019).
- **Line 904 Belridge to Pentland Anomaly Repairs, Bakersfield, Kern County, CA.** *Associate Environmental Scientist.* (2019).
- **Line 50 DWR Anomaly Repair Project, Bakersfield, Kern County, CA.** *Associate Environmental Scientist.* (2019)

- Department of Water Resources Encroachment Permit No. 1872

SAN JOAQUIN ANTELOPE SQUIRREL

(Ammospermophilus nelsoni)

Mr. Madueno has handled four SJAS (3 adults and 1 juvenile), excavated 100 potential SJAS burrows, and has conducted 9 days of trapping for SJAS. He has over 500 hours of construction monitoring for SJAS and has observed 500+ SJAS throughout his career. Below are several Projects Mr. Madueno has worked that involved SJAS.

Blackwells corner CAPM– Kern County, CA (September 2024 to Present)

Senior Associate Environmental Scientist.

Approved Designated Biologist for San Joaquin antelope squirrel, blunt-nosed leopard lizard, San Joaquin kit fox and Kern mallow under Incidental Take Permit #2081-2023-029-04, USFWS Permit #2022-0023965-S7-002, LSA #EPIMS-KER-37203-R4, USACE 404 Permit No. 0710-0003, and Regional Water Quality Control Board 401 WDID Permit #5C15CR00130. Excavated 172 BNLL burrows and 100+ San Joaquin antelope squirrel burrows over 13 days. Provided two days of construction monitoring along right-of-way work areas. Assisted with San Joaquin antelope squirrel trapping during which Mr. Madueno handled a total of 4 specimens (3 adults and 1 juvenile).

Caltrans: Panoche Hills CAPM Project (TO#14) – Fresno County, CA. Associate Environmental Scientist (2022-Present).

Constructed and installed SJAS soft release enclosures. Excavated approximately 45 potential SJAS burrows within wildlife exclusionary fenced work areas after the completion of SJAS trapping. All activities were conducted under Incidental Take Permit No. 2081-2021-018-04 and Lake and Streambed Alteration Agreement No. FRE-17350-R4.

Caltrans Cherry Avenue Revegetation and Drainage Project (TO#21/#28) – Kern County, CA. Associate I Environmental Scientist.

Conducted 4 days of trapping for SJAS on this 3.5-mile road rehabilitation Project. Monitored construction activities and implemented ITP mitigation measures 2081-2014-082-04 and Biological Opinion mitigation measures 2009-F-0143-R008-1. Observed 30+ SJAS throughout trapping and monitoring efforts.

Hopkins Lease, Sentinel Peak – Kern County, CA. Assistant Environmental Scientist.

Conducted surveys for San Joaquin antelope squirrel, blunt-nosed leopard lizard, San Joaquin kit fox, giant kangaroo rat, Tipton kangaroo rat and burrowing owl on a 2,550-acre site. Observed 20+ San Joaquin antelope squirrels during the surveys.

Breitburn Linn Connector Line – Kern County, CA. Assistant Environmental Scientist.

Conducted a biological pre-construction clearance survey of the Project site to identify the presence or absence of special-status species or their habitat as required by the adopted Kern County Gas and Oil Zoning Ordinance Environmental Impact Report Mitigation Monitoring and Reporting Program (MMRP). Monitored construction activities and provided worker environmental awareness training for threatened and endangered species. Observed 15+ San Joaquin antelope squirrels (SJAS) during construction activities.

Plains All American Pipeline Anomaly Repair Projects (2016-2019)

Conducted pre-activity surveys and biological monitoring for several anomaly repair locations on sensitive environmental lands with a potential for protected, threatened and endangered species. Projects are conducted under a no-take, complete avoidance process except for a few projects that had specific permits. Protected, threatened and endangered with the potential to occur on site included San Joaquin kit fox, blunt-nosed leopard lizard, Tipton kangaroo rat, short-nosed kangaroo rat, burrowing owl, San Joaquin antelope squirrel, American badger, raptors and nesting birds and Bakersfield cactus. Over the course of time Mr. Madueno observed multiple raptors, San Joaquin antelope squirrels, San Joaquin kit fox, and burrowing owls. Drafted multiple reports and used ArcMap to produce map figures. A complete list of Projects is listed below.

- **Line 304, Line 314 Derby Acres to Ten Section Anomaly Repair, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
- **Line 2000 Dig 13 on DWR ROW Anomaly Repair, Bakersfield, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
 - Department of Water Resources Encroachment Permit No. 1074-A
- **Line 915 Anomaly Repairs, Lost Hills, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
- **Line 904 Belridge to Pentland Anomaly Repair, Kern County, CA.** *Assistant Environmental Scientist.* (2016 to 2017).
- **Line 903 Sisquoc to Pentland Anomaly Repairs, Cuyama and New Cuyama, CA.** *Assistant Environmental Scientist.* (2017).
 - California Department of Fish and Wildlife Carrizo Plains Ecological Reserve Permission Letter: 8/25/17 to 12/31/17
- **Line 2000 Emidio to Wilmington Anomaly Repairs, Kern County, CA.** *Assistant Environmental Scientist.* (2017).
- **Line 56 Replacement Pipeline near CA Aqueduct, Kern County, CA.** *Assistant Environmental Scientist.* (2017)
 - Biological Opinion Permit #1-8-94-F-27
- **Line 2000 Angeles National Forest Anomaly Repairs, Los Angeles County, CA.** *Assistant Environmental Scientist.* (2017).
- **Line 62 Wind Wolves Preserve Anomaly Repairs, Kern County, CA.** *Associate Environmental Scientist.* (2018).
- **Line 307/308 Wind Wolves Preserve Anomaly Repairs, Kern County, CA.** *Associate Environmental Scientist.* (2019).
- **Line 904 Belridge to Pentland Anomaly Repairs, Bakersfield, Kern County, CA.** *Associate Environmental Scientist.* (2019).

- Line 50 DWR Anomaly Repair Project, Bakersfield, Kern County, CA. *Associate Environmental Scientist*. (2019)
 - Department of Water Resources Encroachment Permit No. 1872

City of Bakersfield Water Resources Department – Bakersfield, CA. *Associate Environmental Scientist* (2017 to Current).

Qualified Biologist approved to work on MBHCP (City of Bakersfield and County of Kern) projects for San Joaquin kit fox and Tipton kangaroo rat under ITP #2081-2013-058-04. Conducted numerous reconnaissance, pre-construction surveys and protocol-level surveys.

- **On-Call Biological Services.** *Senior Associate/Associate Environmental Scientist.*
- **Back Up Weir Project** *Senior Associate/Associate Environmental Scientist.*
- **Kern River Maintenance Project.** *Associate Environmental Scientist.*
- **SCADA Project.** *Associate Environmental Scientist.*
- **Rock Crest Weir Emergency Maintenance Project.** *Associate Environmental Scientist.*
- **Campus Park South Biological Monitoring.** *Associate Environmental Scientist.*
- **Kern River Channel Maintenance at Bellevue Weir Project.** *Associate Environmental Scientist.*

TCP Mitigation Project – Site CBK-65 Facilities. *Associate Environmental Scientist*

City of Bakersfield On-Call Biological Services – Bakersfield, CA. *Senior Associate/Associate/Assistant Environmental Scientist* (2017 to Current).

Qualified Biologist approved to work on MBHCP (City of Bakersfield and County of Kern) projects for San Joaquin kit fox and Tipton kangaroo rat under Incidental Take Permit #2081-2013-058-04. Conducted numerous Worker Environmental Awareness Trainings (WEATs), pre-construction and protocol level surveys.

- **On-Call Biological Services.** *Senior Associate/Associate Environmental Scientist.*
- **Pavement Rehabilitation 2022-2023 SB1.** *Senior Associate Environmental Scientist.*
- **Street Improvements: Hosking Avenue from Stine Road to Leprechaun Way (T2K246).** *Senior Associate Environmental Scientist.*
- **Storm Drain Improvements Stockpile Yard Project.** *Senior Associate Environmental Scientist.*
- **Biological Services for Linnell-Brahma Park (P1C011).** *Senior Associate Environmental Scientist.*
- **Stockdale Ranch Bike Bath.** *Senior Associate Environmental Scientist.*
- **District Sump off Ashe Rd and District Blvd.** *Senior Associate Environmental Scientist.*
- **Sports Village Phase IV.** *Associate Environmental Scientist.*
- **Street Improvements on Panama Lane from Cactus Patch to Esperanza.** *Associate Environmental Scientist.*

- Street Improvements on Wible Road from Berkshire to Esperanza. *Associate Environmental Scientist.*
- Police Magazine Relocation Project. *Associate Environmental Scientist.*
- Parking Lot Modification Improvements at 4646 California Avenue Project. *Associate Environmental Scientist.*
- Westside Parkway Operational Improvements. *Associate Environmental Scientist.*
- Westside Parkway Calloway Ramps Project. *Associate Environmental Scientist.*
- Road Operational Improvements Project. *Associate Environmental Scientist.*
- Corporate Yard Parking Lot Expansion Project. *Associate Environmental Scientist.*
- Kern River Bike Path Rehabilitation Project. *Associate Environmental Scientist.*
- TCP Mitigation Project. *Associate Environmental Scientist.*
- 4th of July Vacant Lot. *Assistant Environmental Scientist.*

SAN JOAQUIN KIT FOX

(Vulpes macrotis mutica)

Blackwells corner CAPM– Kern County, CA (September 2024 to 2026)

Senior Associate Environmental Scientist.

Approved Designated Biologist for San Joaquin antelope squirrel, blunt-nosed leopard lizard, San Joaquin kit fox and Kern mallow under Incidental Take Permit #2081-2023-029-04, USFWS Permit #2022-0023965-S7-002, LSA #EPIMS-KER-37203-R4, USACE 404 Permit No. 0710-0003, and Regional Water Quality Control Board 401 WDID Permit #5C15CR00130. Excavated 172 BNLL burrows and 100+ San Joaquin antelope squirrel burrows over 13 days. Provided two days of construction monitoring along right-of-way work areas. Assisted with San Joaquin antelope squirrel trapping during which Mr. Madueno handled a total of 4 specimens (3 adults and 1 juvenile).

Sump Habitat Program, City of Bakersfield Water Resource Department – Kern County, CA. (2025)

Senior Associate Environmental Scientist.

The City of Bakersfield WRD requested QK assist with the annual kit fox artificial den monitoring effort and prepare a summary of the results including the condition of the artificial dens, SJKF activity present at the dens and any recommendations resulting from the monitoring efforts. The Sump Habitat Program includes 15 locations: 9 storm water drainage basins (i.e., sumps), 1 city-owned parcel adjacent to the Faint-Kern Canal (i.e., canal site), and 5 locations in the conservation buffer area surrounding the now-closed Bakersfield Sanitary Landfill. Observed a red fox, and SJKF sign at multiple dens.

NLC Energy Project, California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist. (2024 - Current).

Conducted a reconnaissance survey on approximately 75-acres of partially disturbed saltbush scrub habitat. Several potential special-status plant and wildlife species including San Joaquin kit fox, San Joaquin antelope squirrel, Crotch's bumblebee, blunt-nosed leopard lizard, western burrowing owl, giant and short-nosed kangaroo rats, Tulare grasshopper mouse, American badger, Kern mallow, California jewelflower, recurved larkspur, San Joaquin woollythreads, and oil neststraw. Mr. Madueno observed one western burrowing owl and a potential owl burrow, eight San Joaquin antelope squirrels, and eight potential San Joaquin kit fox dens. Drafted the Biological Analysis Report and supporting graphics

Countryside Dairy Digester Project, Maas Energy Works – Kings County, CA. Senior Associate Environmental Scientist (2023).

Counted pre-construction survey for the Countryside Dairy Digester Project as required by Kings County as part of Site Plan Review NO. 22-16, Standards and Requirement #25. Special-status species with the potential to occur include San Joaquin kit fox, Tipton kangaroo rat, burrowing owl, nesting birds, blunt-nosed leopard lizard, northwestern pond turtle, tricolored blackbird, and western spadefoot. No special-status species or their sign (i.e., tracks, dens, burrows, or nests) were observed during the survey. Drafted the pre-construction survey report and associated figures

Solari Sand and Gravel Mine, Granite Construction Company – Kern County, CA. Associate Environmental Scientist (2019-Current).

Conducted BNLL protocol level surveys on approximately 270-acres and construction monitoring for an approximate 2-acre parcel of land. Assisted with the exclusion of a burrowing owl and San Joaquin kit fox located within the Project area. Observed one adult burrowing owl and three active burrows within the vicinity of the Project site. Conducted den monitoring for five potential San Joaquin kit fox dens. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Buena Vista Hills and Mt. Poso Well Sites Project - California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist. (05/2022-Current).

Conducted biological reconnaissance surveys for numerous well site locations in Mt Poso and Buena Vista (BV) Hills existing oil and gas properties. Observed 10 potential SJKF dens, over 25 SJAS, and active nesting birds. Conducted a month long, protocol level, SJKF den monitoring for two potential SJKF dens using trail cameras to determine activity. Observed one SJKF and one AMBA on the trail cameras. Drafted the biological section for eight Initial Study Mitigation Negative Declarations (ISMND). Create associated figures for ISMNDs to represent survey results

Caltrans District 6: Blackwell's Corner CAPM Project (TO#28), Caltrans – Kern County, CA. *Senior Associate/ Associate Environmental Scientist. (2023).*

Conducted protocol level blunt-nosed leopard lizard surveys for a 8.0-mile stretch of State Route 33, within western Kern County, CA. Surveys were conducted in potential habitat for several other special-status species including San Joaquin kit fox, burrowing owl, San Joaquin antelope squirrel, Swainson's hawk, and nesting birds. Observed a total of 1 San Joaquin antelope squirrel during blunt-nosed leopard lizard surveys. No blunt-nosed leopard lizard, San Joaquin kit fox, burrowing owl, Swainson's hawk or nesting birds were observed during the BNLL surveys.

Carbon Terravault I Project, California Resources Corporation (CRC) – Kern County, CA. *Senior Associate Environmental Scientist (2022-Current).*

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂) capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. The Project would inject the captured CO₂ into these well sites for sequestration into the ground for importunity as part of the goal to reduce CO₂ emissions for the State of California. Several special-status plant species have the potential to occur on site including heartscale, Lost Hills crownscale, California jewelflower, recurved larkspur, Kern mallow, Temblor buckwheat, Tejon poppy, showy golden madia, San Joaquin woollythreads, and oil neststraw. In addition, several special-status wildlife species have the potential to occur on site including Crotch's bumblebee, California glossy snake, blunt-nosed leopard lizard, San Joaquin coachwhip, temblor legless lizard, coast horned lizard, burrowing owl, Swainson's hawk, prairie falcon, loggerhead shrike, LeConte's thrasher, San Joaquin antelope squirrel, giant kangaroo rat, short-nosed kangaroo rat, Tulare grasshopper mouse, San Joaquin pocket mouse, American badger, and San Joaquin kit fox. No special-status plant species were observed during the reconnaissance surveys. Observed one adult blunt-nosed leopard lizard, two potential burrowing owl burrows, one loggerhead shrike, two LeConte's thrashers, ten potential San Joaquin kit fox dens, 10 San Joaquin antelope squirrels, potential giant kangaroo rat burrows with the appropriate size characteristics, potential kangaroo rat burrows with appropriate size characteristics for short-nosed kangaroo rats, and five stick nests that could be utilized by nesting birds. Assisted with the drafting of the Biological Analysis Report and associated figures

Five Points Dairy Digester Cluster Project, Maas Energy Works – Fresno County, CA. *Associate Environmental Scientist. (2021).*

Conducted a reconnaissance level survey for the proposed development, construction, and operation of a series of biogas collection facilities (digesters) at five existing dairies, and one upgrading facility on the existing Open Sky Dairy, and gathering pipelines. Special-status wildlife species with the potential to occur in the vicinity include tricolored blackbird, burrowing owl, Swainson's hawk, loggerhead shrike, American badger, and San Joaquin kit fox. Observed one loggerhead shrike and one

Swainson's hawk during the reconnaissance survey. Observed minimal suitable habitat for tricolored blackbird but no direct observation. No other special-status species observed. Drafted the Biological Analysis Report and associated figures.

Merced Biogas Pipeline Project, Maas Energy Works – Merced County, CA. Associate Environmental Scientist (2020).

Conducted pre-construction survey for proposed pipeline as required by the adopted Mitigation Monitoring and Reporting Program. The pipeline will run along existing paved and dirt roads to collect biogas from several dairy digesters in the area. Special-status species with the potential to occur include Swainson's hawk, tricolored blackbird, nesting birds, San Joaquin kit fox and American badger. No suitable tricolored blackbird foraging or nesting habitat was observed. Numerous potential stick nests were observed that Swainson's hawk or other nesting birds could occupy. No San Joaquin kit fox or American badger or their sign was observed.

Sandrini Solar Park Project, EDP Renewables North America, LLC. – Kern County, CA. Associate Environmental Scientist (2020 to 2022).

Assisted with reconnaissance surveys for proposed 300-MW solar project, approximately 4,151.5-acres, in Kern County. Conducted multiple reconnaissance level surveys for blunt-nosed leopard lizard, Tipton kangaroo rat, San Joaquin kit fox, Swainson's hawk, tricolored blackbird, least Bell's vireo, American badger, Tulare grasshopper mouse, San Joaquin antelope squirrel, burrowing owl, short-nosed kangaroo rat, loggerhead shrike, LeConte's thrasher, northern harrier, white-tailed kite, California glossy snake, San Joaquin coachwhip, western pond turtle, and nesting birds. Potential special-status plants include Horn's milk vetch, Bakersfield smallscale, Lost Hills crownscale, heartscale, akali mariposa lily, hispid salty bird's beak, recurved larkspur, Kern mallow, and Comanche Point layia. Observed four Swainson's hawks and four loggerhead shrikes on the Project site. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures.

Caltrans Cherry Avenue Revegetation and Drainage Project (TO#21/#28) – Kern County, CA. Associate Environmental Scientist (2019).

Pre-construction survey and protocol-level SJKF den monitoring for 19 potential SJKF dens and temporarily excluding all 19 dens. Construction monitoring and implementing ITP mitigation measures 2081-2014-082-04 and Biological Opinion mitigation measures 2009-F-0143-R008-1.

Kern River Bike Path Rehab – City of Bakersfield, CA. Assistant Environmental Scientist (2019).

Completed a pre-construction clearance survey for approximately 3-miles of a bike path re-surfacing project. Conducted SJKF den monitoring with tracking medium, and. Hard blocked non-active dens.

Glasspoint Solar facility, E&B Natural Resources, Kern County, CA.
Assistant Environmental Scientist (2018).
Conducted a presence/absence survey for SJKF, and special-status plant species for a proposed 320-acre solar facility.

Krista Mutual Water Company Test Well Project, Tejon Ranch, Kern County, CA. *Associate I Environmental Scientist (2018).*
Conducted a biological pre-construction clearance survey of the Project site to identify the presence or absence of special-status species or their habitat including SJKF.

San Lauren Project, Kern County, CA. *Associate I Environmental Scientist (2018).*
Conducted a pre-construction biological survey of the 160-acre Project site to identify the presence or absence of special-status species or their habitat including SJKF.

Corporation Yard Parking Expansion Project- City of Bakersfield, Kern County, CA- *Assistant Environmental Scientist (2018).*
Conducted pre-construction clearance surveys for SJKF, SJAS, WEBO and Bakersfield cactus for the City of Bakersfield Corporation Storage Yard. Assisted with SJKF den monitoring and temporarily hard blocking non-active dens.

Louden Elementary School, Panama Buena Vista School District- Bakersfield, Kern County, CA. *Assistant Environmental Scientist (2018).*
Conducted SJKF den surveys, monitored dens with tracking medium for a classroom expansion project located for an elementary school ground.

Manor Bridge Seismic Retrofit, City of Bakersfield - Bakersfield, CA. *Assistant Environmental Scientist (2018).*
Conducted biological surveys for sensitive wildlife species, nesting birds, and rare plants on two highway overpass bridge improvement sites in the City of Bakersfield. Targeted special - status species included SJKF, silvery legless lizard, WEBO, nesting swallows and other birds, and bat species. During the construction phase of the project, monitored an active SJKF natal den for project permit avoidance, provided environmental Worker Education and Training (WEAT) training to construction personnel and conducted nighttime monitoring to avoid impacts to SJKF.

Terra Bella Pavement Rehabilitation, Caltrans - Terra Bella, CA. *Assistant Environmental Scientist (2018).*
Conducted pre-construction surveys for SJKF, nesting migratory birds and raptors; monitored active raptor nests and conducted WEAT training for construction personnel on a five-mile-long project along State Route 65 near Terra Bella.

Walnut Street Extension – Phase 1 and Jewett Park Project, Arvin, CA. *Assistant Environmental Scientist (2018).*
Conducted special-status species survey of the project site. Observed potential SJKF dens within the project area, notified the city of Arvin and recommended avoidance and minimization

measures until the dens were declared active or inactive. Assisted writing the monitoring report for submission to the city.

Caltrans District 6: State Route 33/ State Route 119 Rumble Strip Project (TO#17) – Taft, Kern County, CA. Associate Environmental Scientist. (2018).

Conducted a pre-construction survey for six Traffic Element Count Stations (TCS) project site locations. Pre-construction survey was conducted to look for state and federally listed plant and wildlife species. Conducted daily sweeps on the project sites looking for threatened or endangered species or their sign. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Airport Drive, Kern County Bridges Seismic Restoration Project (TO#25), Caltrans – Bakersfield, CA. Assistant Environmental Scientist (2017).

Conducted biological surveys for sensitive wildlife species, nesting birds, and invasive plants on two highway overpass bridge improvement sites in the City of Bakersfield. Targeted special-status species included SJKF, silvery legless lizard, WEBO, nesting swallows and other birds, and bat species. During the construction phase of the project, monitored an active SJKF natal den for project permit avoidance, provided environmental Worker Education and Training (WEAT) training to construction personnel and conducted nighttime monitoring to avoid impacts to SJKF.

Caltrans District 6: Famoso SR 46/99 Bridge (TO#17), Caltrans – Famoso, Kern County, CA. Assistant/Associate Environmental Scientist. (2017 to 2018).

Provided WEAT (Worker Environmental Awareness Training) to all field employees involved during construction. Maintained a complete record of all construction related activities, conducted threatened and endangered species training for construction crews, species observed, and monitoring photos taken. Conducted San Joaquin kit fox den monitoring on six potential dens and excavated vacant dens. Conducted several sweeps of the Project site during the duration of the construction.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. Assistant/Associate Environmental Scientist. (2017 to 2018).

Conducted a reconnaissance survey on a 2,550-acre parcel of the Hopkins Lease to identify the presence or absence of special-status species or their habitat. Potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species including Kern mallow, California jewelflower, and San Joaquin woollythreads. Conducted floristic surveys and blunt-nosed leopard lizard protocol level surveys. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed two San Joaquin kit foxes, one active San Joaquin kit fox natal den, tracks, and scat, 10 giant kangaroo complexes, and 15 San Joaquin antelope squirrels. Drafted a memo report, reviewed historical annual reports, drafted the blunt-nosed

leopard lizard and floristics survey report, and used ArcMap to produce map figures for the client on the results of the findings

Cottonwood East/Rehab (TO#57), Caltrans – Bakersfield, CA. Associate I Environmental Scientist (2017 to 2020).

Conducted biological surveys for sensitive wildlife species, nesting birds, and rare plants in the City of Bakersfield. Targeted special -status species included SJKF, WEBO, nesting swallows and other birds, and bat species. Excluded 30+ SJKF dens. During the construction phase of the project, monitored 2 active SJKF natal dens for project permit avoidance, provided environmental Worker Education and Training (WEAT) training to construction personnel and conducted nighttime monitoring to avoid impacts to SJKF.

Caltrans District 6: Kern Avenue – Pedestrian Over-Crossing (TO#17), Caltrans – McFarland, Kern County, CA. Assistant Environmental Scientist. (2017).

Project to replace a pedestrian overcrossing on State Route 99 at Post Mile Marker #49.6. Conducted San Joaquin kit fox protocol den monitoring for two potential dens on the Project site using tracking medium. After no sign was observed the potential dens were excavated, collapsed and backfilled. Provided Worker Environmental Awareness Training to all construction crews.

City of Bakersfield Water Resources Department – Bakersfield, CA. Senior Associate/Associate Environmental Scientist (2017 to Current).

Qualified Biologist approved to work on MBHCP (City of Bakersfield and County of Kern) projects for San Joaquin kit fox and Tipton kangaroo rat under ITP #2081-2013-058-04. Conducted numerous reconnaissance and pre-construction surveys and protocol-level San Joaquin kit fox den monitoring for 50+ potential dens and excluded dens after inactivity:

- **On-Call Biological Services.** Senior Associate/Associate Environmental Scientist.
- **Back Up Weir Project** Senior Associate/Associate Environmental Scientist.
- **Kern River Maintenance Project.** Associate Environmental Scientist.
- **SCADA Project.** Associate Environmental Scientist.
- **Rock Crest Weir Emergency Maintenance Project.** Associate Environmental Scientist.
- **Campus Park South Biological Monitoring.** Associate Environmental Scientist.
- **Kern River Channel Maintenance at Bellevue Weir Project.** Associate Environmental Scientist.
- **TCP Mitigation Project – Site CBK-65 Facilities.** Associate Environmental Scientist.

Jaye Street Bridge, VSCE – City of Porterville, CA. Assistant Environmental Scientist (2017).

Conducted sensitive species including SJKF, Valley elderberry longhorn beetle, bat species, nesting swallows and birds for a bridge expansion over the Tule River. Ensured compliance with

permit conditions and conducted weekly sensitive species clearance surveys.

Paso Robles Solar 1 – Lend Lease (US) Energy Development LLC, Kern County, CA. Assistant Environmental Scientist (2016).

Conducted reconnaissance surveys for SJKF on 78 acres of undeveloped land.

Kern County Seismic Restoration – Bakersfield, CA. Assistant Environmental Scientist (2016).

Conducted 5 nights of SJKF monitoring and multiple night checks for a bridge reconstruction Project in Bakersfield, CA. Observed two SJKF during monitoring efforts.

Visalia R2 Rehab – City of Visalia, CA. Assistant Environmental Scientist (2016).

SJKF surveys including 41 hours of spotlighting within nine days; protocol-level Swainson's hawk surveys; nesting raptors and migratory bird species for an eight-mile-long project along State Route 198 near Visalia.

Plains All American Pipeline Anomaly Repair Projects (2016-2019)

Conducted pre-activity surveys and biological monitoring for several anomaly repair locations on sensitive environmental lands with a potential for protected, threatened and endangered species. Projects are conducted under a no-take, complete avoidance process except for a few projects that had specific permits. Protected, threatened and endangered with the potential to occur on site included San Joaquin kit fox, blunt-nosed leopard lizard, Tipton kangaroo rat, short-nosed kangaroo rat, burrowing owl, San Joaquin antelope squirrel, American badger, raptors and nesting birds and Bakersfield cactus. Over the course of time Mr. Madueno observed multiple raptors, several San Joaquin antelope squirrels, San Joaquin kit fox tracks, and burrowing owls. Drafted multiple reports and used ArcMap to produce map figures. A complete list of Projects is listed below.

- **Line 304, Line 314 Derby Acres to Ten Section Anomaly Repair, Kern County, CA. Assistant Environmental Scientist. (2016).**
- **Line 2000 Dig 13 on DWR ROW Anomaly Repair, Bakersfield, Kern County, CA. Assistant Environmental Scientist. (2016).**
 - Department of Water Resources Encroachment Permit No. 1074-A
- **Line 915 Anomaly Repairs, Lost Hills, Kern County, CA. Assistant Environmental Scientist. (2016).**
- **Line 904 Belridge to Pentland Anomaly Repair, Kern County, CA. Assistant Environmental Scientist. (2016 to 2017).**
- **Line 903 Sisquoc to Pentland Anomaly Repairs, Cuyama and New Cuyama, CA. Assistant Environmental Scientist. (2017).**
 - California Department of Fish and Wildlife Carrizo Plains Ecological Reserve Permission Letter: 8/25/17 to 12/31/17
- **Line 2000 Emidio to Wilmington Anomaly Repairs, Kern County, CA. Assistant Environmental Scientist. (2017).**

- Line 56 Replacement Pipeline near CA Aqueduct, Kern County, CA. *Assistant Environmental Scientist*. (2017)
 - Biological Opinion Permit #1-8-94-F-27
- Line 2000 Angeles National Forest Anomaly Repairs, Los Angeles County, CA. *Assistant Environmental Scientist*. (2017).
- Line 62 Wind Wolves Preserve Anomaly Repairs, Kern County, CA. *Associate Environmental Scientist*. (2018).
- Line 307/308 Wind Wolves Preserve Anomaly Repairs, Kern County, CA. *Associate Environmental Scientist*. (2019).
- Line 904 Belridge to Pentland Anomaly Repairs, Bakersfield, Kern County, CA. *Associate Environmental Scientist*. (2019).
- Line 50 DWR Anomaly Repair Project, Bakersfield, Kern County, CA. *Associate Environmental Scientist*. (2019)
 - Department of Water Resources Encroachment Permit No. 1872

SWAINSON'S HAWK

(Buteo swainsoni)

Merced Biogas Pipeline Phase 2 Project, Maas Energy Works – Merced County, CA. (2023).

Senior Associate Environmental Scientist

Conducted nesting bird and raptor surveys on a proposed 21-mile biogas pipeline Project. Observed multiple stick nests including five active red-tailed hawk nests, three Swainson's hawk nest active swallow nests. Monitored two adult SWHA rear two hatchlings until they fully fledged. Recorded behavior of SWHA every 15 minutes while monitoring.

Kingsburg SR 99 Rehab Project, Caltrans – Fresno County, CA.

Assistant Environmental Scientist.

Conducted approximately 40 hours of Swainson's hawk nest monitoring for this road rehabilitation Project. Monitored two adult SWHA rear two hatchlings until they fully fledged. Recorded behavior of SWHA every 15 minutes while monitoring.

BigBeau Solar Project, EDF Renewables – Kern County, CA.

Associate Environmental Scientist (2020 to Current).

Monitor for DT, SWHA, DKF, BO, golden eagle (GOEA), and nesting birds and raptors or any of their sign (i.e. dens, burrows, scat, tracks, or nests) during the Joshua tree removal and construction phases. Observed 3 DKF, 2 BO, and one active SWHA, mourning dove and red-tailed hawk nests. Drafted 28 monthly monitoring reports during the construction phase as part of the EIR Mitigation Measure 4.4-4. Provided Worker Environmental Awareness Training to new crew members as part of the EIR Mitigation Measure 4.4-2. Monitored Arizona crossing construction installation following the Lake and Streambed Alteration Agreement (LSAA) Notification No. 600-2020-0086-R4.

Reward CAPM Project, Caltrans – Kern County, CA. (2022).

Associate Environmental Scientist

Conducted nesting bird and raptor surveys on a proposed 4.7-mile road rehabilitation Project. Observed multiple stick nests and one active raven nest. Collected, submitted data, and assisted on final report.

Lost Hills Project – Kern County, CA. (2022). *Associate Environmental Scientist.*

Conducted nesting bird and raptor surveys on a proposed 4.7-mile road rehabilitation Project. Observed multiple stick nests and one active raven nest. Collected, submitted data, and assisted on final report.

AV Apollo Solar Project, Lend Lease (US) Energy Development, LLC – Rosamond, CA. *Assistant Environmental Scientist.*

Conducted protocol-level Swainson's hawk surveys on a 493-acre site.

Gettysburg Solar Project, Lend Lease Energy Development, LLC. – Rosemond, CA. *Assistant Environmental Scientist.*

Conducted protocol-level Swainson's hawk surveys on a 160-acre site.

Terra Bella Pavement Rehabilitation, Caltrans – Terra Bella, CA. *Assistant Environmental Scientist.*

Conducted pre-construction surveys for SJKE, nesting migratory birds and raptors; monitored active raptor nests and conducted WEAT training for construction personnel on a five-mile-long project along State Route 65 near Terra Bella.

Paso Robles Solar Project, Lend Lease Energy Development, LLC. – Paso Robles, CA. *Assistant Environmental Scientist.*

Conducted protocol-level Swainson's hawk surveys on a 493-acre site.

Cartago Wildlife Area, Inyo County, CA. (2019). *Associate I Environmental Scientist.*

Conducted nesting migratory birds and raptors surveys as well as wetland delineation surveys for this 218-acre site. Collected, submitted data and assisted on final report.

TIPTON KANGAROO RAT

(Dipodomys nitratooides nitratooides)

Northern Orchard (RWE): Burrow Mapping of Conservation Site – Kern County, CA. *Associate II Environmental Scientist (2022).*

Participated in assessing and mapping all potential kangaroo rat burrows on the conservation site.

Plains Pipeline Maintenance, Plains All-American Various Locations in Kern County, CA. *Assistant Environmental Scientist.*

Conducted pre-activity surveys for Tipton kangaroo rat. Monitored construction activities and provided worker environmental awareness training for threatened and endangered species.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. Assistant Environmental Scientist.

Conducted pre-construction surveys for Tipton kangaroo rat and other special-status species on a proposed 100-acre portion of the Sentinel Peak Hopkins Lease. Collected, submitted data, and assisted on final report.

Paso Robles Solar Project, Lend Lease Energy Development, LLC. – Paso Robles, CA. Assistant Environmental Scientist.

Conducted pre-construction surveys for Tipton kangaroo rat and other special-status species on a proposed 100-acre portion of the Sentinel Peak Hopkins Lease. Collected, submitted data, and assisted on final report.

City of Bakersfield Water Resources Department – Bakersfield, CA. Associate Environmental Scientist (2017 to Current).

Qualified Biologist approved to work on MBHCP (City of Bakersfield and County of Kern) projects for San Joaquin kit fox and San Joaquin antelope squirrel under ITP #2081-2013-058-04. Conducted numerous reconnaissance and pre-construction surveys and protocol-level San Joaquin kit fox den monitoring for 50+ potential dens and excluded dens after inactivity:

- **On-Call Biological Services.** Senior Associate/Associate Environmental Scientist.
- **Back Up Weir Project** Senior Associate/Associate Environmental Scientist.
- **Kern River Maintenance Project.** Associate Environmental Scientist.
- **SCADA Project.** Associate Environmental Scientist.
- **Rock Crest Weir Emergency Maintenance Project.** Associate Environmental Scientist.
- **Campus Park South Biological Monitoring.** Associate Environmental Scientist.
- **Kern River Channel Maintenance at Bellevue Weir Project.** Associate Environmental Scientist.

TCP Mitigation Project – Site CBK-65 Facilities. Associate Environmental Scientist

City of Bakersfield On-Call Biological Services – Bakersfield, CA. Senior Associate/Associate/Assistant Environmental Scientist (2017 to Current).

Qualified Biologist approved to work on MBHCP (City of Bakersfield and County of Kern) projects for San Joaquin kit fox and Tipton kangaroo rat under Incidental Take Permit #2081-2013-058-04. Conducted numerous Worker Environmental Awareness Trainings (WEATs), pre-construction and protocol level surveys.

- **On-Call Biological Services.** Senior Associate/Associate Environmental Scientist.
- **Pavement Rehabilitation 2022-2023 SB1.** Senior Associate Environmental Scientist.
- **Street Improvements: Hosking Avenue from Stine Road to Leprechaun Way (T2K246).** Senior Associate Environmental Scientist.
- **Storm Drain Improvements Stockpile Yard Project.** Senior Associate Environmental Scientist.

- **Biological Services for Linnell-Brahma Park (P1C011).** *Senior Associate Environmental Scientist.*
- **Stockdale Ranch Bike Bath.** *Senior Associate Environmental Scientist.*
- **District Sump off Ashe Rd and District Blvd.** *Senior Associate Environmental Scientist.*
- **Sports Village Phase IV.** *Associate Environmental Scientist.*
- **Street Improvements on Panama Lane from Cactus Patch to Esperanza.** *Associate Environmental Scientist.*
- **Street Improvements on Wible Road from Berkshire to Esperanza.** *Associate Environmental Scientist.*
- **Police Magazine Relocation Project.** *Associate Environmental Scientist.*
- **Parking Lot Modification Improvements at 4646 California Avenue Project.** *Associate Environmental Scientist.*
- **Westside Parkway Operational Improvements.** *Associate Environmental Scientist.*
- **Westside Parkway Calloway Ramps Project.** *Associate Environmental Scientist.*
- **Road Operational Improvements Project.** *Associate Environmental Scientist.*
- **Corporate Yard Parking Lot Expansion Project.** *Associate Environmental Scientist.*
- **Kern River Bike Path Rehabilitation Project.** *Associate Environmental Scientist.*
- **TCP Mitigation Project.** *Associate Environmental Scientist.*
- **4th of July Vacant Lot.** *Assistant Environmental Scientist.*

Research, CSU Bakersfield – Kern County, CA.

Assisted Dr. David Germano of CSU Bakersfield with a long-term demographic study of TKR at two distinct populations in Kern County. Established and maintained a 12x12 trapping grid of Sherman Live Traps and conducted protocol of five-night trapping surveys for a total of 10 nights. Set and baited traps daily and checked each morning for trapped individuals. Assisted the recording of demographic data (weight, age, sex, health, markings, etc.) on TKR. Closely observed approximately 40+ individuals and handled approximately 15+ individuals during the survey. Also, handled and observed numerous Heermann's kangaroo rat and mice spp. (pocket mice, deer mice, etc.).

GIANT KANGAROO RAT

(Dipodomys ingens)

Caltrans: Panoche Hills CAPM Project (TO#14) – Fresno County, CA. *Associate Environmental Scientist (2022-Present).*

Constructed and installed GIKR soft release enclosures as well as hard release artificial burrows. Excavated approximately 235 burrows within wildlife exclusionary fenced work areas after the completion of GKR trapping. All activities were conducted under Incidental Take Permit No. 2081-2021-018-04 and Lake and Streambed Alteration Agreement No. FRE-17350-R4.

Caltrans Cherry Avenue Revegetation and Drainage Project (TO#21/#28) – Kern County, CA. *Associate / Environmental Scientist.*

Conducted 5 nights of trapping for GKR on this 3.5-mile road rehabilitation Project. Monitored construction activities and implemented ITP mitigation measures 2081-2014-082-04 and Biological Opinion mitigation measures 2009-F-0143-R008-1.

Trafalgar Solar Project, Lend Lease (US) Energy Development, LLC – Kings County, CA. *Assistant Environmental Scientist.*

Assisted with three nights of GKR trapping on this 300-acre Project site. Set and baited traps daily and checked each morning for trapped individuals. Identified and handled one GKR under the guidance of authorized biologists Curtis Uptain and Belen Perez. Also, handled and observed numerous Heermann's kangaroo rat and mice spp. (pocket mice, deer mice, etc.).

Plains Pipeline Maintenance, Plains All-American Various Locations in Kern County, CA. *Assistant Environmental Scientist.*

Conducted pre-activity surveys for giant kangaroo rat. Monitored construction activities and provided worker environmental awareness training for threatened and endangered species.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. *Assistant Environmental Scientist.*

Conducted pre-construction surveys for giant kangaroo rat and other special-status species on a proposed 100-acre portion of the Sentinel Peak Hopkins Lease. Collected, submitted data and assisted on final report.

Research, CSU Bakersfield – Kern County, CA. *Undergrad.*

Assisted Dr. David Germano of CSU Bakersfield with a long-term demographic study of giant kangaroo rats in Kern County. Established and maintained a 12x12 trapping grid of Sherman Live Traps and conducted protocol-level trapping surveys. Set and baited traps daily and checked each morning for trapped individuals. Assisted the recording of demographic data (weight, age, sex, health, markings, etc.) on giant kangaroo rat. Closely observed 20+ individuals. Also, handled and observed numerous Heermann's kangaroo rat and mice species (pocket mice, deer mice, etc.).

WESTERN BURROWING OWL

(Athene cunicularia)

Dutra Farm Facility, Pitman Family Farms – Kings County, CA.

Senior Associate Environmental Scientist (2025 to Current).

Conducted a biological reconnaissance survey of the proposed project site and 250-foot buffer in potential San Joaquin kit, Tipton kangaroo rat, and burrowing owl habitat. The biologist observed two burrowing owls, and multiple potential kit fox dens.

RB Inyokern Solar Project, Dimension RE LLC - Inyokern, CA.

Senior Associate Environmental Scientist (2023 to Current).

Conducted a pre-construction clearance survey in potential desert tortoise, Mohave ground squirrel, desert kit fox, and burrowing owl habitat. No protocol-level desert tortoise surveys were conducted. Conducted biological monitoring during the construction of a 32-megawatt photovoltaic solar project on approximately 166.5 acres. Provided WEAT to new construction crew members. Monitoring was conducted under ITP No. 2081-2020-001-04 Condition of Approval (COA) measures. Drafted Quarterly Compliance Reports as required under ITP COA 5.4. The monitor observed four burrowing owls, and two desert kit foxes prior to any ground disturbing activities.

Buena Vista Hills and Mt. Poso Well Sites Project - California Resources Corporation (CRC) – Kern County, CA. Associate Environmental Scientist. (05/2022-Current).

Conducted biological reconnaissance surveys for numerous well site locations in Mt Poso and Buena Vista (BV) Hills existing oil and gas properties.

Organic Waste – Renewable Energy Facility, True North Renewable Energy, LLC. – Mojave, Kern County, CA. Associate Environmental Scientist (2021-Current).

Conducted a fatal flaw analysis survey for the proposed 117-acre project. Potential threatened and/or endangered species that have the potential to occur include Mohave ground squirrel, desert tortoise, desert kit fox, burrowing owl, and Swainson's hawk. No protocol level surveys were conducted.

Caltrans District 6: Reward CAPM (TO#60/TO#10) – Kern County. Associate Environmental Scientist. (2021-2022).

Conducted protocol blunt-nosed leopard lizard surveys, protocol floristic surveys, monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on State Route 58 between Post Mile (PM) 6.0 and 15.4 near McKittrick, California.

BigBeau Solar Project, EDF Renewables – Kern County, CA.

Associate Environmental Scientist (2020 to Current).

Monitor for DT, SWHA, DKF, BO, golden eagle (GOEA), and nesting birds and raptors or any of their sign (i.e., dens, burrows, scat, tracks, or nests) during the Joshua tree removal and construction phases. Observed 3 DKF, 2 WEBO, and one active SWHA, mourning dove and red-tailed hawk nests. Drafted 12 monthly monitoring reports during the construction phase as part of the EIR Mitigation Measure 4.4-4. Provided Worker Environmental Awareness Training to new crew members as part of the EIR Mitigation Measure 4.4-2. Monitored Arizona crossing construction installation following the Lake and Streambed Alteration Agreement (LSAA) Notification No. 600-2020-0086-R4.

Rosamond Solar Project, Clearway Energy Group, LLC. – Kern County, CA. Associate Environmental Scientist (2019 to Current).

Conducted reconnaissance level surveys, nesting bird surveys, and Joshua tree census (*Yucca brevifolia*) and two seasons of rare-plant surveys. Observed one adult burrowing owl.

Solari Sand and Gravel Mine, Granite Construction Company – Kern County, CA. Associate Environmental Scientist (2019).

Conducted BNLL protocol level surveys on approximately 270-acres and construction monitoring for an approximate 2-acre parcel of land. Observed one adult burrowing owl and three active burrows within the vicinity of the Project site.

Caltrans District 6: Cottonwood East/Rehab Project (TO#57/#26) – Bakersfield, Kern County, CA.

Assistant/Associate Environmental Scientist (2017 to 2020).

Conducted 11 pre-construction surveys and on-going San Joaquin kit fox den monitoring for the construction phase of the project to begin. Conducted on-site monitoring in Environmental Sensitive Areas (ESAs) when construction was activity in these areas. Observed 2 adult burrowing owls.

Solari Sand and Gravel Mine, Granite Construction Company – Kern County, CA. Associate Environmental Scientist (2019).

Conducted BNLL protocol level surveys on approximately 270-acres and construction monitoring for an approximate 2-acre parcel of land. Assisted with the exclusion of a burrowing owl and San Joaquin kit fox located within the Project area. Observed one adult burrowing owl and three active burrows within the vicinity of the Project site.

Kern-Tulare Water District Pipeline, Kern-Tulare Water District – Kern County, CA. Assistant/Associate Environmental Scientist (2017 to 2019).

Conducted a reconnaissance survey and pre-construction survey of an approximate 12-mile proposed oil field water reuse pipeline located in suitable blunt-nosed leopard lizard, San Joaquin kit fox, burrowing owl, and Swainson's hawk habitat. Conducted protocol level blunt-nosed leopard lizard surveys and maintained a complete record of all species observed, photographs taken, biological resources GPS points, and data sheets for the surveys.

Plains All American Pipeline Anomaly Repair Projects (2016-2019)

Conducted pre-activity surveys and biological monitoring for several anomaly repair locations on sensitive environmental lands with a potential for protected, threatened and endangered species. Projects are conducted under a no-take, complete avoidance process except for a few projects that had specific permits. Protected, threatened and endangered with the potential to occur on site included San Joaquin kit fox, blunt-nosed leopard lizard, Tipton kangaroo rat, short-nosed kangaroo rat, burrowing owl, San Joaquin antelope squirrel, American badger, raptors and nesting birds and Bakersfield cactus. Over the course of time Mr. Madueno observed multiple raptors, San Joaquin antelope squirrels, San Joaquin kit fox, and burrowing owls. Drafted multiple reports and used ArcMap to produce map figures. A complete list of Projects is listed below.

- **Line 304, Line 314 Derby Acres to Ten Section Anomaly Repair, Kern County, CA. Assistant Environmental Scientist. (2016).**
- **Line 2000 Dig 13 on DWR ROW Anomaly Repair, Bakersfield, Kern County, CA. Assistant Environmental Scientist. (2016).**
 - Department of Water Resources Encroachment Permit No. 1074-A

- Line 915 Anomaly Repairs, Lost Hills, Kern County, CA. *Assistant Environmental Scientist*. (2016).
- Line 904 Belridge to Pentland Anomaly Repair, Kern County, CA. *Assistant Environmental Scientist*. (2016 to 2017).
- Line 903 Sisquoc to Pentland Anomaly Repairs, Cuyama and New Cuyama, CA. *Assistant Environmental Scientist*. (2017).
 - California Department of Fish and Wildlife Carrizo Plains Ecological Reserve Permission Letter: 8/25/17 to 12/31/17
- Line 2000 Emidio to Wilmington Anomaly Repairs, Kern County, CA. *Assistant Environmental Scientist*. (2017).
- Line 56 Replacement Pipeline near CA Aqueduct, Kern County, CA. *Assistant Environmental Scientist*. (2017)
 - Biological Opinion Permit #1-8-94-F-27
- Line 2000 Angeles National Forest Anomaly Repairs, Los Angeles County, CA. *Assistant Environmental Scientist*. (2017).
- Line 62 Wind Wolves Preserve Anomaly Repairs, Kern County, CA. *Associate Environmental Scientist*. (2018).
- Line 307/308 Wind Wolves Preserve Anomaly Repairs, Kern County, CA. *Associate Environmental Scientist*. (2019).
- Line 904 Belridge to Pentland Anomaly Repairs, Bakersfield, Kern County, CA. *Associate Environmental Scientist*. (2019).
- Line 50 DWR Anomaly Repair Project, Bakersfield, Kern County, CA. *Associate Environmental Scientist*. (2019)
 - Department of Water Resources Encroachment Permit No. 1872

TRICOLORED BLACKBIRD

(Agelaius tricolor)

Countryside Dairy Digester Project, Maas Energy Works – Kings County, CA. Senior Associate Environmental Scientist (2023).

Conducted pre-construction survey for the Countryside Dairy Digester Project as required by Kings County as part of Site Plan Review NO. 22-16, Standards and Requirement #25. Special-status species with the potential to occur include San Joaquin kit fox, Tipton kangaroo rat, burrowing owl, nesting birds, blunt-nosed leopard lizard, northwestern pond turtle, tricolored blackbird, and western spadefoot. No special-status species or their sign (i.e., tracks, dens, burrows, or nests) were observed during the survey. Drafted the pre-construction survey report and associated figures.

Sandrini Solar Park Project, EDP Renewables North America, LLC. – Kern County, CA. *Associate Environmental Scientist* (2020 to 2022).

Assisted with reconnaissance surveys for proposed 300-MW solar project, approximately 4,151.5-acres, in Kern County. Conducted multiple reconnaissance level surveys for blunt-nosed leopard lizard, Tipton kangaroo rat, San Joaquin kit fox, Swainson's hawk, tricolored blackbird, least Bell's vireo, American badger, Tulare grasshopper mouse, San Joaquin antelope squirrel, burrowing owl, short-nosed kangaroo rat, loggerhead shrike, LeConte's thrasher, northern harrier, white-tailed kite, California glossy snake, San Joaquin coachwhip,

western pond turtle, and nesting birds. Potential special-status plants include Horn's milk vetch, Bakersfield smallscale, Lost Hills crownscale, heartscale, akali mariposa lily, hispid salty bird's beak, recurved larkspur, Kern mallow, and Comanche Point layia. Observed four Swainson's hawks and four loggerhead shrikes on the Project site. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures.

Merced Biogas Pipeline Project, Maas Energy Works – Merced County, CA. Associate Environmental Scientist (2020).

Conducted pre-construction survey for proposed pipeline as required by the adopted Mitigation Monitoring and Reporting Program. The pipeline will run along existing paved and dirt roads to collect biogas from several dairy digesters in the area. Special-status species with the potential to occur include Swainson's hawk, tricolored blackbird, nesting birds, San Joaquin kit fox and American badger. No suitable tricolored blackbird foraging or nesting habitat was observed. Numerous potential stick nests were observed that Swainson's hawk or other nesting birds could occupy. No San Joaquin kit fox or American badger or their sign was observed.

Lone Oak #1 and #2 Proposed Dairy Expansions, Maas Energy Works – Kings County, CA. Associate Environmental Scientist (2019).

Conducted two reconnaissance and two pre-construction surveys for a double lined, covered digester ponds and associated equipment at two existing dairies on approximately 20-acres. Potential special-status plant and wildlife species with the potential to occur in the vicinity include Earlimart orache, heartscale, lesser saltscale, mud nama, recurved larkspur, subtle orache, burrowing owl, San Joaquin kit fox, Swainson's hawk, tricolored blackbird, and nesting birds. No special-status plant or wildlife species observed.

Five Points Dairy Digester Cluster Project, Maas Energy Works – Fresno County, CA. Associate Environmental Scientist. (2019).

Conducted a reconnaissance level survey for the proposed development, construction, and operation of a series of biogas collection facilities (digesters) at five existing dairies, and one upgrading facility on the existing Open Sky Dairy, and gathering pipelines. Special-status wildlife species with the potential to occur in the vicinity include tricolored blackbird, burrowing owl, Swainson's hawk, loggerhead shrike, American badger, and San Joaquin kit fox. Observed one loggerhead shrike and one Swainson's hawk during the reconnaissance survey. Observed minimal suitable habitat for tricolored blackbird but no direct observation. No other special-status species observed.

Incidental Observations

A tri-colored blackbird colony was observed in a drainage along Famoso Road in Kern County, CA. Approximately 50 birds were perched and foraging in the drainage containing bulrush.

Crotch's Bumble bee *(Bombus crotchii)*

Backup Weir Replacement Project – Kern County, CA (2020-2025). *Senior Associate Environmental Scientist.*

A protocol level Crotch's bumble bee (*Bombus crotchii*) visual survey was conducted on the Project site and surrounding 25-foot buffer. Suitable habitat was identified and examined during the floristic survey and consisted of existing blooming nectar/pollen resources within annual grassland and riparian habitat. The surveyors walked through floral habitat for 1 hour with the goal of observing bumble bees in passing and looking for bumble bee nest sites associated with small mammal burrows or other appropriate cavities.

California Bumble Bee Atlas, Xerces Society, Panoche, CA and Bass Lake, CA. (2024-2025). *Senior Associate Environmental Scientist).*

Four Point Surveys were conducted for Crotch's bumble bee over two years (two in Panoche, one in Bass Lake and one in North Fork, CA). The survey consisted of wandering through the entire survey area for 45 minutes, focusing on plants that are flowering. All bumble bees were captured in a vial using an insect net, the plant species was documented, and the vial was placed in a chilled cooler. After bees are cooled for several minutes (5-10min), a photograph was taken. The bumble bee was released in the shade, and it took flight after warming up.

Carbon TerraVault Project, California Resources Corporation (CRC) – Kern County, CA. *Senior Associate Environmental Scientist (2022-Current).*

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂) capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. Several special-status wildlife species have the potential to occur on site including Crotch's bumblebee. No special-status plant species were observed during the reconnaissance surveys. Observed one adult blunt-nosed leopard lizard, two potential burrowing owl burrows, one loggerhead shrike, two LeConte's thrashers, ten potential San Joaquin kit fox dens, 10 San Joaquin antelope squirrels, potential giant kangaroo rat burrows with the appropriate size characteristics, potential kangaroo rat burrows with appropriate size characteristics for short-nosed kangaroo rats, and five stick nests that could be utilized by nesting birds. Assisted with the drafting of the Biological Analysis Report and associated figures.

LE CONTE'S THRASHER *(Toxostoma lecontei)*

Carbon TerraVault Project, California Resources Corporation (CRC) – Kern County, CA. *Senior Associate Environmental Scientist (2022-Current).*

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂)

capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. The Project would inject the captured CO₂ into these well sites for sequestration into the ground for importunity as part of the goal to reduce CO₂ emissions for the State of California. Several special-status plant species have the potential to occur on site including heartscale, Lost Hills crownscale, California jewelflower, recurved larkspur, Kern mallow, Temblor buckwheat, Tejon poppy, showy golden madia, San Joaquin woollythreads, and oil neststraw. In addition, several special-status wildlife species have the potential to occur on site including Crotch's bumblebee, California glossy snake, blunt-nosed leopard lizard, San Joaquin coachwhip, temblor legless lizard, coast horned lizard, burrowing owl, Swainson's hawk, prairie falcon, loggerhead shrike, LeConte's thrasher, San Joaquin antelope squirrel, giant kangaroo rat, short-nosed kangaroo rat, Tulare grasshopper mouse, San Joaquin pocket mouse, American badger, and San Joaquin kit fox. No special-status plant species were observed during the reconnaissance surveys. Observed one adult blunt-nosed leopard lizard, two potential burrowing owl burrows, one loggerhead shrike, two LeConte's thrashers, ten potential San Joaquin kit fox dens, 10 San Joaquin antelope squirrels, potential giant kangaroo rat burrows with the appropriate size characteristics, potential kangaroo rat burrows with appropriate size characteristics for short-nosed kangaroo rats, and five stick nests that could be utilized by nesting birds. Assisted with the drafting of the Biological Analysis Report and associated figures.

Sandrini Solar Park Project, EDP Renewables North America, LLC. – Kern County, CA. *Associate Environmental Scientist* (2020 to 2022).

Assisted with reconnaissance surveys for proposed 300-MW solar project, approximately 4,151.5-acres, in Kern County. Conducted multiple reconnaissance level surveys for blunt-nosed leopard lizard, Tipton kangaroo rat, San Joaquin kit fox, Swainson's hawk, tricolored blackbird, least Bell's vireo, American badger, Tulare grasshopper mouse, San Joaquin antelope squirrel, burrowing owl, short-nosed kangaroo rat, loggerhead shrike, LeConte's thrasher, northern harrier, white-tailed kite, California glossy snake, San Joaquin coachwhip, western pond turtle, and nesting birds. Potential special-status plants include Horn's milk vetch, Bakersfield smallscale, Lost Hills crownscale, heartscale, akali mariposa lily, hispid salty bird's beak, recurved larkspur, Kern mallow, and Comanche Point layia. Observed four Swainson's hawks and four loggerhead shrikes on the Project site.

CALIFORNIA TIGER SALAMANDER

Species Totals:

- Larvae Surveying: 12 hours
- Pitfall trap and fence array: 2 hours
- Observed: 2 adults, 365 larvae

- Handled: 37 larvae

Advanced California Tiger Salamander Aquatic Survey Workshop, Santa Rosa, Sonoma County, CA. *Senior Associate Environmental Scientist (2026).*

The Advanced California Tiger Salamander Aquatic Survey Workshop consisted of dipnet surveys for larval California tiger salamander (CTS) in Sonoma County. Field activities included the capture of larval CTS and other amphibians, measuring larvae, decontamination procedures, demonstration of tissue collection for genetic analysis, and a discussion of how collected field data is used in conservation efforts. This program is implemented under the auspices of U.S. Fish and Wildlife Service (PER0003749) and California Department of Fish and Wildlife Memorandum of Understanding. The one-day workshop provides 6 hours of field effort. The instructors, Dave Cook (TE-816187) and Victoria Brunal-Byrd, hold state and federal permits to study CTS. Survey methods follow regulatory procedures and techniques to determine presence/absence and monitor long-term population patterns. The field studies were conducted at one site with 10-50 vernal pools, depending on season. Mr. Madueno dipnet sampled 7 pools, 5 of which contained CTS larvae. He observed 68 CTS larvae, captured 8 CTS larvae by dipnet, and processed 20 CTS larvae.

Rare Pond Species Survey Techniques Workshop, Laguna de Santa Rosa Foundation, Santa Rosa, Sonoma County, CA. *Senior Associate Environmental Scientist (2026).*

Attended and participated in practical training on aquatic survey techniques for California tiger salamander, California red-legged frog, and western pond turtle. The lecture session included a review of the biology and ecology of these species, identification of life stages, state and federal regulations, and approved survey protocols. The field portion included field training in aquatic survey techniques, including dip net sampling for CTS larvae, evening spotlighting for frogs, and turtle visual encounter surveys and trapping under Permitted Biologists Dave Cook (TE-816187) and Jeff Alvarez (TE-27427). Mr. Madueno handled a total of the seven and measured 2 out of 297 CTS larvae capture, handled, and released.

California Tiger Salamander Terrestrial Ecology Workshop, Laguna de Santa Rosa Foundation, Santa Rosa, Sonoma County, CA. *Senior Associate Environmental Scientist (2026).*

Attended and participated in practical training and lecture discussion on a review of the biology, upland habitat use, and migration patterns of CTS, the theory and design of roadway tunnels to facilitate safe passage of migrating salamanders, design pitfall trap arrays, USFWS and CDFW approval survey protocols, and implementing and monitoring land use management practices. This workshop's instructors were Permitted Biologists Dave Cook (TE-816187) and Jeff Alvarez (TE-27427).

Merced Biogas Pipeline Phase 2 Project, Merced Pipeline, LLC – Merced County, CA (2021-2023)

Mr. Madueno conducted pre-construction surveys and compliance monitoring for an approximately 21-mile biogas pipeline Project located in Merced County, CA, in compliance with the adopted Initial Study /Mitigated Negative Declaration (IS/MND) and a Mitigation Monitoring and Reporting Program (MMRP; SCH # 2022040525). Occurrences of California tiger salamander (CTS), western spadefoot, and listed vernal pool branchiopods are recorded within known vernal pool habitat at two mitigation bank locations within five miles of the site, and potential vernal pool grassland habitat occurred in several locations adjacent to the proposed pipeline alignment.

CALIFORNIA RED-LEGGED FROG

Species Totals:

- *Surveying: 2 hours*
- *Observed: 9 adults, 3 egg masses*
- *Handled: 9 adults*

Rare Pond Species Survey Techniques Workshop, Laguna de Santa Rosa Foundation, Santa Rosa, Sonoma County, CA. Senior Associate Environmental Scientist (2026).

Attended and participated in practical training on aquatic survey techniques for California tiger salamander, California red-legged frog, and western pond turtle. The lecture session included a review of the biology and ecology of these species, identification of life stages, state and federal regulations, and approved survey protocols. The field portion included field training in aquatic survey techniques, including dip net sampling for CTS larvae, evening spotlighting for frogs, and turtle visual encounter surveys and trapping under Permitted Biologists Dave Cook (TE-816187) and Jeff Alvarez (TE-27427). Mr. Madueno surveyed, observed, and handled nine adult CRLF and observed three CRLF egg mass.

NORTHWESTERN/SOUTHWESTERN POND TURTLE

Species Totals:

- *Northwestern Surveying: 1.5 hours*
- *Pond Turtles Observed: 8*
- *Northwestern Pond Turtle Handled: 2*

Rare Pond Species Survey Techniques Workshop, Laguna de Santa Rosa Foundation, Santa Rosa, Sonoma County, CA. Senior Associate Environmental Scientist (2024).

Attended and participated in practical training on aquatic survey techniques for California tiger salamander, California red-legged frog, and western pond turtle. The lecture session included a review of the biology and ecology of these species, identification of life stages, state and federal regulations, and approved survey protocols. The field portion included field training in aquatic survey

techniques, including dip net sampling for CTS larvae, evening spotlighting for frogs, and turtle visual encounter surveys and trapping under Permitted Biologists Dave Cook (TE-816187) and Jeff Alvarez (TE-27427). Mr. Madueno handled two northwestern pond turtles and observed 6 northwestern pond turtles.

TEHACHAPI SLENDER SALAMANDER

(Batrachoseps stebbinsi)

Grapevine Channel Repair Project – Kern County, CA Associate / Environmental Scientist.

Conducted two presence/absence surveys for the Tehachapi slender salamander at five locations of the Grapevine Creek Channel Canal along Interstate 5 (I-5).

LEGLESS LIZARDS

(Anniella sp.)

Natural Communities Conference- San Joaquin Valley Chapter TWS, Bakersfield, CA, 2024.

Senior Associate Environmental Scientist.

Mr. Madueno attended a presentation on legless lizards by Theodore J. Papenfuss. As part of the session, Mr. Papenfuss invited Mr. Madueno to handle a Temblor legless lizard, which he brought along to enhance the experience.

Carbon TerraVault Project, California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist (2022-Current).

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂) capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. The Project would inject the captured CO₂ into these well sites for sequestration into the ground for importunity as part of the goal to reduce CO₂ emissions for the State of California. Several special-status plant species have the potential to occur on site including heartscale, Lost Hills crownscale, California jewelflower, recurved larkspur, Kern mallow, Temblor buckwheat, Tejon poppy, showy golden madia, San Joaquin woollythreads, and oil neststraw. In addition, several special-status wildlife species have the potential to occur on site including Crotch's bumblebee, California glossy snake, blunt-nosed leopard lizard, San Joaquin coachwhip, temblor legless lizard, coast horned lizard, burrowing owl, Swainson's hawk, prairie falcon, loggerhead shrike, LeConte's thrasher, San Joaquin antelope squirrel, giant kangaroo rat, short-nosed kangaroo rat, Tulare grasshopper mouse, San Joaquin pocket mouse, American badger, and San Joaquin kit fox. No special-status plant species were observed during the reconnaissance surveys. Observed one adult blunt-nosed leopard lizard, two potential burrowing owl burrows, one loggerhead shrike, two LeConte's thrashers, ten potential San Joaquin kit fox dens, 10 San Joaquin antelope squirrels, potential giant kangaroo rat burrows with the appropriate size characteristics, potential kangaroo rat burrows with appropriate size characteristics for short-nosed kangaroo rats, and five stick nests that could be utilized by nesting birds. Assisted

with the drafting of the Biological Analysis Report and associated figures.

Plains All American Pipeline Anomaly Repair Projects Line 903 Sisquoc to Pentland Anomaly Repairs, Cuyama and New Cuyama, CA, 2017.

Assistant Environmental Scientist. (2017).

Mr. Madueno observed an relocated an unidentified legless lizard from construction activities during this pipeline anomaly repair.

Manor Bridge Seismic Retrofit, City of Bakersfield - Bakersfield, CA. Assistant Environmental Scientist (2017).

Conducted biological surveys for sensitive wildlife species, nesting birds, and rare plants on two highway overpass bridge improvement sites in the City of Bakersfield. Targeted special - status species included SJKF, silvery legless lizard, WEBO, nesting swallows and other birds, and bat species. During the construction phase of the project, monitored an active SJKF natal den for project permit avoidance, provided environmental Worker Education and Training (WEAT) training to construction personnel and conducted nighttime monitoring to avoid impacts to SJKF.

Airport Drive, Kern County Bridges Seismic Restoration Project (TO#25), Caltrans – Bakersfield, CA. Assistant Environmental Scientist.

Conducted biological surveys for sensitive wildlife species, nesting birds, and invasive plants on two highway overpass bridge improvement sites in the City of Bakersfield. Targeted special - status species included SJKF, silvery legless lizard, WEBO, nesting swallows and other birds, and bat species. During the construction phase of the project, monitored an active SJKF natal den for project permit avoidance, provided environmental Worker Education and Training (WEAT) training to construction personnel and conducted nighttime monitoring to avoid impacts to SJKF.

WESTERN SPADEFOOT TOAD

(Spea Hammondi)

Road 209 – Merced County, CA. Senior Associate Environmental Scientist (2025).

Mr. Madueno relocated three western spadefoot toads from Road 209 after determining they were in immediate danger from being stuck by oncoming traffic.

City of Bakersfield Water Resource Department, Bakersfield, CA (2024-Present)

Mr. Madueno observed a western spadefoot toad during a general reconnaissance survey on a reach of the Kern River.

Countryside Dairy Digester Project, Maas Energy Works – Kings County, CA. Senior Associate Environmental Scientist (2023).

Conducted pre-construction survey for the Countryside Dairy Digester Project as required by Kings County as part of Site Plan Review NO. 22-16, Standards and Requirement #25. Special-status species with the potential to occur include San Joaquin kit fox, Tipton kangaroo rat, burrowing owl, nesting birds, blunt-

nosed leopard lizard, northwestern pond turtle, tricolored blackbird, and western spadefoot. No special-status species or their sign (i.e., tracks, dens, burrows, or nests) were observed during the survey. Drafted the pre-construction survey report and associated figures.

DESERT TORTOISE

(Gopherus agassizii)

Keyhole Wind Project, EDF Renewables, LLC – Kern County, CA. (2021-Present)

Conducted seventeen desert tortoise (*Gopherus agassizii*) surveys on an approximately 7,000-acre wind Project site. Observed two potential desert tortoise burrows and desert tortoise scat.

Copper Mountain College Desert Tortoise Training, Dr. Delaney, - San Bernardino County, CA. (April 30, 2022). Associate Environmental Scientist.

Attended training on the desert tortoise (*Gopherus agassizii*) taught by approved biologist for desert tortoise Dr. Delaney and Jeff Erway. Observed one hatchling and one adult desert tortoise. The hatchling was seen both inside the burrow and basking outside of the burrow. Processing and rehydration of the hatchling was also observed. Identified one active hatchling burrow, two active adult burrows, two inactive adult burrows, and desert tortoise scat and tracks. Four hours were spent attending desert training in the field.

Olancho Cartago 4-lane Project Desert Tortoise Training, Caltrans, Inyo County, CA. (September 18, 2021). Associate Environmental Scientist.

Attended training on the desert tortoise (*Gopherus agassizii*) taught by Curtis Uptain. Observed one hatchling and one adult desert tortoise. The hatchling was seen both inside the burrow and basking outside of the burrow. Identified one active hatchling burrow, three active, adult burrows, two inactive adult burrows, and desert tortoise scat and tracks. Six hours were spent attending desert training in the field.

BigBeau Solar Project, EDF Renewables, LLC – Kern County, CA. (2020-2021) Associate / Environmental Scientist.

Assisted with the removal of over 1,200 Joshua trees for the proposed 2,125-acre solar Project located in southeastern Kern County. Duties included tagging Joshua trees for harvest, guiding contractor through Project site to avoid any biological resources, and collecting GIS points for potential nests, DT, and DKF dens. Assisted with pre-construction clearance surveys for DT.

Rosamond Solar Project, Clearway Energy Group, LLC – Kern County, CA. (2020) Associate / Environmental Scientist.

Conducted three days of reconnaissance special-status wildlife surveys for the proposed solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave

ground squirrel. Desert kit fox sign and Swainson's hawk nest observed during the surveys.

AV Apollo Solar Project, Lend Lease (US) Energy Development, LLC - Rosamond, CA. Assistant Environmental Scientist.

Conducted two days of reconnaissance special-status wildlife surveys for the proposed 494-acre solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel. Recorded all observed species and noted relative abundance for the restoration after completion of the project. Desert kit fox and desert tortoise sign observed on site. One western burrowing owl individual observed on site.

Gettysburg Solar Project, Lend Lease Energy Development, LLC. – Rosemond, CA. Associate I Environmental Scientist.

Conducted two days of reconnaissance special-status wildlife surveys for the proposed 160-acre solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel. Desert kit fox sign and Swainson's hawk nest observed during the surveys.

Organic Waste – Renewable Energy Facility, True North Renewable Energy, LLC. – Mojave, Kern County, CA. Associate Environmental Scientist (2021-2023).

Conducted a fatal flaw analysis survey for the proposed 117-acre project. Potential threatened and/or endangered species that have the potential to occur included Mohave ground squirrel, desert tortoise, desert kit fox, burrowing owl, and Swainson's hawk. No protocol level surveys were conducted. Observed several potential desert kit fox dens.

Beacon Solar Project – Kern County, CA. Assistant Environmental Scientist.

Conducted reconnaissance special-status wildlife surveys for the proposed solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel.

Borax Solar Project – Kern County, CA. Assistant Environmental Scientist.

Conducted reconnaissance special-status wildlife surveys for the proposed 320-acre solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel. Desert kit fox and desert tortoise sign observed on site.

MOHAVE GROUND SQUIRREL

(Xerospermophilus mohavensis)

Rosamond Solar Project, Clearway Energy Group, LLC – Kern County, CA. Associate I Environmental Scientist (2020).

Conducted three days of reconnaissance special-status wildlife surveys for the proposed solar Project located in southeastern

Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel.

AV Apollo Solar Project, Lend Lease (US) Energy Development, LLC - Rosamond, CA. Assistant Environmental Scientist.

Conducted two days of reconnaissance special-status wildlife surveys for the proposed 494-acre solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel. Recorded all observed species and noted relative abundance for the restoration after completion of the project. Desert kit fox and desert tortoise sign observed on site. One western burrowing owl individual observed on site.

Gettysburg Solar Project, Lend Lease Energy Development, LLC. – Rosemond, CA. Associate Environmental Scientist.

Conducted two days of reconnaissance special-status wildlife surveys for the proposed 160-acre solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel.

Organic Waste – Renewable Energy Facility, True North Renewable Energy, LLC. – Mojave, Kern County, CA. Associate Environmental Scientist

Conducted a fatal flaw analysis survey for the proposed 117-acre project. Potential threatened and/or endangered species that have the potential to occur included Mohave ground squirrel, desert tortoise, desert kit fox, burrowing owl, and Swainson's hawk. No protocol level surveys were conducted. Observed several potential desert kit fox dens.

Beacon Solar Project – Kern County, CA. Assistant Environmental Scientist.

Conducted reconnaissance special-status wildlife surveys for the proposed solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel.

Borax Solar Project – Kern County, CA. Assistant Environmental Scientist.

Conducted reconnaissance special-status wildlife surveys for the proposed 320-acre solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel.

DESERT KIT FOX

(Vulpes macrotis arsipus)

RB Inyokern Solar Project, Dimension RE LLC - Inyokern, CA. Senior Associate Environmental Scientist (2023 to Current).

Conducted a pre-construction clearance survey in potential desert tortoise, Mohave ground squirrel, desert kit fox, and burrowing owl habitat. No protocol-level desert tortoise surveys were conducted. Conducted biological monitoring during the construction of a 32-megawatt photovoltaic solar project on

approximately 166.5 acres. Provided WEAT to new construction crew members. Monitoring was conducted under ITP No. 2081-2020-001-04 Condition of Approval (COA) measures. Drafted Quarterly Compliance Reports as required under ITP COA 5.4. Monitor observed two burrowing owls, and two desert kit foxes prior to any ground disturbing activities.

Rosamond Solar Project, Clearway Energy Group, LLC – Kern County, CA. Associate I Environmental Scientist (2020).

Conducted three days of reconnaissance special-status wildlife surveys for the proposed solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel. Desert kit fox sign and Swainson's hawk nest observed during the surveys.

AV Apollo Solar Project, Lend Lease (US) Energy Development, LLC - Rosamond, CA. Assistant Environmental Scientist.

Conducted two days of reconnaissance special-status wildlife surveys for the proposed 494-acre solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel. Recorded all observed species and noted relative abundance for the restoration after completion of the project. Desert kit fox and desert tortoise sign observed on site. One western burrowing owl individual observed on site.

Gettysburg Solar Project, Lend Lease Energy Development, LLC. – Rosemond, CA. Associate I Environmental Scientist.

Conducted two days of reconnaissance special-status wildlife surveys for the proposed 160-acre solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel. Desert kit fox sign and Swainson's hawk nest observed during the surveys.

Beacon Solar Project – Kern County, CA. Assistant Environmental Scientist.

Conducted reconnaissance special-status wildlife surveys for the proposed solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel.

Borax Solar Project – Kern County, CA. Assistant Environmental Scientist.

Conducted reconnaissance special-status wildlife surveys for the proposed 320-acre solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel. Desert kit fox and desert tortoise sign observed on site.

Organic Waste – Renewable Energy Facility, True North Renewable Energy, LLC. – Mojave, Kern County, CA. Associate Environmental Scientist (2021-2023).

Conducted a fatal flaw analysis survey for the proposed 117-acre project. Potential threatened and/or endangered species that have the potential to occur included Mohave ground squirrel, desert tortoise, desert kit fox, burrowing owl, and

Swainson's hawk. No protocol level surveys were conducted. Observed several potential desert kit fox dens.

JOSHUA TREE

(Yucca brevifolia)

Windhub B, Balanced Rock – Kern County, CA. Senior Associate/ Associate Environmental Scientist (2023 to Current).

Conducted a Joshua tree (*Yucca brevifolia*) census survey on approximately 112-acres. Maintaining a complete record of all Joshua tree's surveyed and their corresponding data per the CDFW protocol. All data collected was compiled to draft an application for an Incidental Take Permit (ITP). Worked on several revisions of the ITP application package as legislature and protocol revisions were adopted.

Keyhole Wind Project, EDF Renewables – Kern County, CA. Senior Associate/ Associate Environmental Scientist (2021 to 2023).

Conducted reconnaissance level survey, protocol desert tortoise, and botanical surveys for approximately 4,182-acres. Observed numerous potential DKF dens, three potential DT burrows, thousands of Joshua trees, and numerous nesting birds. Assisted with writing the Biological Analysis Report.

Rosamond South Solar Project, Clearway Energy Group, LLC. – Kern County, CA. Associate Environmental Scientist (2019 to Current).

Conducted multiple reconnaissance level surveys, nesting bird surveys, Joshua tree census (*Yucca brevifolia*) and three seasons of rare-plant surveys. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report. Assisted with drafting two Joshua Tree Incidental Take Permit (ITP) application packages, and calculations submitted to CDFW for approval.

BigBeau Solar Project, EDF Renewables – Kern County, CA. Senior Associate/Associate Environmental Scientist (2020 to Current).

Conducted Joshua tree (*Yucca brevifolia*) census surveys and drafted Joshua Tree Census 2084 Report.

HABITAT ASSESSMENT

Middle Mile Broadband Network, Task Order 21, Caltrans – Kern County, CA. (2021-Present). Senior Associate Environmental Scientist

Performed habitat assessments and related support activities for the Middle Mile Broadband Network (Kern County) project (EA 06-1F340, EA 06-1F390, EA 06-1F400, and EA 06-1F410). Habitats along portions of State Routes: 115, 58, 178, 184, 204, 223, 33, and 43 were assessed for potential impacts to special-status species, and other biological resources. Habitat assessment surveys occurred throughout the valley floor and Sierra Nevada Mountains within Kern County, CA.

RARE PLANT SURVEYS

KERN MALLOW

(Eremalche parryi ssp. Kernensis)

Blackwells corner CAPM– Kern County, CA (September 2024 to Present)

Senior Associate Environmental Scientist.

Approved Designated Monitor for San Joaquin antelope squirrel and Approved Designated Biologist for blunt-nosed leopard lizard under Incidental Take Permit #2081-2023-029-04, USFWS Permit #2022-0023965-S7-002, LSA #EPIMS-KER-37203-R4, USACE 404 Permit No. 0710-0003, and Regional Water Quality Control Board 401 WDID Permit #5C15CR00130. Excavated 172 BNLL burrows and 100+ San Joaquin antelope squirrel burrows over 13 days. Provided two days of construction monitoring along right-of-way work areas. Assisted with San Joaquin antelope squirrel trapping during which Mr. Madueno handled a total of 4 specimens (3 adults and 1 juvenile). Observed a Kern Mallow population (20+) along SR-33 during SJAS trapping efforts.

Reference site visit at the Carrizo Plain National Monument-Carrizo Plain- Kern County, CA. (April 14- 16, 2023). *Senior Associate Environmental Scientist.*

Conducted a preliminary field visit to reference sites for the 2023 season within the Carrizo Plain for Kern mallow, San Joaquin woollythreads, California jewelflower, and recurved larkspur. Observed 1000+ Kern mallow individuals, 1000+ San Joaquin woollythreads, 50+ California jewelflower, and 25+ recurved larkspur.

Reward CAPM Project, Caltrans – Kern County, CA. (2022). *Associate Environmental Scientist*

Conducted botanical surveys on an 9.4-mile roadwork Project. Surveyed for special status plants including but not limited to California jewel flower (*Caulanthus californicus*), Kern Mallow (*Eremalche parryi* ssp.) and Recurved Larkspur (*Delphinium recurvatum*). Recorded all observed species and noted relative abundance.

Lost Hills Rubber Rehabilitation Project, Construction Compliance Monitoring, Caltrans – Kern and Kings Counties, CA. (November 2020 – December 2022) *Assistant/Associate Environmental Scientist.*

Conducted preconstruction surveys for San Joaquin kit fox, badger, nesting birds and raptors, and multiple rare plant species including but not limited to Kern mallow, California jewelflower, and San Joaquin woollythreads, and provided weekly construction monitoring, weekly site visits, and Worker Environmental Awareness Training (WEAT) given as needed for the Project. Examined the Project site including two overpasses for special-status species and nesting birds or raptors including Swainson's hawk and burrowing owl. Maintained a complete record of all species observed, photographs taken both aerially

using a DJI Spark UAV and on ground during the surveys. Prepared weekly compliance report.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. *Assistant/Associate Environmental Scientist.* (2017 to 2018).

Conducted a reconnaissance survey on a 2,550-acre parcel of the Hopkins Lease to identify the presence or absence of special-status species or their habitat. Potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species including Kern Mallow. Conducted floristic surveys and blunt-nosed leopard lizard protocol level surveys. Drafted a memo report, reviewed historical annual reports, drafted the blunt-nosed leopard lizard and floristics survey report, and used ArcMap to produce map figures for the client on the results of the findings.

Other Plant Surveys

Graaf Solar Project, Dimension RE LLC - Inyokern, CA. (2024-2025). *Senior Associate Environmental Scientist.*

Conducted two seasons of rare plant surveys (5 surveys) on a 80-acre lot in Inyokern, CA. The survey focused on locating Mojave tarplant (*Deinandra mohavensis*), Pale-yellow layia (*Layia heteroticha*), Charlotte's phacelia (*Phacelia nashiana*) and Latimer's woodland-gilia (*Saltugilia latimeri*) among other special-status plant species.

Rosamond South Solar Project, Clearway Energy Group, LLC. – Kern County, CA. *Associate/Associate Environmental Scientist* (2019 to present).

Assisted with surveys for three Conditional Use Permits and associated forms for a proposed 100-MW solar project, approximately 1,292-acres. Conducted multiple Joshua tree census surveys in compliance with the CDFW 2084 Special Order allowing incidental take of western Joshua tree during CESA Candidacy for renewable energy projects that have met specific qualifications. Assisted with one season of rare-plant surveys. Observed one adult burrowing owl.

Keyhole Wind Project, EDF Renewables, LLC – Kern County, CA. (2021-Present). *Associate Environmental Scientist*

Conducted botanical surveys on an approximately 7,000-acre wind project site. Surveyed for special status plants including, but not limited to Tejon poppy (*Eschscholzia lemmonii* ssp.), Bakersfield cactus (*Opuntia basilaris* var. *treleasei*), and alkali mariposa lily (*Calochortus striatus*). Recorded all observed species and noted relative abundance for the restoration after completion of the project.

Organic Waste-Renewable Energy Facility, True North Renewable Energy, LLC – Kern County, CA. (2022). *Associate Environmental Scientist*

Conducted botanical surveys on 117-acres of undeveloped land in the western Mojave Desert. Recorded all observed species and noted relative abundance.

AV Apollo Solar Project, Lend Lease (US) Energy Development, LLC - Rosamond, CA. Assistant Environmental Scientist

Conducted floristic surveys on a 493-acre project site. Recorded all observed species and noted relative abundance for the restoration after completion of the project.

Gettysburg Solar Project, Lend Lease Energy Development, LLC. – Rosemond, CA. Assistant Environmental Scientist

Conducted reconnaissance special-status wildlife and floristic surveys for the proposed 160-acre solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel. Recorded all observed species and noted relative abundance for the restoration after completion of the project.

Beacon Solar Project- Kern County, CA. Assistant Environmental Scientist

Conducted reconnaissance special-status wildlife and floristic surveys for the proposed solar Project located in southeastern Kern County. Species of focus included desert kit fox, desert tortoise, western burrowing owl, Swainson's hawk, and Mohave ground squirrel. Recorded all observed species and noted relative abundance for the restoration after completion of the project.

AQUATIC RESOURCES DELINEATION

Merced Biogas Pipeline – Hemlock Road x Chowchilla River Project – Merced and Madera County, CA (2025).

Senior Associate Environmental Scientist.

Conducted an aquatic resource delineation of a pipeline crossing at Hemlock Road and Chowchilla River in Merced and Madera Counties, California. Prepared an Aquatic Resource Delineation Report that was submitted to the agencies for jurisdictional determination and impact analysis

Woodlake Mulberry Ave./Naranjo Blvd. Roundabout Project – Tulare County, CA. (2024-2025)

Senior Associate Environmental Scientist.

Conducted a delineation of wetland and non-wetland waters of Antelope Creek and an Unnamed ditch in the City of Woodlake, CA. Prepared an Aquatic Resource Delineation Report that was submitted to the agencies for jurisdictional determination and impact analysis

Backup Weir Replacement Project – Kern County, CA (2020-2025).

Senior Associate Environmental Scientist.

Conducted a delineation of wetland and non-wetland waters of the Kern River in the City of Bakersfield, CA. Prepared an Aquatic Resource Delineation Report that was submitted to the agencies for jurisdictional determination and impact analysis.

Merced Biogas Pipeline – Phase 2 Project – Merced and Madera County, CA (2022).

Associate Environmental Scientist.

Conducted an aquatic resource delineation of six aquatic features along/near Gurr Road Merced County, California. Prepared an Aquatic Resource Delineation Report that was submitted to the agencies for jurisdictional determination and impact analysis.

Maricopa Highway CAPM Project- Kern County, CA (2021).

Associate I Environmental Scientist

Conducted an aquatic resource delineation of 23 culverts along state Route (SR) 166 from post mile (PM) 0.0 to 9.0 in Kern County, California. Prepared an Aquatic Resource Delineation Report that was submitted to the agencies for jurisdictional determination and impact analysis.

Grapevine Rehab- Kern County, CA (2021).

Associate I Environmental Scientist.

Conducted an aquatic resource delineation of 43 drainage features and 8 wetland features along interstate 5 from Grapevine Creek near Fort Tejon at Post Mile (PM) 4.5 to the Grapevine Undercrossing near Grapevine at PM 10.2. Prepared an Aquatic Resource Delineation Report that was submitted to the agencies for jurisdictional determination and impact analysis.

Blackwell's Corner- Kern County, CA (2021).

Associate I Environmental Scientist.

Conducted an aquatic resource delineation of 12 culverts along state Route (SR) 33 from just south of SR 46 at Blackwell's Corner to south of the Belridge oil field in Kern County, California. Prepared an Aquatic Resource Delineation Report that was submitted to the agencies for jurisdictional determination and impact analysis.

Kern River Maintenance Project – Kern County, CA (2020-2021).

Associate I Environmental Scientist.

Conducted a delineation of wetland and non-wetland waters in two reaches of the Kern River stretching approximately 11.6 miles through the City of Bakersfield, CA. Prepared an Aquatic Resource Delineation Report that was submitted to the agencies for jurisdictional determination and impact analysis.

Merced Biogas Project – Merced and Madera Counties, CA (2020). *Associate I Environmental Scientist.*

Conducted aquatic resources delineation for this proposed 34-mile gathering of pipelines, and a series of biogas collection facilities. Prepared an Aquatic Resource Delineation Report that was submitted to the agencies for jurisdictional determination and impact analysis.

Cartago Wildlife Area – Inyo County, CA. (2019).

Associate I Environmental Scientist.

Conducted a delineation of wetland and non-wetland waters for this 218-acre site. Collected, submitted data, and assisted on final report.

Meadow farms – Mono County, CA (2019).

Associate I Environmental Scientist.

Conducted aquatic resources delineation for a road improvement project near Bishop, CA.

Five Points Dairy Digester Cluster Project – Fresno County, CA. (2019). *Associate I Environmental Scientist.*

Conducted aquatic resources delineation for this proposed 10-mile gathering of pipelines, and a series of biogas collection facilities.

RESEARCH

Sea Turtle Monitoring, Aquarium of the Pacific and SoCal Turtle– Los Angeles County, CA. *Sea Turtle Monitor Volunteer (2022 - Current).*

Volunteer monitor once a month to collect data on the sea turtle population size in the San Gabriel River in Long Beach, California. Monitor received training from Aquarium of the Pacific staff on identifying and approximating the size of sea turtles breaching the surface.



AREAS OF EXPERTISE

- Conservation Management of Threatened and Endangered Species
- Protocol-level Special-Status Species Plant and Wildlife Surveys
- Small Mammal Trapping and Relocation
- Environmental Compliance Monitoring
- Geographic Information Systems (GIS)/Global Positioning System (GPS)
- CEQA Documents (Drafting and Reviewing)
- Data Collection, Management, and Analyses

EDUCATION

- BS, Conservation and Organismal Biology, San Jose State University, 2015
- AS, Biology, Bakersfield College, 2012

PERMITS

- USFWS Recovery Permit No. ESPER9631931
 - California red-legged frog
 - Foothill yellow-legged frog (Central Coast DPS)
- Scientific Collecting Permit No. S-220760002-24073-001
 - Amphibians & Reptiles
- Plant Voucher Collecting Permit No. 2081(a)-25-200-V

Karissa A. Denney

Senior Environmental Scientist

Ms. Denney is a San Jose State University (SJSU) graduate with a Bachelor of Science in Conservation and Organismal Biology. Ms. Denney has conducted several United States Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW) protocol level surveys for San Joaquin kit fox (i.e., den and track station monitoring), blunt-nosed leopard lizard surveys, floristic surveys, Swainson's hawk surveys, nesting avian surveys, desert tortoise surveys, and bird and bat mortality. Ms. Denney is also knowledgeable in conducting small mammal burrow surveys and small mammal trapping for giant, Tipton, and short-nosed kangaroo rats and San Joaquin antelope squirrels. Conversant with species specific rare plant survey protocols for CDFW, USFWS, Bureau of Land Management (BLM), and United States Forest Service (USFS).

Ms. Denney has conducted reconnaissance level, pre-construction surveys, and has been approved as a Designated Monitor or Designated Biologist for protected, threatened, and endangered species such as: San Joaquin kit fox (SJKF), San Joaquin antelope squirrel (SJAS), blunt-nosed leopard lizard (BNLL), giant kangaroo rat (GKR), Tipton kangaroo rat (TKR), and short-nosed kangaroo rat (SNKR), western burrowing owl (WEBO), Swainson's hawk (SWHA), desert tortoise (DETO), Mohave ground squirrel (MGS), American badger (AMBA), northwestern pond turtle (NWPT), southwestern pond turtle (SWPT), Coast Range newt (TATO) and special-status rare plants. She has drafted a variety of California Environmental Quality Act and (CEQA) and National Environmental Policy Act (NEPA) documents from letter reports to biological sections of Initial Study Mitigated Negative Declarations, Biological Analysis Reports, Biological Resource Evaluations, and Biological Assessments. Ms. Denney is well rehearsed in Joshua tree census surveys and Incidental Take Permit (ITP) applications. She has assisted on several active construction and future proposed solar projects in the Mojave Desert for Joshua tree ITP applications.

Additionally, Ms. Denney has a USFWS 10(a)1(A) Recovery Permit (ESPER9631931) for California red-legged frog (CRLF) and foothill yellow-legged frog (FYLF, Central Coast DPS), a CDFW Scientific Collecting Permit for amphibians and reptiles, and applying for a Memorandum of Understanding (MOU) for FYLF (East/Southern Sierra and West/Central Coast clades). She is proficient with using ArcMap and ArcPro to use Global Positioning System (GPS) data to create figures/maps for field surveys and project reports. Ms. Denney is a Federal Aviation Administration (FAA) certified part 107 drone pilot.

PROFESSIONAL EMPLOYMENT

2025 – Present	QK, Senior Environmental Scientist
2022 – 2025	QK, Senior Associate Environmental Scientist



REGISTRATIONS / CERTIFICATIONS

- FAA Certified Part 107 Drone Pilot, Certification No. 4603505
- Wildlife Biologist Construction Awareness Training (WildC.A.T.)
- California Department of Fish and Wildlife, Level II Blunt-nosed Leopard Lizard Surveyor
- CPR, AED, and First Aid Training

2017 – 2022
2016 – 2017
2015 – 2016

2015 – 2015

2013 – 2015

QK, Associate Environmental Scientist
QK, Assistant Environmental Scientist
Mesa Biological, Biological Field Technician I
M.H. Wolfe and Associates
Environmental Consulting, Inc., Biologist I
M.H. Wolfe and Associates
Environmental Consulting, Inc., Student Intern

PROJECT EXPERIENCE

PROFESSIONAL ORGANIZATIONS

- Member, The Wildlife Society (TWS), TWS Western Section, San Joaquin Valley, Central Coast, and Southern California Chapters
- Member, Desert Tortoise Council
- Member, American Society of Mammalogists

AWARDS / RECOGNITION

- Beta Beta Beta National Biological Honor Society, Epsilon Kappa Chapter, March 2014

CONTINUING EDUCATION

- Mohave Ground Squirrel Workshop: Walk Big Trap Grid, from The Wildlife Society Western Section, June 5, 2026, Ridgecrest, CA.
- Declining Aquatic and Semi-Aquatic Herpetofauna of the Central Coast Workshop; The Western Wildlife Society Central Coast Chapter, April 10-11, 2026,

NORTHWESTERN/SOUTHWESTERN POND TURTLE

Declining Aquatic and Semi-Aquatic Herpetofauna of the Central Coast Workshop, The Western Wildlife Society Central Coast Chapter, San Luis Obispo and Santa Barbara Counties, CA. *Senior Environmental Scientist* (2026).

Attended and participated in an in-depth exploration of the ecology, identification, threats, conservation challenges, and management considerations for the region's aquatic and semi-aquatic sensitive amphibian and reptile species. Gained experience through lectures, field demonstrations, hands-on identification exercise, protocol-level surveys, and habitat assessments for the CRLF, CTS, SWPT, and WESP. Participants of the class surveyed for 6 hours for SWPT but no pond turtles were observed or handled.

Amphibians and Reptiles of the Sierra Nevada Workshop, San Francisco State University Sierra Nevada Field Campus, Sierra and Butte Counties, CA. *Senior Associate Environmental Scientist* (2025).

Introduced to the identification, natural history, and field survey techniques of reptile and amphibian species of the Sierra Nevada. Curriculum consisted of lectures and lab examination of live and preserved specimen, with daily field trips. Hands-on experience with foothill and Sierra Nevada yellow-legged frogs, CRLF, and NWPT under Permitted Biologist Kevin Wiseman [10 (a)1(A) #ES139628, SCP #006634 and #2843 with California Academy of Sciences, Department of Herpetology]. Three of the 12 FYLF observed were handled and processed, 4 FYLF froglettes (post-metamorph) and 13 FYLF tadpoles were observed, handled, and processed. Three adult CRLF, 3 CRLF froglettes (post-metamorph), and 1 CRLF tadpole were observed and handled. Four NWPT were observed, handled, and processed. Five of the 11 Sierra Nevada yellow-legged frogs observed were handled and processed, 8 Sierra Nevada yellow-legged froglettes (post-metamorphs) and 3 Sierra Nevada yellow-legged frog tadpoles were observed, handled, and processed.

Rare Pond Species Survey Techniques Workshop, Laguna de Santa Rosa Foundation, Santa Rosa, Sonoma County, CA. *Senior Associate Environmental Scientist* (2024).

San Luis Obispo and Santa Barbara Counties, CA.

- Natural Communities Conference, The Western Wildlife Society San Joaquin Valley Chapter, March 19, 2026, Bakersfield, CA.
- California Tiger Salamander Spring 2026 Survey with Dave Cook; March 13-14, 2026, Santa Rosa, CA.
- The Wildlife Society Western Section 2026 Annual Conference, February 4-6, 2026, Monterey, CA.
- California Bumble Bee Atlas Training (Online), Xerces Society, December 2025.
- Amphibians and Reptiles of the Sierra Nevada Workshop, San Francisco State University Sierra Nevada Field Campus, July 28-31, 2025, Sattley, California
- Basic Botany and an Introduction to California Plant Families, Jepson Herbarium, June 7-8, 2025, UC Berkeley, Berkeley, CA.
- Western Spadefoot Workshop, TWS Western Section, April 17 (Lecture) and 20 (Field), 2025, Carnegie State Vehicular Recreation Area, Tracy, CA.
- Arroyo Toad Workshop, The Western Wildlife Society Southern California Chapter, April 11, 2025, Reserve at Ranch Mission Viejo, Rancho Mission Viejo, CA
- Natural Communities Conference, The Western Wildlife Society San Joaquin Valley Chapter, March 20, 2025, Bakersfield, CA.
- The Wildlife Society (TWS) Western Section 2025 Annual Conference, February 5-7, 2025, Visalia, CA.
- Bodie Hills Plant Workshop, Jepson Herbarium, June 20-23, 2024, Bridgeport, CA.
- Natural Communities Conference, TWS San Joaquin Valley Chapter, March 21, 2024, Bakersfield, CA.
- Rare Pond Species Survey Techniques Workshop, Laguna de Santa Rosa Foundation, March 9-10, 2024, Santa Rosa, CA.
- California Tiger Salamander Terrestrial Ecology Workshop, Laguna de Santa Rosa

Attended and participated in practical training on aquatic survey techniques for California tiger salamander, CRLF, and western pond turtle. The lecture session included a review of the biology and ecology of these species, identification of life stages, state and federal regulations, and approved survey protocols. Field portion included training in aquatic survey techniques, including dip net sampling for CTS larvae, evening spotlighting for frogs, and turtle visual encounter surveys and trapping under Permitted Biologists Dave Cook (TE-816187) and Jeff Alvarez (TE-27427). During the workshop two pond turtles were observed and due to the geographic location of the field site it was determined to be NWPT. Neither pond turtle was handled.

Foothill Yellow-legged Frog Level II Workshop, The Wildlife Project – San Benito, Sonoma, Santa Clara, and Placer Counties, CA. Senior Associate Environmental Scientist (2023).

This workshop included a total of four separate field meeting dates over the course of a 12-month period. Each field meeting coincided with specific FYLF life history stages: breeding/egg-laying, larval, post-metamorphic, and adult. Field sites included Mitsui Ranch (Sonoma County), Llagas Creek (Santa Clara County), Mineral Bar (Placer County) and San Benito River (San Benito County). Participant in surveying, observing, and handling for FYLF at each of the field meeting dates under Permitted Biologists Jeff Wilcox (TE-068745) and Jeff Alvarez (TE-27427). During the four separate field meetings, students observed a total of 2 pond turtles. Of the two pond turtles observed one pond turtle was handled identified as southwestern. Over the four field meetings, Ms. Denney has spent a total of 21 hours surveying for pond turtles under the guidance of Mr. Wilcox and Mr. Alvarez. Of the 21 hours, 5 hours were spent on surveying for NWPT, and 21 hours were spent on surveying for SWPT. One field meetings had the potential for both DPS to be present.

California Red-legged Frog Level II Workshop, The Wildlife Project – San Benito, Sonoma, Santa Clara, Placer, and Marin Counties, CA. Senior Associate/Associate Environmental Scientist (2021-2022).

This workshop included a total of five separate field meeting dates over the course of a 12-month period. Each field meeting coincided with specific CRLF life history stages: breeding/egg-laying, larval, post-metamorphic, and adult. Field sites included Pinnacles National Park (San Benito County), Mitsui Ranch (Sonoma County), Blue Oak Ranch Reserve (Santa Clara County), Big Gun Conservation Site by Westervelt (Placer County) and Point Reyes National Seashore (Marin County). Participant in surveying, observing, and handling for CRLF at each of the field meeting dates under Permitted Biologists Jeff Wilcox (TE-068745) and Jeff Alvarez (TE-27427). During the five separate field meetings, students observed a total of 30 pond turtles. Of those 30 pond turtles observed 23 pond turtles were handled and 12 identified as NWPT and 11 identified as SWPT. Over the five field meetings, Ms. Denney has spent 29 hours surveying for pond turtles under the guidance of Mr. Wilcox and Mr. Alvarez.

Foundation, March 8, 2024, Santa Rosa, CA.

- Foothill Yellow-legged Frog Level II Workshop, from The Wildlife Project.
 - April 29, 2023 - Sonoma Mt. Ranch Field Station, Sonoma County
 - June 1, 2023 – Llagas Creek, Santa Clara County
 - August 5, 2023 – Mineral Bar, Placer County
 - September 23, 2023 – San Benito River and Clear Creek at Hernandez Reservoir, San Benito County
- Natural Communities Conference, TWS San Joaquin Valley Chapter, March 30, 2023, Bakersfield, CA.
- American Fisheries Society (AFS) 2023 Annual Conference, March 1-3, 2023, Long Beach, CA.
- California Native Plant Society Bakersfield Cactus Workshop, November 12, 2022, Bakersfield, CA.
- West Coast Sea Turtle Symposium, Aquarium of the Pacific, October 18, 2022, Long Beach, CA.
- American Society of Mammalogists (ASM) 2022 Annual Conference, June 17-21, 2022, Virtual Conference, AZ.
- Desert Tortoise Training with Dr. Paul Delaney, Copper Mountain College, April 30, 2022
- Mohave Ground Squirrel Workshop, from The Wildlife Society Western Section, March 7-8, 2022, Ridgecrest, CA.
- Rattlesnake Training and Handling Workshop, Central Coast Snake Services, taught by Emily Taylor, 2021.
- Conservation Lecture Series: Conservation of endangered Buena Vista Lake Shrews through investigation of taxonomic status, distribution, and use of non-invasive survey methods; December 20, 2021; Webinar, CA.
- California Red-legged Frog Level II Workshop, from The Wildlife Project
 - October 15, 2021 – Pinnacles National Park, San Benito County
 - February 19, 2022 – Sonoma Mt. Ranch Field Station, Sonoma County

California Red-legged Frog Level I Workshop, The Wildlife Project – Sonoma County, CA. Associate Environmental Scientist (2021).

Participant in one day lecture and one day field portion workshop. Field portion of workshop included surveying, observing, and handling for adult CRLF at the Mitsui Ranch which is a part of the Sonoma Mountain Ranch Preservation Foundation under Permitted Biologists Jeff Wilcox (TE-068745) and Jeff Alvarez (TE-27427). Ms. Denney surveyed, observed, and handled all 16 CRLF that were captured and released. While surveying for CRLF, a total of 2 adult FYLF, three NWPT, and two SWPT were caught, identified, handled, and released. Ms. Denney spent six hours surveying for pond turtles under the guidance of Mr. Wilcox and Mr. Alvarez.

WESTERN SPADEFOOT

Declining Aquatic and Semi-Aquatic Herpetofauna of the Central Coast Workshop, The Western Wildlife Society Central Coast Chapter, San Luis Obispo and Santa Barbara Counties, CA. Senior Environmental Scientist (2026).

Attended and participated in an in-depth exploration of the ecology, identification, threats, conservation challenges, and management considerations for the region's aquatic and semi-aquatic sensitive amphibian and reptile species. Gained experience through lectures, field demonstrations, hands-on identification exercise, protocol-level surveys, and habitat assessments for the CRLF, CTS, SWPT, and WESP. Participants of the class surveyed for 6 hours for WESP, but no WESP were observed or handled.

Western Spadefoot Workshop, The Wildlife Society Western Section – Tracey, CA. Senior Associate Environmental Scientist (2025).

Attended the 2025 Western Spadefoot Workshop which taught participants how to identify, survey for, and mitigate for the species through an online lecture followed by a field session. The field session included a day and nighttime component looking at habitat and management considerations. During the 8-hour field survey (day and night) a total of 48 adult WESP were observed. Ms. Denney held and identified 30 of those adults. All field work was done under the guidance of Jeff Alvarez (SCP S-19224005) and Nicole Kleponis (S-233100004-23335-001).

Kern River Canal Backup Weir Reconstruction Project, City of Bakersfield Water Resources Department – Kern County, CA. Senior Associate/ Associate Environmental Scientist (2021-Present).

Conducted biological reconnaissance surveys over the course of several years for the replacement of the Kern River Backup Weir. Project activities included demolition and removal of an existing concrete weir, retaining wall, riprap, and sheet piling, and construction of a new weir system and recontouring of the Kern River channel bed. Ms. Denney assisted with data analysis, drafting of the Biological Assessment and associated map figures.

- April 23, 2022 – Blue Oak Ranch Reserve, Santa Clara County
- June 18, 2022 – Big Gun (Sierra Nevada) Conservation Area, owned and operated by Westervelt, Placer County
- August 6, 2022 – Point Reyes National Seashore, Marin County
- August 6, 2022 – Sonoma Mt. Ranch Field Station, Sonoma County
- Desert Tortoise Training with Curtis Uptain, Olancho Cartago 4-lane Project, September 18, 2021, Olancho, CA.
- CEQA 101 for Biologists Webinar from Association of Environmental Professionals, July 29, 2021, Virtual Workshops, CA
- California Red-legged Frog Level I Workshop, from The Wildlife Project, July 13 and 21, 2021, Sonoma Mt. Ranch Field Station, CA.
- The Wildlife Society (TWS) Western Section 2021 Annual Conference, February 1-5, 2021, Virtual Conference, CA.
- The Wildlife Society (TWS) Central Coast Chapter Annual Symposium, October 23, 2020; Virtual Symposium, CA.
- Foothill Yellow-legged Frog Ecology and Conservation Workshop; October 18 -19, 2019; Laguna de Santa Rosa, CA
- CDFW Research Permitting Overview, TWS Western Section 2019 Annual Conference, February 5, 2019, Fish Camp, CA.
- The Wildlife Society (TWS) Western Section 2019 Annual Conference, February 4-8, 2019, Fish Camp, CA.
- CEQA Essentials: An Introduction & Intermediate – Level Training Workshop, Association of Environmental Professionals, October 26, 2018, Los Angeles, CA.
- Blunt-nosed Leopard Lizard Identification Workshop, TWS: San Joaquin Valley Chapter, May 18-19, 2018, Bakersfield, CA
- The Wildlife Society (TWS) Western Section 2018 Annual Conference, February 5-9, 2018, Santa Rosa, CA.
- Natural Communities Conference, TWS San Joaquin Valley Chapter, March 23, 2017, Bakersfield, CA.

The Project site has the potential for several special-status plant and wildlife species including California jewelflower, recurved larkspur, San Joaquin woollythreads, Bakersfield legless lizard, California glossy snake, western spadefoot, WEBO, Crotch's bumble bee, AMBA, SJKF, nesting birds and raptors, and roosting bats. Ms. Denney conducted two bat flyout surveys prior to the construction activities beginning. No bat activity was observed. Ms. Denney conducted a Bakersfield legless lizard survey, but no legless lizards were observed. Observed active nesting cliff swallows under the Coffee Road Bridge located south of the Project site. Conducted SJKF den monitoring (i.e., tracking medium) on a potential den. No SJKF sign (i.e., tracks, scat, prey remains) were observed during the den monitoring. No WESP were observed.

COAST RANGE NEWT

Declining Aquatic and Semi-Aquatic Herpetofauna of the Central Coast Workshop, The Western Wildlife Society Central Coast Chapter, San Luis Obispo and Santa Barbara Counties, CA. *Senior Environmental Scientist* (2026).

Attended and participated in an in-depth exploration of the ecology, identification, threats, conservation challenges, and management considerations for the region's aquatic and semi-aquatic sensitive amphibian and reptile species. Gained experience through lectures, field demonstrations, hands-on identification exercise, protocol-level surveys, and habitat assessments for the CRLF, CTS, SWPT, WESP, and TATO. Participants of the class surveyed for 5.5 hours for TATO. A total of 76 TATO were observed and handled.

Foothill Yellow-legged Frog Level II Workshop, The Wildlife Project – San Benito, Sonoma, Santa Clara, and Placer Counties, CA. *Senior Associate Environmental Scientist* (2023).

This workshop included a total of four separate field meeting dates over the course of a 12-month period. Each field meeting coincided with specific FYLF life history stages: breeding/egg-laying, larval, post-metamorphic, and adult. Field sites included Mitsui Ranch (Sonoma County), Llagas Creek (Santa Clara County), Mineral Bar (Placer County) and San Benito River (San Benito County). Participant in surveying, observing, and handling for FYLF at each of the field meeting dates under Permitted Biologists Jeff Wilcox (TE-068745) and Jeff Alvarez (TE-27427). During the four separate field meetings, students observed and handled 10 TATO. Over the four field meetings, Ms. Denney has spent 5 hours surveying for TATO under the guidance of Mr. Wilcox and Mr. Alvarez.

California Red-legged Frog Level II Workshop, The Wildlife Project – San Benito, Sonoma, Santa Clara, Placer, and Marin Counties, CA. *Senior Associate/Associate Environmental Scientist* (2021-2022).

This workshop included a total of five separate field meeting dates over the course of a 12-month period. Each field meeting coincided with specific CRLF life history stages: breeding/egg-

- Introduction to Desert Tortoises and Field Techniques, November 5-6, 2016, Ridgecrest, CA.
- CEQA Essentials: An Introduction & Intermediate – Level Training Workshop, Association of Environmental Professionals, November 5, 2015, Fresno, CA.
- Section 404 Permitting Process, Association of Environmental Professionals, October 21, 2015, Fresno, CA.
- Tracking Intensive Workshop presented by Jim Lowery, Earth Skills, June 12-14, 2015, Windy Springs, CA.
- American Fisheries Society 2015 Annual Conference; April 9, 2015; Santa Cruz, CA.

PRESENTATIONS

- Evaluating the Efficacy and Cost of Burrow Excavations for Small Vertebrate Species, Natural Communities Conference, The Western Wildlife Society San Joaquin Valley Chapter, Bakersfield, CA, March 19, 2026.
- Evaluating the Efficacy and Cost of Burrow Excavations for Small Vertebrate Species, The Wildlife Society Western Section Annual Conference, Monterey, CA, February 5, 2026.
- Incursion of Sargassum and Other Invasive Species, Scuba Show 2023, Long Beach, CA, June 3, 2023.

RESEARCH WORK

- Aquarium of the Pacific: Green Sea Turtle Monitoring at the San Gabriel River, Long Beach, CA, October 2022 - Current
- The Wildlands Conservancy: Wind Wolves Preserve; Bakersfield Cactus Translocating Volunteer Day, January 26, 2020, Bakersfield, CA

laying, larval, post-metamorphic, and adult. Field sites included Pinnacles National Park (San Benito County), Mitsui Ranch (Sonoma County), Blue Oak Ranch Reserve (Santa Clara County), Big Gun Conservation Site by Westervelt (Placer County) and Point Reyes National Seashore (Marin County). Participant in surveying, observing, and handling for CRLF at each of the field meeting dates under Permitted Biologists Jeff Wilcox (TE-068745) and Jeff Alvarez (TE-27427). During the five separate field meetings, students observed and handled 38 TATO. Over the five field meetings, Ms. Denney has spent a total of 21 hours surveying for TATO under the guidance of Mr. Wilcox and Mr. Alvarez.

California Red-legged Frog Level I Workshop, The Wildlife Project – Sonoma County, CA. *Associate Environmental Scientist* (2021). Participant in one day lecture and one day field portion workshop. Field portion of workshop included surveying, observing, and handling for adult CRLF at the Mitsui Ranch which is a part of the Sonoma Mountain Ranch Preservation Foundation under Permitted Biologists Jeff Wilcox (TE-068745) and Jeff Alvarez (TE-27427). Ms. Denney surveyed, observed, and handled all 16 CRLF that were captured and released. While surveying for CRLF, a total of 2 adult FYLF, three NWPT, and two SWPT were caught, identified, handled, and released. A total of 100 TATO were observed and of those observations 5 adults were handled. The survey was a total of six hours surveying for TATO under the guidance of Mr. Wilcox and Mr. Alvarez.

CALIFORNIA TIGER SALAMANDER

Declining Aquatic and Semi-Aquatic Herpetofauna of the Central Coast Workshop, The Western Wildlife Society Central Coast Chapter, San Luis Obispo and Santa Barbara Counties, CA. *Senior Environmental Scientist* (2026).

Attended and participated in an in-depth exploration of the ecology, identification, threats, conservation challenges, and management considerations for the region's aquatic and semi-aquatic sensitive amphibian and reptile species. Gained experience through lectures, field demonstrations, hands-on identification exercise, protocol-level surveys, and habitat assessments for the CRLF, CTS, SWPT, and WESP. Under the guidance of Jeff Alvarez (TE-27427) and Dr. Robert D. Cooper, Ms. Denney surveyed, observed, and handled 17 CRLF adults and 698 CTS larvae. Of the 698 CTS larvae captured, 25 CTS larvae had their tail-clipped for subsequent genetic analysis. The 17 CRLF were captured by hand during a combined daytime and nighttime survey effort of 5.5-hours. The 698 CTS larvae were captured through dip-net and seine during a 2.5-hour daytime survey.



CALIFORNIA TIGER SALAMANDER (continued)

California Tiger Salamander Spring 2026 Survey with Dave Cook. – Sonoma County, CA. *Senior Environmental Scientist. (2026).*

Assisted Dave Cook on March 13 and 14, 2026, with his spring 2026 dipnet survey sampling at the CDFW Wetland Mitigation Bank referred to as Hazel. Dipnet surveyed 80 out of 89 vernal pools, the remaining nine pools were too dry to sample. Ms. Denney dipnet captured 11 larvae, measured 3 larvae for a total of 14 larvae handled. A combined total of 346 larvae were captured, identified, and released over the two survey days. Total of 11 hours dipnet surveying.

Caltrans District 6: Fresno State Route 198 Culvert Rehabilitation Project (TO#6), Caltrans – Fresno County, CA. *Senior Environmental Scientist. (2025 - Current).*

Provided biological monitoring during ground disturbance under Incidental Take Permit (ITP) No. 2081-2022-057-04 and Biological Opinion No. 2022-0081558-S7-001. Ms. Denney was approved as a Designated Monitor for California tiger salamander. Monitoring was conducted in potential upland habitat for California tiger salamander. No California tiger salamander (adult or larvae) were identified during the monitoring effort.

Gustine Project, WattEV, Gustine, Merced County, CA. *Senior Associate Environmental Scientist (2025).*

Conducted a reconnaissance survey on approximately 5-acres in Merced County. Proposed project is for an electric vehicle charging location, a solar field, convenience store, and truck rest/parking stalls. Potential vernal pool habitat was observed and could be suitable habitat for California tiger salamander, fairy shrimp, and western spadefoot. No California tiger salamanders, adults or larvae, fairy shrimp, or western spadefoot were observed.

Rare Pond Species Survey Techniques Workshop, Laguna de Santa Rosa Foundation, Santa Rosa, Sonoma County, CA. *Senior Associate Environmental Scientist (2024).*

Attended and participated in practical training on aquatic survey techniques for California tiger salamander, CRLF, and western pond turtle. The lecture session included a review of the biology and ecology of these species, identification of life stages, state and federal regulations, and approved survey protocols. Field portion included training in aquatic survey techniques, including dip net sampling for CTS larvae, evening spotlighting for frogs, and turtle visual encounter surveys and trapping under Permitted Biologists Dave Cook (TE-816187) and Jeff Alvarez (TE-27427). Ms. Denney handled a total of the five out of 244 CTS larvae capture, handled, and released.

California Tiger Salamander Terrestrial Ecology Workshop, Laguna de Santa Rosa Foundation, Santa Rosa, Sonoma County, CA. *Senior Associate Environmental Scientist (2024).*

Attended and participated in practical training and lecture discussion on a review of the biology, upland habitat use, and migration patterns of CTS, the theory and design of roadway tunnels to facilitate safe passage of migrating salamanders, design pitfall trap arrays, USFWS and CDFW approval survey protocols, implementing and monitoring land use management practices. This workshop's instructors were Permitted Biologists Dave Cook (TE-816187) and Jeff Alvarez (TE-27427).

Concord Naval Weapons Station Environmental Remediation, Condor Country Consulting - Contra Costa County, CA. *Senior Associate Environmental Scientist (2024).*

Conducted trap checks for 307 traps located at three sites undergoing environmental remediation on the retired Concord Naval Weapons Station. Seventeen individuals were relocated from the three sites on January 21, January 22, and February 2, 2024. On January 21, one adult female, one juvenile, and two young of the year were relocated. On January 22, two adult males, one adult female, one juvenile, and six young of the year were relocated. On February 2, one juvenile and two young of the year were relocated. Individual adults were relocated into a nearby breeding pool and young were released into nearby burrows. A combined total of approximately 19 hours of California tiger salamander trap checking and handling, as individuals were processed, were conducted over a span of three days.

California Red-legged Frog Level II Workshop, The Wildlife Project – Santa Clara County, CA. *Senior Associate Environmental Scientist (April 23, 2022).*



Participant in surveying, observing, and handling for CRLF at the Blue Oak Ranch Reserve in Santa Clara County under Permitted Biologists Jeff Wilcox (TE-068745) and Jeff Alvarez (TE-27427). While surveying for California red-legged frog a total of 108 California tiger salamander larvae were caught, identified, handled, and released. The survey was a total of five hours under the guidance of Mr. Wilcox and Mr. Alvarez.

FOOTHILL YELLOW-LEGGED FROG

Amphibians and Reptiles of the Sierra Nevada Workshop, San Francisco State University Sierra Nevada Field Campus, Sierra and Butte Counties, CA. *Senior Associate Environmental Scientist* (2025).

Introduced to the identification, natural history, and field survey techniques of reptile and amphibian species of the Sierra Nevada. Curriculum consisted of lectures and lab examination of live and preserved specimen, with daily field trips. Hands-on experience with foothill and Sierra Nevada yellow-legged frogs, CRLF, and NWPT under Permitted Biologist Kevin Wiseman [10 (a)1(A) #ES139628, SCP #006634 and #2843 with California Academy of Sciences, Department of Herpetology]. Three of the 12 FYLF observed were handled and processed, 4 FYLF froglettes (post-metamorph) and 13 FYLF tadpoles were observed, handled, and processed. Three adult CRLF, 3 CRLF froglettes (post-metamorph), and 1 CRLF tadpole were observed and handled. Four NWPT were observed, handled, and processed. Five of the 11 Sierra Nevada yellow-legged frogs observed were handled and processed, 8 Sierra Nevada yellow-legged froglettes (post-metamorphs) and 3 Sierra Nevada yellow-legged frog tadpoles were observed, handled, and processed.

Foothill Yellow-legged Frog Level II Workshop, The Wildlife Project – San Benito, Sonoma, Santa Clara, and Placer Counties, CA. *Senior Associate Environmental Scientist* (2023).

This workshop included a total of four separate field meeting dates over the course of a 12-month period. Each field meeting coincided with specific FYLF life history stages: breeding/egg-laying, larval, post-metamorphic, and adult. Field sites included Mitsui Ranch (Sonoma County), Llagas Creek (Santa Clara County), Mineral Bar (Placer County) and San Benito River (San Benito County). Participant in surveying, observing, and handling for FYLF at each of the field meeting dates under Permitted Biologists Jeff Wilcox (TE-068745) and Jeff Alvarez (TE-27427). A total of 243 out of 1,889 observed adult and froglettes (post-metamorph) were handled over the four field meetings. A total of 110 larvae were observed and handled and six egg masses were identified in the field. Egg masses which were not handled only observed. Over the four field meetings, Ms. Denney has spent a total of 26 hours under the guidance of Mr. Wilcox and Mr. Alvarez.

Foothill Yellow-legged Frog Ecology and Conservation Workshop, Laguan de Santa Rosa Foundation – Santa Rosa, Sonoma County, CA. *Assistant Environmental Scientist* (2019).

Participant in one day lecture and field portion workshop. Field portion of workshop included surveying, observing, and handling for adult FYLF under Permitted Biologists Dave Cook (TE-816187) and Jeff Alvarez (TE-27427). Ms. Denney surveyed, and observed 14 FYLF that were identified during a survey. The survey was a total of two hours under the guidance of Mr. Cook and Mr. Alvarez.

CALIFORNIA RED-LEGGED FROG

Declining Aquatic and Semi-Aquatic Herpetofauna of the Central Coast Workshop, The Western Wildlife Society Central Coast Chapter, San Luis Obispo and Santa Barbara Counties, CA. *Senior Environmental Scientist* (2026).

Attended and participated in an in-depth exploration of the ecology, identification, threats, conservation challenges, and management considerations for the region's aquatic and semi-aquatic sensitive amphibian and reptile species. Gained experience through lectures, field demonstrations, hands-on identification exercise, protocol-level surveys, and habitat assessments for the CRLF, CTS, SWPT, and WESP. Under the guidance of Jeff Alvarez (TE-27427) and Dr. Robert D. Cooper, Ms. Denney surveyed, observed, and handled 17 CRLF adults and 698 CTS larvae. Of the 698 CTS larvae captured, 25 CTS larvae had their tail-clipped for subsequent genetic analysis. The 17 CRLF were captured by hand during a combined daytime and nighttime survey effort of 5.5-hours. The 698 CTS larvae were captured through dip-net and seine during a 2.5-hour daytime survey.

Amphibians and Reptiles of the Sierra Nevada Workshop, San Francisco State University Sierra Nevada Field Campus, Sierra and Butte Counties, CA. *Senior Associate Environmental Scientist* (2025).



Introduced to the identification, natural history, and field survey techniques of reptile and amphibian species of the Sierra Nevada. Curriculum consisted of lectures and lab examination of live and preserved specimen, with daily field trips. Hands-on experience with foothill and Sierra Nevada yellow-legged frogs, CRLF, and NWPT under Permitted Biologist Kevin Wiseman [10 (a)1(A) #ES139628, SCP #006634 and #2843 with California Academy of Sciences, Department of Herpetology]. Three of the 12 FYLF observed were handled and processed, 4 FYLF froglettes (post-metamorph) and 13 FYLF tadpoles were observed, handled, and processed. Three adult CRLF, 3 CRLF froglettes (post-metamorph), and 1 CRLF tadpole were observed and handled. Four NWPT were observed, handled, and processed. Five of the 11 Sierra Nevada yellow-legged frogs observed were handled and processed, 8 Sierra Nevada yellow-legged froglettes (post-metamorphs) and 3 Sierra Nevada yellow-legged frog tadpoles were observed, handled, and processed.

Rare Pond Species Survey Techniques Workshop, Laguna de Santa Rosa Foundation, Santa Rosa, Sonoma County, CA. Senior Associate Environmental Scientist (2024).

Attended and participated in practical training on aquatic survey techniques for California tiger salamander, CRLF, and western pond turtle. The lecture session included a review of the biology and ecology of these species, identification of life stages, state and federal regulations, and approved survey protocols. The field portion included field training in aquatic survey techniques, including dip net sampling for CTS larvae, evening spotlighting for frogs, and turtle visual encounter surveys and trapping under Permitted Biologists Dave Cook (TE-816187) and Jeff Alvarez (TE-27427). Ms. Denney surveyed, observed, and handled one adult CRLF and observed one CRLF egg mass.

Concord Naval Weapons Station Environmental Remediation, Condor Country Consulting - Contra Costa County, CA. Senior Associate Environmental Scientist (2024).

Conducted trap checks for 307 traps located at three sites undergoing environmental remediation on the retired Concord Naval Weapons Station. Participant in checking traps, handling, and processing captured California tiger salamanders and incidental by-catch of CRLF under Permitted Biologist Sean Dexter (SC-013861 Specific Use Permit ID: S-212010001-21214-002). During the CTS trap checks a total of two adult CRLF were captured, identified, handled, and released to a nearby breeding pond. A combined total of approximately 19 hours of California tiger salamander trap checking and handling, as individuals were processed, were conducted over a span of three days.

California Red-legged Frog Level II Workshop, The Wildlife Project – San Benito, Sonoma, Santa Clara, Placer, and Marin Counties, CA. Senior Associate/Associate Environmental Scientist (2021-2022).

This workshop included a total of five separate field meeting dates over the course of a 12-month period. Each field meeting coincided with specific CRLF life history stages: breeding/egg-laying, larval, post-metamorphic, and adult. Field sites included Pinnacles National Park (San Benito County), Mitsui Ranch (Sonoma County), Blue Oak Ranch Reserve (Santa Clara County), Big Gun Conservation Site by Westervelt (Placer County) and Point Reyes National Seashore (Marin County). Participant in surveying, observing, and handling for CRLF at each of the field meeting dates under Permitted Biologists Jeff Wilcox (TE-068745) and Jeff Alvarez (TE-27427). A total of 19 adult CRLF, 39 CRLF froglettes (metamorphs), 292 CRLF larvae, and 13 CRLF egg masses were observed and handled. Except for the egg masses which were not handled only observed. Over the five field meetings, Ms. Denney has spent a total of 39 hours under the guidance of Mr. Wilcox and Mr. Alvarez.

California Red-legged Frog Level I Workshop, The Wildlife Project – Sonoma County, CA. Associate Environmental Scientist (2021).

Participant in one day lecture and one day field portion workshop. Field portion of workshop included surveying, observing, and handling for adult CRLF at the Mitsui Ranch which is a part of the Sonoma Mountain Ranch Preservation Foundation under Permitted Biologists Jeff Wilcox (TE-068745) and Jeff Alvarez (TE-27427). Ms. Denney surveyed, observed, and handled all 16 CRLF that were captured and released. While surveying for CRLF, a total of 2 adult FYLF, three NWPT, and two SWPT were caught, identified, handled, and released. The survey was a total of six hours under the guidance of Mr. Wilcox and Mr. Alvarez.

ARROYO TOAD

The Western Wildlife Society Southern California Chapter, April 11, 2025, Reserve at Ranch Mission Viejo,



Rancho Mission Viejo, CA. Senior Associate Environmental Scientist (2025).

Participants were introduced to the identification, natural history, and field survey techniques for the Arroyo toad. Curriculum consisted of a combination of lectures and nighttime field survey. During the nighttime field survey, participants gained experience searching and listening for this species. Ms. Denney acquired a total of 3.5 hours surveying for the Arroyo toad. A total of 3 adult Arroyo toads were identified, and several male calls were heard and confirmed by qualified biologists.

SIERRA NEVADA YELLOW-LEGGED FROG

Amphibians and Reptiles of the Sierra Nevada Workshop, San Francisco State University Sierra Nevada Field Campus, Sierra and Butte Counties, CA. Senior Associate Environmental Scientist (2025).

Introduced to the identification, natural history, and field survey techniques of reptile and amphibian species of the Sierra Nevada. Curriculum consisted of lectures and lab examination of live and preserved specimen, with daily field trips. Hands-on experience with foothill and Sierra Nevada yellow-legged frogs, CRLF, and NWPT under Permitted Biologist Kevin Wiseman [10 (a)1(A) #ES139628, SCP #006634 and #2843 with California Academy of Sciences, Department of Herpetology]. Three of the 12 FYLF observed were handled and processed, 4 FYLF froglettes (post-metamorph) and 13 FYLF tadpoles were observed, handled, and processed. Three adult CRLF, 3 CRLF froglettes (post-metamorph), and 1 CRLF tadpole were observed and handled. Four NWPT were observed, handled, and processed. Five of the 11 Sierra Nevada yellow-legged frogs observed were handled and processed, 8 Sierra Nevada yellow-legged froglettes (post-metamorphs) and 3 Sierra Nevada yellow-legged frog tadpoles were observed, handled, and processed.

BUMBLE BEE COLLECTING & IDENTIFYING

Entomology 101 – Insect Diversity, San Jose State University, - Santa Clara County, CA. San Jose State Undergraduate Student. (2013).

Ms. Denney attended and participated in this course that was an introduction to biology, ecology, and behavior of insects. Course also focused on ways insects affect humans and the environment. Ms. Denney collected, curated, and identified common families of insects including a few different species of bumble bees.

GIANT KANGAROO RAT

NLC Energy Project, California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist. (2024 - Current).

Conducted a reconnaissance survey on approximately 75-acres of partially disturbed saltbush scrub habitat. Several potential special-status plant and wildlife species including SJKF, SJAS, Crotch's bumblebee, BNLL, WEBO, GKR and SNKR, Tulare grasshopper mouse, AMBA, Kern mallow, California jewelflower, recurved larkspur, San Joaquin woollythreads, and oil neststraw. Ms. Denney observed one WEBO and a potential owl burrow, eight SJAS, and eight potential SJKF dens. Drafted the Biological Analysis Report and supporting graphics.

Caltrans District 6: Maricopa Highway CAPM Project (TO#37), Caltrans – Kern County, CA. Senior Associate Environmental Scientist. (2024 - Current).

Provided biological monitoring during ground disturbance under Streambed Alteration Agreement (SAA) No. EPIMS-KER-35971-R4 and Incidental Take Permit #2081-2022-078-04. Ms. Denney was approved as a Designated Biologist. Monitoring was conducted in potential habitat for several special-status species including SJAS, SJKF, AMBA, BNLL, WEBO, GKR, SNKR, and nesting birds. Ms. Denney observed six SJAS within the Project boundary. Five SJAS were visual observations, and one was identified via a trail camera. Hand excavated a total of 20 small mammal burrows that could potential be used SJAS, BNLL, or SNKR.

Caltrans District 6: Panoche Hills CAPM Project (TO#09/TO#14) – Fresno County, CA. Senior Associate Environmental Scientist. (2022 – 2023)

Conducted protocol level BNLL surveys, focused botanical survey, and small mammal trapping (XL Sherman Traps) for GKR, and other wildlife species in the vicinity, for a 12.0-mile stretch of the Interstate 5 (I-5), within



western Fresno County, CA. Focused botanical surveys were conducted for the presence of San Joaquin woollythreads, showy golden madia, and Panoche peppergrass. Observed a total of 3 SJAS and one loggerhead shrike during BNLL surveys. Handled 35 Heermann's kangaroo rats and 3 California pocket mice under the guidance of authorized biologists Curtis Uptain and Martina Pernicano under Federal Recovery Permit TE-119861-2. No GKR was captured during the five consecutive nights of trapping. No special-status plant species observed during the botanical surveys.

Carbon TerraVault Project, California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist (2022-Current).

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂) capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. The Project would inject the captured CO₂ into these well sites for sequestration into the ground for importunity as part of the goal to reduce CO₂ emissions for the State of California. Several special-status plant species have the potential to occur on site including heartscale, Lost Hills crownscale, California jewelflower, recurved larkspur, Kern mallow, Temblor buckwheat, Tejon poppy, showy golden madia, San Joaquin woollythreads, and oil neststraw. In addition, several special-status wildlife species have the potential to occur on site including Crotch's bumblebee, California glossy snake, BNLL, San Joaquin coachwhip, temblor legless lizard, coast horned lizard, WEBO, SWHA, prairie falcon, loggerhead shrike, LeConte's thrasher, SJAS, GKR, SNKR, Tulare grasshopper mouse, San Joaquin pocket mouse, AMBA, and SJKF. No special-status plant species were observed during the reconnaissance surveys. During the reconnaissance surveys Ms. Denney observed one adult BNLL, two potential WEBO burrows, one loggerhead shrike, two LeConte's thrashers, ten potential San Joaquin kit fox dens, 30 SJAS, potential GKR burrows with the appropriate size characteristics, potential kangaroo rat burrows with appropriate size characteristics for SNKR, and five stick nests that could be utilized by nesting birds. Assisted with the drafting of the Biological Analysis Report and associated figures.

After CRC received their approved EIR, Ms. Denney worked on several Biological Resources Mitigation Measures (MM) from the adopted Mitigation Measure and Report Program (MMRP). Ms. Denney conducted a reconnaissance survey to identify potential special-status plant and wildlife species or their suitable habitat and determined where focused/protocol surveys may be required. Ms. Denney conducted two botanical surveys, but no special-status plant species were identified. Wrote a Fence Plan, per MM 4.4-12, that requires a wildlife fence to be installed 500-feet from each injection well. Conducted numerous Biological Pre-Activity Surveys for the project prior to construction beginning. Conducted ten days of protocol SJKF den monitoring for ten potential dens. No SJKF was identified. Observed one AMBA on a trail camera during SJKF den monitoring efforts. Observed 40 SJAS and their active burrows over the course of numerous surveys. Ms. Denney has approximately 300 hours monitoring construction activities.

Gas Company Road Solar Project, Apex Energy Solutions, LLC – Kern County, CA. Senior Associate/ Associate Environmental Scientist. (2021-2022)

Conducted protocol BNLL and floristics surveys, and small mammal trapping for GKR on approximately 58 acres, in Taft, California. Special status plant species with the potential to occur include heartscale and Kern mallow. No direct observation of a BNLL or any special-status plant species. Observed approximately 15 SJAS during the field surveys. Small mammal trapping (XL Sherman Traps) for 2 nights for GKR. No GKR captured during the small mammal trapping effort. Handled 3 SJAS, 14 SNKR and 6 Heermann's kangaroo rats under the guidance of authorized biologist Curtis Uptain.

Caltrans District 6: Blackwell's Corner CAPM (TO#47 – Kern County, CA. Associate Environmental Scientist (2020-2021).

Small mammal trapping (XL Sherman Traps) for 5 nights for GKR. No GKR captured during the small mammal trapping effort. Handled 1 Southern Grasshopper mouse, 7 SNKR, 19 California pocket mice, and 35 Heermann's kangaroo rats under the guidance of authorized biologists Curtis Uptain and Martina Pernicano. Created ARDR figures to represent the Project site and Impact area, aquatic resources study area (ARSA), culvert inlet/outlets, ordinary high-water mark transect lines, and the bank. Figures were used in the Aquatic Resources Delineation Report submitted to Caltrans.



Caltrans District 6: Cherry Avenue Revegetation and Drainage Project (TO#21/#28) – Kern County, CA. *Associate Environmental Scientist* (2019).

Conducted BNLL protocol level surveys, protocol-level SJKF den monitoring for 19 potential dens and temporarily excluding all 19 dens, small mammal trapping (XL Sherman Traps and Tomahawk Traps) for GKR, SJAS, and other wildlife species in the vicinity, and daily construction monitoring for a 2.5-mile stretch of the State Route 119, west of Bakersfield, CA and east of Taft, CA. Observed a total of 5 of the 14 total SJAS captured and handled during the trapping effort. Hand excavated approximately 20 small mammal burrows that could potential be used SJAS or BNLL. Observed over 20 sightings of SJAS during construction monitoring. Maintained a complete record of all species observed and trapped, photographs taken, and GPS points of biological resources. Drafted BNLL survey report and used ArcMap to produce map figures for the client. All activities were conducted under mitigation measures within Incidental Take Permit No. 2081-2014-082-04 and Biological Opinion No. 2009-0143-R008-1.

Small Mammal Trapping on Lokern, Center for Natural Lands Management (Central California Region) – Kern County, CA. *Volunteer* (2018).

Assisted with conducting two nights of small mammal trapping for GKR and SNKR. Observed a total of five GKR and 24 SNKR. Handled 22 SNKR under a permitted Biologist guidance.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. *Assistant/Associate Environmental Scientist.* (2017 to 2018).

Conducted a reconnaissance survey on a 2,550-acre parcel of the Hopkins Lease to identify the presence or absence of special-status species or their habitat. Potential state and federally listed species in the vicinity included SJKF, BNLL, GKR, SJAS, and several rare plants species including Kern mallow, California jewelflower, and San Joaquin woollythreads. Conducted floristic surveys and BNLL protocol level surveys. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed two SJKF, one active SJKF natal den, tracks, and scat, 10 GKR complexes, and 15 SJAS. Drafted a memo report, reviewed historical annual reports, drafted the BNLL and floristics survey report, and used ArcMap to produce map figures for the client on the results of the findings.

Trafalgar Solar Project, Lend Lease Energy Development, LLC. - Kings County, CA. *Assistant Environmental Scientist* (2016).

Conducted a reconnaissance survey of the site located in potential SJKF, BNLL, and GKR habitat. Conducted BNLL protocol level surveys and GKR trapping (XL Sherman Traps) to determine the presence or absence of the species. Conducted GKR trapping for a total of two days. Handled three Heermann's kangaroo rats under the guidance of authorized biologists Curtis Uptain and Belen Perez.

Caltrans District 6: Cherry Avenue Road Widening (TO#37), Caltrans – Bakersfield, Kern County, CA. *Assistant Environmental Scientist* (2016).

Provided biological monitoring during ground disturbance in areas of known SJKF, SJAS, BNLL, GKR, WEBO, SNKR, Kern mallow, California jewelflower, and San Joaquin woollythreads habitat. Implemented Incidental Take Permit #2081-2014-082-04 mitigation measures, Biological Opinion #81420-2009-F-0143-R003-2 mitigation measures, and Lake and Streambed Alteration Agreement #1600-2014-0216-R4 during the construction phase of the Project. Attended daily safety meetings with the crew and provided WEAT (Worker Environmental Awareness Training) to all field employees involved during construction. Maintained a complete record of all construction related activities, T&E trained personal, species observed, and monitoring photos taken. Assisted with small mammal trapping for SNKR, SJAS, and GKR for a total of 3 nights. Handled a total of two Heermann's kangaroo rats under the guidance of authorized biologist Curtis Uptain. Observed one deceased adult SJKF and 33 SJAS.

South Coast Transport – Kern County, CA. (Permit: SC-9798). *Student Intern.* (2015)

Assisted with small mammal trapping (XL Sherman Traps) for 3 nights for GKR. No GKR captured during the small mammal trapping effort. Handled 1 Heermann's kangaroo rat under the guidance of authorized biologist Andy Krause.



TIPTON KANGAROO RAT

Countryside Dairy Digester Project, Maas Energy Works – Kings County, CA. Senior Associate Environmental Scientist (2023).

Conducted pre-construction survey for the Countryside Dairy Digester Project as required by Kings County as part of Site Plan Review NO. 22-16, Standards and Requirement #25. Special-status species with the potential to occur include SJKF, TKR, WEBO, nesting birds, BNLL, NWPT, tricolored blackbird, and western spadefoot. No special-status species or their sign (i.e., tracks, dens, burrows, or nests) were observed during the survey. Drafted the pre-construction survey report and associated figures.

Sandrini Solar Park Project, EDP Renewables North America, LLC. – Kern County, CA. Associate Environmental Scientist (2020 to 2022).

Assisted with reconnaissance surveys for proposed 300-MW solar project, approximately 4,151.5-acres, in Kern County. Conducted multiple reconnaissance level surveys for BNLL, TKR, SJKF, SWHA, tricolored blackbird, least Bell's vireo, AMBA, Tulare grasshopper mouse, SJAS, WEBO, SNKR, loggerhead shrike, LeConte's thrasher, northern harrier, white-tailed kite, California glossy snake, San Joaquin coachwhip, western pond turtle, and nesting birds. Potential special-status plants include Horn's milk vetch, Bakersfield smallscale, Lost Hills crowscale, heartscale, akali mariposa lily, hispid salty bird's beak, recurved larkspur, Kern mallow, and Comanche Point layia. Observed four SWHA and four loggerhead shrikes on the Project site. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures.

Glass Point Solar, Energy Project Solutions, LLC. – Kern County, CA. Assistant Environmental Scientist (2017).

Conducted a reconnaissance level survey, of a 340-acre parcel, in potential SJKF and BNLL habitat. Conducted two nights of TKR verification which included setting up track pads at multiple bait stations and spotlighting for kangaroo rats. Maintained a record of all species and sign observed on the proposed project site.

Paso Robles Solar Project, Lend Lease Energy Development, LLC. – Paso Robles, CA. Assistant/Associate Environmental Scientist. (2016 to 2018).

Conducted a reconnaissance level survey in potential SJKF, TKR, SWHA, and WEBO habitat. Conducted protocol level SWHA surveys. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed approximately 12 SWHA during the protocol level surveys. Drafted the Biological Analysis Report.

Plains All American Pipeline Anomaly Repair Projects (2016-2019)

Conducted pre-activity surveys and biological monitoring for several anomaly repair locations on sensitive environmental lands with a potential for protected, threatened and endangered species. Projects are conducted under a no-take, complete avoidance process except for a few projects that had specific permits. Protected, threatened and endangered with the potential to occur on site included SJKF, BNLL, TKR, SNKR, WEBO, SJAS, AMBA, raptors and nesting birds and Bakersfield cactus. Over the course of time Ms. Denney observed multiple raptors, several SJAS, SJKF tracks, and WEBO. Drafted multiple reports and used ArcMap to produce map figures. A complete list of Projects is listed below.

- **Line 304, Line 314 Derby Acres to Ten Section Anomaly Repair, Kern County, CA.** Assistant Environmental Scientist. (2016).
- **Line 2000 Dig 13 on DWR ROW Anomaly Repair, Bakersfield, Kern County, CA.** Assistant Environmental Scientist. (2016).
 - Department of Water Resources Encroachment Permit No. 1074-A
- **Line 915 Anomaly Repairs, Lost Hills, Kern County, CA.** Assistant Environmental Scientist. (2016).
- **Line 904 Belridge to Pentland Anomaly Repair, Kern County, CA.** Assistant Environmental Scientist. (2016 to 2017).
- **Line 903 Sisquoc to Pentland Anomaly Repairs, Cuyama and New Cuyama, CA.** Assistant Environmental Scientist. (2017).
 - California Department of Fish and Wildlife Carrizo Plains Ecological Reserve Permission Letter: 8/25/17 to 12/31/17



- Line 2000 Emidio to Wilmington Anomaly Repairs, Kern County, CA. *Assistant Environmental Scientist*. (2017).
- Line 56 Replacement Pipeline near CA Aqueduct, Kern County, CA. *Assistant Environmental Scientist*. (2017)
 - Biological Opinion Permit #1-8-94-F-27
- Line 2000 Angeles National Forest Anomaly Repairs, Los Angeles County, CA. *Assistant Environmental Scientist*. (2017).
- Line 62 Wind Wolves Preserve Anomaly Repairs, Kern County, CA. *Associate Environmental Scientist*. (2018).
- Line 307/308 Wind Wolves Preserve Anomaly Repairs, Kern County, CA. *Associate Environmental Scientist*. (2019).
- Line 904 Belridge to Pentland Anomaly Repairs, Bakersfield, Kern County, CA. *Associate Environmental Scientist*. (2019).
- Line 50 DWR Anomaly Repair Project, Bakersfield, Kern County, CA. *Associate Environmental Scientist*. (2019)
 - Department of Water Resources Encroachment Permit No. 1872

Lamont Public Utility District – Kern County, CA. (MBHCP) *Biological Field Technician I* (2015).

Assisted with conducting burrow surveys which included identifying and mapping GPS points for potential TKR burrows. No direct handling of any species.

SAN JOAQUIN ANTELOPE SQUIRREL

NLC Energy Project, California Resources Corporation (CRC) – Kern County, CA. *Senior Associate Environmental Scientist*. (2024 - Current).

Conducted a reconnaissance survey on approximately 75-acres of partially disturbed saltbush scrub habitat. Several potential special-status plant and wildlife species including SJKF, SJAS, Crotch's bumblebee, BNLL, WEBO, GKR and SNKR, Tulare grasshopper mouse, AMBA, Kern mallow, California jewelflower, recurved larkspur, San Joaquin woollythreads, and oil neststraw. Ms. Denney observed one WEBO and a potential owl burrow, eight SJAS, and eight potential SJKF dens. Drafted the Biological Analysis Report and supporting graphics.

Caltrans District 6: Blackwell's Corner CAPM Project (TO#40/10), Caltrans – Kern County, CA. *Senior/ Senior Associate Environmental Scientist*. (2024 - Current).

Approved as a Designated Biologist for SJKF, BNLL, and SJAS under Incidental Take Permit #2081-2023-029-04. Approved for BNLL pre-construction surveys, monitoring, and burrow excavating. Approved for Kern mallow pre-construction survey and monitoring. Provided biological monitoring during ground disturbance under ITP #2081-2023-029-04, USFWS Permit #2022-0023965-S7-002, LSA #EPIMS-KER-37203-R4, USACE 404 Permit No. 0710-0003, and Regional Water Quality Control Board 401 WDID Permit #5C15CR00130. Monitoring was conducted in potential habitat for several special-status species including SJAS, SJKF, AMBA, BNLL, WEBO, GKR, SNKR, nesting birds, and Kern mallow. Worker Environmental Awareness Training was provided to new crew members. Observed one known population of Kern mallow within the project site. Observed 30+ SJAS during construction monitoring efforts.

I conducted 7 days of hand burrow excavations. Excavated 51 SJAS burrows and 81 BNLL burrows. Assisted in SJAS trap set up, baiting, checking traps, and processing animals. Handled 1 non-scrotal male SJAS. Assisted Sarah Yates, a USFWS Kern mallow Designated Biologist, in identifying approximately 75 sprouts during 1 hour of surveying for relocation.

Caltrans District 6: Maricopa Highway CAPM Project (TO#37), Caltrans – Kern County, CA. *Senior Associate Environmental Scientist*. (2024 - Current).

Provided biological monitoring during ground disturbance under Streambed Alteration Agreement (SAA) No. EPIMS-KER-35971-R4 and Incidental Take Permit #2081-2022-078-04. Ms. Denney was approved as a Designated Biologist. Monitoring was conducted in potential habitat for several special-status species including SJAS, SJKF, AMBA, BNLL, WEBO, GKR, SNKR, and nesting birds. Ms. Denney observed six SJAS within the Project boundary. Five SJAS were visual observations, and one was identified via a trail camera. Hand excavated a total of 20 small mammal burrows that could potential be used SJAS, BNLL, or SNKR.



Caltrans District 6: Blackwell's Corner CAPM Project (TO#28), Caltrans – Kern County, CA. Senior Associate/ Associate Environmental Scientist. (2023).

Conducted protocol level BNLL surveys for a 8.0-mile stretch of State Route 33, within western Kern County, CA. Surveys were conducted in potential habitat for several other special-status species including SJKF, WEBO, SJAS, SWHA, and nesting birds. Observed a total of 1 SJAS during BNLL surveys. No BNLL, SJKF, WEBO, SWHA or nesting birds were observed during the BNLL surveys.

Buena Vista Hills and Mt. Poso Well Sites Project - California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist. (05/2022-Current).

Conducted biological reconnaissance surveys for numerous well site locations in Mt Poso and Buena Vista (BV) Hills existing oil and gas properties. Observed 10 potential SJKF dens, over 25 SJAS, and active nesting birds. Conducted a month long, protocol level, SJKF den monitoring for two potential SJKF dens using trail cameras to determine activity. Observed one SJKF and one AMBA on the trail cameras. Drafted the biological section for eight Initial Study Mitigation Negative Declarations (ISMND). Create associated figures for ISMNDs to represent survey results.

Caltrans District 6: Panoche Hills CAPM Project (TO#09/TO#14) – Fresno County, CA. Senior Associate Environmental Scientist. (2022 – 2023)

Conducted protocol level BNLL surveys, focused botanical survey, and small mammal trapping (XL Sherman Traps) for GKR, and other wildlife species in the vicinity, for a 12.0-mile stretch of the Interstate 5 (I-5), within western Fresno County, CA. Focused botanical surveys were conducted for the presence of San Joaquin woollythreads, showy golden madia, and Panoche peppergrass. Observed a total of 3 SJAS and one loggerhead shrike during BNLL surveys. Handled 35 Heermann's kangaroo rats and 3 California pocket mice under the guidance of authorized biologists Curtis Uptain and Martina Pernicano under Federal Recovery Permit TE-119861-2. No GKR was captured during the five consecutive nights of trapping. No special-status plant species observed during the botanical surveys.

Carbon TerraVault Project, California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist (2022-Current).

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂) capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. The Project would inject the captured CO₂ into these well sites for sequestration into the ground for importunity as part of the goal to reduce CO₂ emissions for the State of California. Several special-status plant species have the potential to occur on site including heartscale, Lost Hills crownscale, California jewelflower, recurved larkspur, Kern mallow, Temblor buckwheat, Tejon poppy, showy golden madia, San Joaquin woollythreads, and oil neststraw. In addition, several special-status wildlife species have the potential to occur on site including Crotch's bumblebee, California glossy snake, BNLL, San Joaquin coachwhip, temblor legless lizard, coast horned lizard, WEBO, SWHA, prairie falcon, loggerhead shrike, LeConte's thrasher, SJAS, GKR, SNKR, Tulare grasshopper mouse, San Joaquin pocket mouse, AMBA, and SJKF. No special-status plant species were observed during the reconnaissance surveys. During the reconnaissance surveys Ms. Denney observed one adult BNLL, two potential WEBO burrows, one loggerhead shrike, two LeConte's thrashers, ten potential SJKF dens, 30 SJAS, potential GKR burrows with the appropriate size characteristics, potential kangaroo rat burrows with appropriate size characteristics for SNKR, and five stick nests that could be utilized by nesting birds. Assisted with the drafting of the Biological Analysis Report and associated figures.

After CRC received their approved EIR, Ms. Denney worked on several Biological Resources Mitigation Measures (MM) from the adopted Mitigation Measure and Report Program (MMRP). Ms. Denney conducted a reconnaissance survey to identify potential special-status plant and wildlife species or their suitable habitat and determined where focused/protocol surveys may be required. Ms. Denney conducted two botanical surveys, but no special-status plant species were identified. Wrote a Fence Plan, per MM 4.4-12, that requires a wildlife fence to be installed 500-feet from each injection well. Conducted numerous Biological Pre-Activity Surveys for the project prior to construction beginning. Conducted ten days of protocol SJKF den monitoring for ten potential dens. No SJKF was identified. Observed one AMBA on a trail camera during SJKF den monitoring efforts.



Observed 40 SJAS and their active burrows over the course of numerous surveys. Ms. Denney has approximately 300 hours monitoring construction activities.

Caltrans District 6: Reward CAPM (TO#60/TO#10) – Kern County. *Senior Associate /Associate Environmental Scientist.* (2021-2022).

Approved for the following activities under Incidental Take Permit No. 2081-2020-044-04 and Streambed Alteration Agreement No. 1600-EPIMS-KER-128650-R4 for SJAS trapping, relocation, burrow excavation under a Designated Biologist, pre-activity surveys, migratory nesting bird surveys lead, botanical surveys, SJKF den/burrow monitoring under a Designated Biologist, and construction monitoring. Conducted protocol BNLL surveys, monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on State Route 58 between Post Mile (PM) 6.0 and 15.4 near McKittrick, California. Potential species to occur on site include SJKF, BNLL, WEBO, SJAS, AMBA, Kern mallow, Lemmon's jewelflower, and recurved larkspur. Observed 15 inactive and active stick nests occupied by American crows or ravens, 30 potential SJKF dens, and three active AMBA dens. Observed 15 SJAS and one loggerhead shrike within the Project boundary. No direct observation of a BNLL, SJKF, WEBO, AMBA, or special-status plant species. Drafted weekly summaries, pre-construction survey reports, and provided associated GIS figures for reports.

Gas Company Road Solar Project, Apex Energy Solutions, LLC – Kern County, CA. *Senior Associate/ Associate Environmental Scientist.* (2021-2022)

Conducted protocol BNLL and floristics surveys, and small mammal trapping for GKR on approximately 58 acres, in Taft, California. Special status plant species with the potential to occur include heartscale and Kern mallow. No direct observation of a BNLL or any special-status plant species. Observed approximately 15 SJAS during the field surveys. Small mammal trapping (XL Sherman Traps) for 2 nights for GKR. No GKR captured during the small mammal trapping effort. Handled 3 SJAS, 14 SNKR and 6 Heermann's kangaroo rats under the guidance of authorized biologist Curtis Uptain.

Sandrini Solar Park Project, EDP Renewables North America, LLC. – Kern County, CA. *Associate Environmental Scientist* (2020 to 2022).

Assisted with reconnaissance surveys for proposed 300-MW solar project, approximately 4,151.5-acres, in Kern County. Conducted multiple reconnaissance level surveys for BNLL, TKR, SJKF, SWHA, tricolored blackbird, least Bell's vireo, AMBA, Tulare grasshopper mouse, SJAS, WEBO, SNKR, loggerhead shrike, LeConte's thrasher, northern harrier, white-tailed kite, California glossy snake, San Joaquin coachwhip, western pond turtle, and nesting birds. Potential special-status plants include Horn's milk vetch, Bakersfield smallscale, Lost Hills crowscale, heartscale, akali mariposa lily, hispid salty bird's beak, recurved larkspur, Kern mallow, and Comanche Point layia. Observed four SWHA and four loggerhead shrikes on the Project site. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures.

Caltrans District 6: Cherry Avenue Revegetation and Drainage Project (TO#21/#28) – Kern County, CA. *Associate Environmental Scientist* (2019).

Conducted BNLL protocol level surveys, protocol-level SJKF den monitoring for 19 potential dens and temporarily excluding all 19 dens, small mammal trapping (XL Sherman Traps and Tomahawk Traps) for GKR, SJAS, and other wildlife species in the vicinity, and daily construction monitoring for a 2.5-mile stretch of the State Route 119, west of Bakersfield, CA and east of Taft, CA. Observed a total of 5 of the 14 total SJAS captured and handled during the trapping effort. Hand excavated approximately 20 small mammal burrows that could potential be used SJAS or BNLL. Observed over 20 sightings of SJAS during construction monitoring. Maintained a complete record of all species observed and trapped, photographs taken, and GPS points of biological resources. Drafted BNLL survey report and used ArcMap to produce map figures for the client. All activities were conducted under mitigation measures within Incidental Take Permit No. 2081-2014-082-04 and Biological Opinion No. 2009-0143-R008-1.

Caltrans District 6: State Route 33/ State Route 119 Rumble Strip Project (TO#17) – Taft, Kern County, CA. *Associate Environmental Scientist.* (2018).

Conducted a pre-construction survey for six Traffic Element Count Stations (TCS) project site locations. Pre-construction survey was conducted to look for state and federally listed plant and wildlife species. Conducted



daily sweeps on the project sites looking for threatened or endangered species or their sign. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. *Assistant/Associate Environmental Scientist.* (2017 to 2018).

Conducted a reconnaissance survey on a 2,550-acre parcel of the Hopkins Lease to identify the presence or absence of special-status species or their habitat. Potential state and federally listed species in the vicinity included SJKF, BNLL, GKR, SJAS, and several rare plants species. Conducted floristic surveys and BNLL protocol level surveys. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed two SJKF, one active SJKF natal den, tracks, and scat, 10 GKR complexes, and 15 SJAS. Drafted a memo report, reviewed historical annual reports, drafted the BNLL and floristics survey report, and used ArcMap to produce map figures for the client on the results of the findings.

City of Bakersfield Water Resources Department – Bakersfield, CA. *Associate Environmental Scientist* (2017 to Current).

Qualified Biologist approved to work on MBHCP (City of Bakersfield and County of Kern) projects for SJKF and SJAS under ITP #2081-2013-058-04. Conducted numerous reconnaissance and pre-construction surveys and protocol-level SJKF den monitoring for 50+ potential dens and excluded dens after inactivity:

- **On-Call Biological Services.** *Senior Associate/Associate Environmental Scientist.*
- **Back Up Weir Project** *Senior Associate/Associate Environmental Scientist.*
- **Kern River Maintenance Project.** *Associate Environmental Scientist.*
- **SCADA Project.** *Associate Environmental Scientist.*
- **Rock Crest Weir Emergency Maintenance Project.** *Associate Environmental Scientist.*
- **Campus Park South Biological Monitoring.** *Associate Environmental Scientist.*
- **Kern River Channel Maintenance at Bellevue Weir Project.** *Associate Environmental Scientist.*
- **TCP Mitigation Project – Site CBK-65 Facilities.** *Associate Environmental Scientist.*

City of Bakersfield On-Call Biological Services – Bakersfield, CA. *Senior Associate/Associate/Assistant Environmental Scientist* (2017 to Current).

Qualified Biologist approved to work on MBHCP (City of Bakersfield and County of Kern) projects for SJKF and SJAS under Incidental Take Permit #2081-2013-058-04. Conducted numerous Worker Environmental Awareness Trainings (WEATs), pre-construction surveys and protocol-level SJKF den monitoring for 50+ potential dens and excluded dens after inactivity:

- **On-Call Biological Services.** *Senior Associate/Associate Environmental Scientist.*
- **Pavement Rehabilitation 2022-2023 SB1.** *Senior Associate Environmental Scientist.*
- **Street Improvements: Hosking Avenue from Stine Road to Leprechaun Way (T2K246).** *Senior Associate Environmental Scientist.*
- **Storm Drain Improvements Stockpile Yard Project.** *Senior Associate Environmental Scientist.*
- **Biological Services for Linnell-Brahma Park (P1C011).** *Senior Associate Environmental Scientist.*
- **Stockdale Ranch Bike Bath.** *Senior Associate Environmental Scientist.*
- **District Sump off Ashe Rd and District Blvd.** *Senior Environmental Scientist.*
- **Sports Village Phase IV.** *Associate Environmental Scientist.*
- **Street Improvements on Panama Lane from Cactus Patch to Esperanza.** *Associate Environmental Scientist.*
- **Street Improvements on Wible Road from Berkshire to Esperanza.** *Associate Environmental Scientist.*
- **Police Magazine Relocation Project.** *Associate Environmental Scientist.*
- **Parking Lot Modification Improvements at 4646 California Avenue Project.** *Associate Environmental Scientist.*
- **Westside Parkway Operational Improvements.** *Associate Environmental Scientist.*
- **Westside Parkway Calloway Ramps Project.** *Associate Environmental Scientist.*
- **Road Operational Improvements Project.** *Associate Environmental Scientist.*
- **Corporate Yard Parking Lot Expansion Project.** *Associate Environmental Scientist.*
- **Kern River Bike Path Rehabilitation Project.** *Associate Environmental Scientist.*
- **TCP Mitigation Project.** *Associate Environmental Scientist.*
- **4th of July Vacant Lot.** *Assistant Environmental Scientist.*



- **Municipal Airport Dust Control.** Assistant Environmental Scientist.

Caltrans District 6: Cherry Avenue Road Widening (TO#37), Caltrans – Bakersfield, Kern County, CA. *Assistant Environmental Scientist* (2016).

Provided biological monitoring during ground disturbance in areas of known SJKF, SJAS, BNLL, GKR, WEBO, SNKR, Kern mallow, California jewelflower, and San Joaquin woollythreads habitat. Implemented Incidental Take Permit #2081-2014-082-04 mitigation measures, Biological Opinion #81420-2009-F-0143-R003-2 mitigation measures, and Lake and Streambed Alteration Agreement #1600-2014-0216-R4 during the construction phase of the Project. Attended daily safety meetings with the crew and provided WEAT (Worker Environmental Awareness Training) to all field employees involved during construction. Maintained a complete record of all construction related activities, T&E trained personal, species observed, and monitoring photos taken. Assisted with small mammal trapping for SNKR, SJAS, and GKR for a total of 3 nights. Handled a total of two Heermann's kangaroo rats under the guidance of authorized biologist Curtis Uptain. Observed one deceased adult SJKF and 33 SJAS.

Plains All American Pipeline Anomaly Repair Projects (2016-2019)

Conducted pre-activity surveys and biological monitoring for several anomaly repair locations on sensitive environmental lands with a potential for protected, threatened and endangered species. Projects are conducted under a no-take, complete avoidance process except for a few projects that had specific permits. Protected, threatened and endangered with the potential to occur on site included SJKF, BNLL, TKR, SNKR, WEBO, SJAS, AMBA, raptors and nesting birds and Bakersfield cactus. Over the course of time Ms. Denney observed multiple raptors, several SJAS, SJKF tracks, and WEBO. Drafted multiple reports and used ArcMap to produce map figures. A complete list of Projects is listed below.

- **Line 304, Line 314 Derby Acres to Ten Section Anomaly Repair, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
- **Line 2000 Dig 13 on DWR ROW Anomaly Repair, Bakersfield, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
 - Department of Water Resources Encroachment Permit No. 1074-A
- **Line 915 Anomaly Repairs, Lost Hills, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
- **Line 904 Belridge to Pentland Anomaly Repair, Kern County, CA.** *Assistant Environmental Scientist.* (2016 to 2017).
- **Line 903 Sisquoc to Pentland Anomaly Repairs, Cuyama and New Cuyama, CA.** *Assistant Environmental Scientist.* (2017).
 - California Department of Fish and Wildlife Carrizo Plains Ecological Reserve Permission Letter: 8/25/17 to 12/31/17
- **Line 2000 Emidio to Wilmington Anomaly Repairs, Kern County, CA.** *Assistant Environmental Scientist.* (2017).
- **Line 56 Replacement Pipeline near CA Aqueduct, Kern County, CA.** *Assistant Environmental Scientist.* (2017)
 - Biological Opinion Permit #1-8-94-F-27
- **Line 2000 Angeles National Forest Anomaly Repairs, Los Angeles County, CA.** *Assistant Environmental Scientist.* (2017).
- **Line 62 Wind Wolves Preserve Anomaly Repairs, Kern County, CA.** *Associate Environmental Scientist.* (2018).
- **Line 307/308 Wind Wolves Preserve Anomaly Repairs, Kern County, CA.** *Associate Environmental Scientist.* (2019).
- **Line 904 Belridge to Pentland Anomaly Repairs, Bakersfield, Kern County, CA.** *Associate Environmental Scientist.* (2019).
- **Line 50 DWR Anomaly Repair Project, Bakersfield, Kern County, CA.** *Associate Environmental Scientist.* (2019)
 - Department of Water Resources Encroachment Permit No. 1872

SWAINSON'S HAWK

Madera Water Storage Tank, Pump Station, Carollo Engineers, Inc. - Madera, CA. *Senior Associate Environmental Scientist.* (05/2025 – Current).



Conducted a biological reconnaissance survey for water supply and distribution facilities including a concrete water storage tank, booster pump station, and installation of a 13,200-foot linear 24-inch pipeline. Ms. Denney observed one adult SWHA foraging over the project site. Wrote the Biological Assessment and created the supporting figures.

Serenade II Project, City of Sanger – Sanger, CA. *Senior Associate Environmental Scientist.* (05/2025 – Current). Conducted a reconnaissance survey for the proposed development of 48 single family lots in the City of Sanger. The proposed project is within suitable foraging habitat for SWHA and other raptors, and nesting habitat for smaller passerine birds. No SWHA, or any nesting birds were identified.

Caltrans District 6: Stratford Kings River Bridge Replacement Project (TO#36 and #39), Caltrans - Stratford, CA. *Senior Associate Environmental Scientist.* (05/2024 – 08/2024).

Conducted a biological monitoring, as a CDFW approved Designated Biologist, under Incidental Take Permit #2081-2022-046-04. Ms. Denney observed one active SWHA nest with two adult SWHA and two chicks/nestlings. Behavior observed during the monitoring efforts included: hunting, bringing prey back to the nest, feeding the chicks, vocalizations, soaring, stretching, flapping, and sitting/perching. Approximately 95 hours total for SWHA monitoring.

Caltrans District 6: Blackwell's Corner CAPM Project (TO#28), Caltrans – Kern County, CA. *Senior Associate/Associate Environmental Scientist.* (2023).

Conducted protocol level BNLL surveys for a 8.0-mile stretch of State Route 33, within western Kern County, CA. Surveys were conducted in potential habitat for several other special-status species including SJKF, WEBO, SJAS, SWHA, and nesting birds. Observed a total of 1 SJAS during BNLL surveys. No BNLL, SJKF, WEBO, SWHA or nesting birds were observed during the BNLL surveys.

Rosamond Central Solar Project, Clearway Energy Group, LLC. – Kern County, CA. *Senior Associate Environmental Scientist* (2023).

Conducted biological monitoring during the construction of battery energy storage system (BESS) on the existing Rosamond Central Solar Project. Potential special-status species in the vicinity include desert kit fox, DETO, WEBO, AMBA, SWHA, and nesting birds. No special-status species observed during the 6 months of construction monitoring.

Greenwood Tract Phases 1 & 2 – NEPA – D.R. Horton, America's Builder – Woodlake, Tulare County, CA. *Senior Associate Environmental Scientist.* (2022-2023).

Conducted a reconnaissance survey for covered species. Maintained a complete record of all species observed and photographs taken during the surveys. Prepared a Biological Assessment (BA), with associated figures produced through ArcMap, to be used in NEPA documents. No SWHA or their sign observed during the survey.

Carbon TerraVault Project, California Resources Corporation (CRC) – Kern County, CA. *Senior Associate Environmental Scientist* (2022-Current).

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂) capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. The Project would inject the captured CO₂ into these well sites for sequestration into the ground for importunity as part of the goal to reduce CO₂ emissions for the State of California. Several special-status plant species have the potential to occur on site including heartscale, Lost Hills crownscale, California jewelflower, recurved larkspur, Kern mallow, Temblor buckwheat, Tejon poppy, showy golden madia, San Joaquin woollythreads, and oil neststraw. In addition, several special-status wildlife species have the potential to occur on site including Crotch's bumblebee, California glossy snake, BNLL, San Joaquin coachwhip, temblor legless lizard, coast horned lizard, WEBO, SWHA, prairie falcon, loggerhead shrike, LeConte's thrasher, SJAS, GKR, SNKR, Tulare grasshopper mouse, San Joaquin pocket mouse, AMBA, and SJKF. No special-status plant species were observed during the reconnaissance surveys. During the reconnaissance surveys Ms. Denney observed one adult BNLL, two potential WEBO burrows, one loggerhead shrike, two LeConte's thrashers, ten potential SJKF dens, 30 SJAS, potential GKR burrows with the appropriate size characteristics, potential kangaroo rat burrows with



appropriate size characteristics for SNKR, and five stick nests that could be utilized by nesting birds. Assisted with the drafting of the Biological Analysis Report and associated figures.

After CRC received their approved EIR, Ms. Denney worked on several Biological Resources Mitigation Measures (MM) from the adopted Mitigation Measure and Report Program (MMRP). Ms. Denney conducted a reconnaissance survey to identify potential special-status plant and wildlife species or their suitable habitat and determined where focused/protocol surveys may be required. Ms. Denney conducted two botanical surveys, but no special-status plant species were identified. Wrote a Fence Plan, per MM 4.4-12, that requires a wildlife fence to be installed 500-feet from each injection well. Conducted numerous Biological Pre-Activity Surveys for the project prior to construction beginning. Conducted ten days of protocol SJKF den monitoring for ten potential dens. No SJKF was identified. Observed one AMBA on a trail camera during SJKF den monitoring efforts. Observed 40 SJAS and their active burrows over the course of numerous surveys. Ms. Denney has approximately 300 hours monitoring construction activities.

Caltrans District 6: State Route 99 Union Avenue to White Lane 2R Project (TO#04), Caltrans – Kern County, CA. Senior Associate/ Associate Environmental Scientist. (10/2021 – 10/2023)

Conducted SWHA and red-tailed hawk nest monitoring during active construction activities and daily night sweeps to monitor for SJKF sign or activity. Observed one active SWHA nest and six active RTHA nests. No SJKF or sign (e.g., dens, tracks, scat) was observed.

BigBeau Solar Project, EDF Renewables – Kern County, CA. Senior/Senior Associate/Associate Environmental Scientist (2020 to 2025).

Approved as a Designated Monitor for DETO, WEBO, SWHA, and nesting birds. Conducted den monitoring on 51 potential desert kit fox dens. Collapsed 35 of the 51 potential desert kit fox dens. Conducted Joshua tree (*Yucca brevifolia*) census surveys and drafted Joshua Tree Census 2084 Report. Assisted with eight DETO preconstruction clearance surveys under the guidance of an authorized DETO biologist Jeff Erway. Monitor for DETO, SWHA, desert kit fox, WEBO, golden eagle, and nesting birds and raptors or any of their sign (i.e. dens, burrows, scat, tracks, or nests) during the Joshua tree removal and construction phases. Observed 3 desert kit fox, 2 WEBO, and one active SWHA, mourning dove and red-tailed hawk nests. Conducting two years of annual revegetation surveys and drafted annual reports. Drafted 28 monthly monitoring reports during the construction phase as part of the EIR Mitigation Measure 4.4-4. Provided Worker Environmental Awareness Training to new crew members as part of the EIR Mitigation Measure 4.4-2. Monitored Arizona crossing construction installation following the Lake and Streambed Alteration Agreement Notification No. 600-2020-0086-R4. Conducted three years of revegetation monitoring, data analysis, and reporting for the road crossings and temporary staging yards. Wrote three annual reports on the revegetation monitoring efforts.

Pratt Valley Ranch, D.R. Horton, America's Builders – Visalia, Tulare County, CA. Associate Environmental Scientist (2020).

Conducted a reconnaissance survey on a proposed Project site, approximately 94.6 acres, in Visalia, California to identify the presence or absence of special-status species including SJKF and SWHA. Observed two SWHA in the vicinity. Drafted the Biological Analysis Report.

Merced Biogas Pipeline Project, Maas Energy Works – Merced County, CA. Associate Environmental Scientist (2020).

Conducted pre-construction survey for proposed pipeline as required by the adopted Mitigation Monitoring and Reporting Program. The pipeline will run along existing paved and dirt roads to collect biogas from several dairy digesters in the area. Special-status species with the potential to occur include SWHA, tricolored blackbird, nesting birds, SJKF and AMBA. No suitable tricolored blackbird foraging or nesting habitat was observed. Numerous potential stick nests were observed that SWHA or other nesting birds could occupy. No SJKF or AMBA or their sign was observed.

Gettysburg Solar Project, Lend Lease Energy Development, LLC. – Rosemond, Kern County, CA. Associate Environmental Scientist (2018-2021, 2022).

In 2018 and 2020, conducted protocol level SWHA surveys, and floristics surveys on approximately 160-acres. In 2020, conducted a reconnaissance survey for special-status species known to occur in the vicinity. Observed



one deceased desert kit fox pup. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report.

Sandrini Solar Park Project, EDP Renewables North America, LLC. – Kern County, CA. Associate Environmental Scientist (2020 to 2022).

Assisted with reconnaissance surveys for proposed 300-MW solar project, approximately 4,151.5-acres, in Kern County. Conducted multiple reconnaissance level surveys for BNLL, TKR, SJKF, SWHA, tricolored blackbird, least Bell's vireo, AMBA, Tulare grasshopper mouse, SJAS, WEBO, SNKR, loggerhead shrike, LeConte's thrasher, northern harrier, white-tailed kite, California glossy snake, San Joaquin coachwhip, western pond turtle, and nesting birds. Potential special-status plants include Horn's milk vetch, Bakersfield smallscale, Lost Hills crownscale, heartscale, alkali mariposa lily, hispid salty bird's beak, recurved larkspur, Kern mallow, and Comanche Point layia. Observed four SWHA and four loggerhead shrikes on the Project site. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures.

Rosamond South Solar Project, Clearway Energy Group, LLC. – Kern County, CA. Associate Environmental Scientist (2019 to Current).

Assisted with preparing and submitting three Conditional Use Permits and associated forms for proposed 100-MW solar project, approximately 1,292-acres, to the Kern County Planning Department for review. Conducted multiple reconnaissance level surveys, nesting bird surveys, Joshua tree census (*Yucca brevifolia*) and three seasons of rare-plant surveys. Observed three desert kit fox, one deceased desert kit fox pup, two adult SWHA, one adult WEBO, and a population of alkali mariposa lily (*Calochortus striatus*). Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures. Assisted with drafting an initial Joshua Tree Incidental Take Permit (ITP) application package, and associated figures and calculations submitted to CDFW for approval. Following the initial ITP, Ms. Denney assisted with four amendments to the permit including additional census data collection, figures, and calculations submitted to CDFW for approval.

Solari Sand and Gravel Mine, Granite Construction Company – Kern County, CA. Senior/Senior Associate/Associate Environmental Scientist (2019, 2023-Current).

Conducted BNLL protocol level surveys on approximately 270-acres and construction monitoring for an approximate 2-acre parcel of land. Assisted with the exclusion of a WEBO and SJKF located within the Project area. Observed one adult WEBO and three active burrows within the vicinity of the Project site. Conducted den monitoring for five potential SJKF dens. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Conducting a three-year study for a required revegetation plot to determine the best methodology for reseeding at the termination of the quarry's lifespan. Conducted the data collection, analysis, and wrote the annual reports (Year 1 and 2).

Five Points Dairy Digester Cluster Project, Maas Energy Works – Fresno County, CA. Associate Environmental Scientist. (2019).

Conducted a reconnaissance level survey for the proposed development, construction, and operation of a series of biogas collection facilities (digesters) at five existing dairies, and one upgrading facility on the existing Open Sky Dairy, and gathering pipelines. Special-status wildlife species with the potential to occur in the vicinity include tricolored blackbird, WEBO, SWHA, loggerhead shrike, AMBA, and SJKF. Observed one loggerhead shrike and one SWHA during the reconnaissance survey. Observed minimal suitable habitat for tricolored blackbird but no direct observation. No other special-status species observed. Drafted the Biological Analysis Report and associated figures.

Caltrans District 6: Lost Hills Rubber Rehabilitation Project (TO#20/TO#31/TO#42/TO#07) – Caltrans. Senior Associate/Associate Environmental Scientist (2019 to 2023).

Conducted three seasons of BNLL protocol level surveys for a 5-mile stretch of the I-5, and associated laydown areas, north of Lost Hills, CA. Maintained a complete record of all species observed, photographs taken, and



biological resources GPS points. Observed two adult SWHA, a deceased AMBA, and variety of other raptors and bird species. Conducted SJKF protocol den monitoring for nine potential dens over the course of two years. Drafted 2019 and 2020 BNLL Survey Reports and monthly Pre-construction Survey Reports and used ArcMap to produce map figures for the client.

Five Points Dairy Digester Cluster Project, Maas Energy Works - Fresno County, CA. Associate Environmental Scientist (2019).

Conducted a pre-construction survey for a series of biogas collection facilities (digesters), 10-miles of gathering pipelines, and one upgrading facility. Observed multiple SWHA, other smaller raptors, and wetland bird species. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Drafted the Biological Analysis Report and used ArcMap to produce map figures.

Lone Oak #1 and #2 Proposed Dairy Expansions, Maas Energy Works – Kings County, CA. Associate Environmental Scientist (2019).

Conducted two reconnaissance and two pre-construction surveys for a double lined, covered digester ponds and associated equipment at two existing dairies on approximately 20-acres. Potential special-status plant and wildlife species with the potential to occur in the vicinity include Earlimart orache, heartscale, lesser saltscare, mud nama, recurved larkspur, subtle orache, WEBO, SJKF, SWHA, tricolored blackbird, and nesting birds. No special-status plant or wildlife species observed. Drafted two pre-construction letter reports summarizing survey results.

Hanford-Lakeside Dairy Digester Cluster Project, Mass Energy –Associate Environmental Scientist (2018).

Conducted a pre-construction survey for a 30,000 square foot portion of a 3.3-acre parcel and approximately 35-miles of proposed buried biogas gathering pipelines connecting to the dairies. Observed multiple SWHA and other smaller raptors. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Drafted the ISMND for the proposed project site and used ArcMap to produce map figures.

Kern-Tulare Water District Pipeline, Kern-Tulare Water District – Kern County, CA. Assistant/Associate Environmental Scientist (2017 to 2019).

Conducted a reconnaissance survey and pre-construction survey of an approximate 12-mile proposed oil field water reuse pipeline located in suitable BNLL, SJKF, WEBO, and SWHA habitat. Conducted protocol level BNLL surveys and maintained a complete record of all species observed, photographs taken, biological resources GPS points, and data sheets for the surveys. Drafted and finalized a letter report(s) and used ArcMap to produce map figures. Drafted the Biological Analysis Report for the permitting of the Project.

Paso Robles Solar Project, Lend Lease Energy Development, LLC. – Paso Robles, CA. Assistant/Associate Environmental Scientist. (2016 to 2018).

Conducted a reconnaissance level survey in potential SJKF, TKR, SWHA, and WEBO habitat. Conducted protocol level SWHA surveys. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed approximately 12 SWHA during the protocol level surveys. Drafted the Biological Analysis Report.

AV Apollo Solar Project, Lend Lease Energy Development, LLC. – Rosamond, CA. Assistant/Associate Environmental Scientist (2016 to 2018).

Conducted a reconnaissance and rare-plant protocol level surveys on approximately 493- acres in potential DETO, desert kit fox, and Mojave ground squirrel habitat. Conducted protocol level SWHA surveys and floristic surveys for several special-status plant species. Maintained a complete record of all species observed and photographs taken of the Project site. Shadowed two expert DETO biologists during protocol level DETO surveys. Observed a small population of Lemmon's jewelflower (*Caulanthus lemmonii*). Drafted the Biological Analysis Report for the permitting of the Project.

SAN JOAQUIN KIT FOX



NLC Energy Project, California Resources Corporation (CRC) – Kern County, CA. *Senior Associate Environmental Scientist.* (2024 - Current).

Conducted a reconnaissance survey on approximately 75-acres of partially disturbed saltbush scrub habitat. Several potential special-status plant and wildlife species including SJKF, SJAS, Crotch's bumblebee, BNLL, WEBO, GKR and SNKR, Tulare grasshopper mouse, AMBA, Kern mallow, California jewelflower, recurved larkspur, San Joaquin woollythreads, and oil neststraw. Ms. Denney observed one WEBO and a potential owl burrow, eight SJAS, and eight potential SJKF dens. Drafted the Biological Analysis Report and supporting graphics.

Caltrans District 6: Blackwell's Corner CAPM Project (TO#40/10), Caltrans – Kern County, CA. *Senior/ Senior Associate Environmental Scientist.* (2024 - Current).

Approved as a Designated Biologist for SJKF, BNLL, and SJAS under Incidental Take Permit #2081-2023-029-04. Approved for BNLL pre-construction surveys, monitoring, and burrow excavating. Approved for Kern mallow pre-construction survey and monitoring. Provided biological monitoring during ground disturbance under ITP #2081-2023-029-04, USFWS Permit #2022-0023965-S7-002, LSA #EPIMS-KER-37203-R4, USACE 404 Permit No. 0710-0003, and Regional Water Quality Control Board 401 WDID Permit #5C15CR00130. Monitoring was conducted in potential habitat for several special-status species including SJAS, SJKF, AMBA, BNLL, WEBO, GKR, SNKR, nesting birds, and Kern mallow. Worker Environmental Awareness Training was provided to new crew members. Observed one known population of Kern mallow within the project site. Observed 30+ SJAS during construction monitoring efforts.

I conducted 7 days of hand burrow excavations. Excavated 51 SJAS burrows and 81 BNLL burrows. Assisted in SJAS trap set up, baiting, checking traps, and processing animals. Handled 1 non-scrotal male SJAS. Assisted Sarah Yates, a USFWS Kern mallow Designated Biologist, in identifying approximately 75 sprouts during 1 hour of surveying for relocation.

Caltrans District 6: Maricopa Highway CAPM Project (TO#37), Caltrans – Kern County, CA. *Senior Associate Environmental Scientist.* (2024 - Current).

Provided biological monitoring during ground disturbance under Streambed Alteration Agreement (SAA) No. EPIMS-KER-35971-R4 and Incidental Take Permit #2081-2022-078-04. Ms. Denney was approved as a Designated Biologist. Monitoring was conducted in potential habitat for several special-status species including SJAS, SJKF, AMBA, BNLL, WEBO, GKR, SNKR, and nesting birds. Ms. Denney observed six SJAS within the Project boundary. Five SJAS were visual observations, and one was identified via a trail camera. Hand excavated a total of 20 small mammal burrows that could potential be used SJAS, BNLL, or SNKR.

Countryside Dairy Digester Project, Maas Energy Works – Kings County, CA. *Senior Associate Environmental Scientist* (2023).

Counted pre-construction survey for the Countryside Dairy Digester Project as required by Kings County as part of Site Plan Review NO. 22-16, Standards and Requirement #25. Special-status species with the potential to occur include SJKF, TKR, WEBO, nesting birds, BNLL, NWPT, tricolored blackbird, and western spadefoot. No special-status species or their sign (i.e., tracks, dens, burrows, or nests) were observed during the survey. Drafted the pre-construction survey report and associated figures.

Mohawk Street Project, Bakersfield, CA. *Senior Associate Environmental Scientist.* (06/2023).

Conducted a reconnaissance survey for a proposed tentative tract map project located in Bakersfield, CA. Surveyed for SJKF, WEBO, AMBA, SWHA, and nesting migratory birds and raptors. Drafted the Biological Analysis Report and used ArcMap to produce maps and figures for the report.

Caltrans District 6: Blackwell's Corner CAPM Project (TO#28), Caltrans – Kern County, CA. *Senior Associate/ Associate Environmental Scientist.* (2023).

Conducted protocol level BNLL surveys for a 8.0-mile stretch of State Route 33, within western Kern County, CA. Surveys were conducted in potential habitat for several other special-status species including SJKF, WEBO, SJAS, SWHA, and nesting birds. Observed a total of 1 SJAS during BNLL surveys. No BNLL, SJKF, WEBO, SWHA or nesting birds were observed during the BNLL surveys.



Greenwood Tract Phases 1 &2 – NEPA – D.R. Horton, America’s Builder – Woodlake, Tulare County, CA. *Senior Associate Environmental Scientist. (2022-2023).*

Conducted a reconnaissance survey for covered species. Maintained a complete record of all species observed and photographs taken during the surveys. Prepared a Biological Assessment (BA), with associated figures produced through ArcMap, to be used in NEPA documents. No SJKF or their sign observed during the survey.

Buena Vista Hills and Mt. Poso Well Sites Project - California Resources Corporation (CRC) – Kern County, CA. *Senior Associate Environmental Scientist. (05/2022-Current).*

Conducted biological reconnaissance surveys for numerous well site locations in Mt Poso and Buena Vista (BV) Hills existing oil and gas properties. Observed 10 potential SJKF dens, over 25 SJAS, and active nesting birds. Conducted a month long, protocol level, SJKF den monitoring for two potential SJKF dens using trail cameras to determine activity. Observed one SJKF and one AMBA on the trail cameras. Drafted the biological section for eight Initial Study Mitigation Negative Declarations (ISMND). Create associated figures for ISMNDs to represent survey results.

Carbon TerraVault Project, California Resources Corporation (CRC) – Kern County, CA. *Senior Associate Environmental Scientist (2022-Current).*

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂) capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. The Project would inject the captured CO₂ into these well sites for sequestration into the ground for importunity as part of the goal to reduce CO₂ emissions for the State of California. Several special-status plant species have the potential to occur on site including heartscale, Lost Hills crownscale, California jewelflower, recurved larkspur, Kern mallow, Temblor buckwheat, Tejon poppy, showy golden madia, San Joaquin woollythreads, and oil neststraw. In addition, several special-status wildlife species have the potential to occur on site including Crotch’s bumblebee, California glossy snake, BNLL, San Joaquin coachwhip, temblor legless lizard, coast horned lizard, WEBO, SWHA, prairie falcon, loggerhead shrike, LeConte’s thrasher, SJAS, GKR, SNKR, Tulare grasshopper mouse, San Joaquin pocket mouse, AMBA, and SJKF. No special-status plant species were observed during the reconnaissance surveys. During the reconnaissance surveys Ms. Denney observed one adult BNLL, two potential WEBO burrows, one loggerhead shrike, two LeConte’s thrashers, ten potential SJKF dens, 30 SJAS, potential GKR burrows with the appropriate size characteristics, potential kangaroo rat burrows with appropriate size characteristics for SNKR, and five stick nests that could be utilized by nesting birds. Assisted with the drafting of the Biological Analysis Report and associated figures.

After CRC received their approved EIR, Ms. Denney worked on several Biological Resources Mitigation Measures (MM) from the adopted Mitigation Measure and Report Program (MMRP). Ms. Denney conducted a reconnaissance survey to identify potential special-status plant and wildlife species or their suitable habitat and determined where focused/protocol surveys may be required. Ms. Denney conducted two botanical surveys, but no special-status plant species were identified. Wrote a Fence Plan, per MM 4.4-12, that requires a wildlife fence to be installed 500-feet from each injection well. Conducted numerous Biological Pre-Activity Surveys for the project prior to construction beginning. Conducted ten days of protocol SJKF den monitoring for ten potential dens. No SJKF was identified. Observed one AMBA on a trail camera during SJKF den monitoring efforts. Observed 40 SJAS and their active burrows over the course of numerous surveys. Ms. Denney has approximately 300 hours monitoring construction activities.

Tract 7337 (MBHCP), K. Hovnanian Companies of California, Inc. – Bakersfield, Kern County, CA. *Senior Associate Environmental Scientist. (2021 – 2022)*

Conducted a reconnaissance survey and pre-construction clearance for covered species prior to land purchase and construction phases. Maintained a complete record of all species observed and photographs taken during the surveys. Prepared two pre-construction clearance reports, provided WEAT for construction staff, and used ArcMap to produce map figures.

Caltrans District 6: Panoche Hills CAPM Project (TO#09/TO#14) – Fresno County, CA. *Senior Associate Environmental Scientist. (2022 – 2023)*



Conducted protocol level BNLL surveys, focused botanical survey, and small mammal trapping (XL Sherman Traps) for GKR, and other wildlife species in the vicinity, for a 12.0-mile stretch of the Interstate 5 (I-5), within western Fresno County, CA. Focused botanical surveys were conducted for the presence of San Joaquin woollythreads, showy golden madia, and Panoche peppergrass. Observed a total of 3 SJAS and one loggerhead shrike during BNLL surveys. Handled 35 Heermann's kangaroo rats and 3 California pocket mice under the guidance of authorized biologists Curtis Uptain and Martina Pernicano under Federal Recovery Permit TE-119861-2. No GKR was captured during the five consecutive nights of trapping. No special-status plant species observed during the botanical surveys.

Caltrans District 6: State Route 99 Union Avenue to White Lane 2R Project (TO#04), Caltrans – Kern County, CA. Senior Associate/ Associate Environmental Scientist. (10/2021-10/2023).

Conducted SWHA and red-tailed hawk nest monitoring during active construction activities and daily night sweeps to monitor for SJKF sign or activity. Observed one active SWHA nest and six active RTHA nests. No SJKF or sign (e.g., dens, tracks, scat) was observed.

Caltrans District 6: Reward CAPM (TO#60/TO#10) – Kern County. Senior Associate /Associate Environmental Scientist. (2021-2022).

Approved for the following activities under Incidental Take Permit No. 2081-2020-044-04 and Streambed Alteration Agreement No. 1600-EPIMS-KER-128650-R4 for SJAS trapping, relocation, burrow excavation under a Designated Biologist, pre-activity surveys, migratory nesting bird surveys lead, botanical surveys, SJKF den/burrow monitoring under a Designated Biologist, and construction monitoring. Conducted protocol BNLL surveys, monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on State Route 58 between Post Mile (PM) 6.0 and 15.4 near McKittrick, California. Potential species to occur on site include SJKF, BNLL, WEBO, SJAS, AMBA, Kern mallow, Lemmon's jewelflower, and recurved larkspur. Observed 15 inactive and active stick nests occupied by American crows or ravens, 30 potential SJKF dens, and three active AMBA dens. Observed 15 SJAS and one loggerhead shrike within the Project boundary. No direct observation of a BNLL, SJKF, WEBO, AMBA, or special-status plant species. Drafted weekly summaries, pre-construction survey reports, and provided associated GIS figures for reports.

Kern River Canal Backup Weir Reconstruction Project, City of Bakersfield Water Resources Department – Kern County, CA. Senior Associate/ Associate Environmental Scientist (2021-Current).

Conducted biological reconnaissance surveys over the course of several years for the replacement of the Kern River Backup Weir. Project activities included demolition and removal of an existing concrete weir, retaining wall, riprap, and sheet piling, and construction of a new weir system and recontouring of the Kern River channel bed. Ms. Denney assisted with data analysis, drafting of the Biological Assessment and associated map figures. The Project site has the potential for several special-status plant and wildlife species including California jewelflower, recurved larkspur, San Joaquin woollythreads, Bakersfield legless lizard, California glossy snake, western spadefoot, WEBO, Crotch's bumble bee, AMBA, SJKF, nesting birds and raptors, and roosting bats. Ms. Denney conducted two bat flyout surveys prior to the construction activities beginning. No bat activity was observed. Ms. Denney conducted a Bakersfield legless lizard survey, but no legless lizards were observed. Observed active nesting cliff swallows under the Coffee Road Bridge located south of the Project site. Conducted SJKF den monitoring (i.e., tracking medium) on a potential den. No SJKF sign (i.e., tracks, scat, prey remains) were observed during the den monitoring.

Kamm Avenue Pistachio Project (KAPP), Assemi Group, Inc. – Fresno, County, CA. Associate Environmental Scientist. (2020).

Conducted a reconnaissance survey on a proposed Project site, approximately 315 acres, and associated potential pipeline routes, near Cantua Creek, California. Conducted 4 nights of baited track stations for SJKF. Observed potential SJKF dens and scat.

Pratt Valley Ranch, D.R. Horton, America's Builders – Visalia, Tulare County, CA. Associate Environmental Scientist (2020).



Conducted a reconnaissance survey on a proposed Project site, approximately 94.6 acres, in Visalia, California to identify the presence or absence of special-status species including SJKF and SWHA. Observed two SWHA in the vicinity. Drafted the Biological Analysis Report.

Merced Biogas Pipeline Project, Maas Energy Works – Merced County, CA. Associate Environmental Scientist (2020).

Conducted pre-construction survey for proposed pipeline as required by the adopted Mitigation Monitoring and Reporting Program. The pipeline will run along existing paved and dirt roads to collect biogas from several dairy digesters in the area. Special-status species with the potential to occur include SWHA, tricolored blackbird, nesting birds, SJKF and AMBA. No suitable tricolored blackbird foraging or nesting habitat was observed. Numerous potential stick nests were observed that SWHA or other nesting birds could occupy. No SJKF or AMBA or their sign was observed.

Sandrini Solar Park Project, EDP Renewables North America, LLC. – Kern County, CA. Associate Environmental Scientist (2020 to 2022).

Assisted with reconnaissance surveys for proposed 300-MW solar project, approximately 4,151.5-acres, in Kern County. Conducted multiple reconnaissance level surveys for BNLL, TKR, SJKF, SWHA, tricolored blackbird, least Bell's vireo, AMBA, Tulare grasshopper mouse, SJAS, WEBO, SNKR, loggerhead shrike, LeConte's thrasher, northern harrier, white-tailed kite, California glossy snake, San Joaquin coachwhip, western pond turtle, and nesting birds. Potential special-status plants include Horn's milk vetch, Bakersfield smallscale, Lost Hills crowscale, heartscale, alkali mariposa lily, hispid salty bird's beak, recurved larkspur, Kern mallow, and Comanche Point layia. Observed four SWHA and four loggerhead shrikes on the Project site. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures.

Caltrans District 6: Cherry Avenue Revegetation and Drainage Project (TO#21/#28) – Kern County, CA. Associate Environmental Scientist (2019).

Conducted BNLL protocol level surveys, protocol-level SJKF den monitoring for 19 potential dens and temporarily excluding all 19 dens, small mammal trapping (XL Sherman Traps and Tomahawk Traps) for GKR, SJAS, and other wildlife species in the vicinity, and daily construction monitoring for a 2.5-mile stretch of the State Route 119, west of Bakersfield, CA and east of Taft, CA. Observed a total of 5 of the 14 total SJAS captured and handled during the trapping effort. Hand excavated approximately 20 small mammal burrows that could potential be used SJAS or BNLL. Observed over 20 sightings of SJAS during construction monitoring. Maintained a complete record of all species observed and trapped, photographs taken, and GPS points of biological resources. Drafted BNLL survey report and used ArcMap to produce map figures for the client. All activities were conducted under mitigation measures within Incidental Take Permit No. 2081-2014-082-04 and Biological Opinion No. 2009-0143-R008-1.

Solari Sand and Gravel Mine, Granite Construction Company – Kern County, CA. Senior/Senior Associate/Associate Environmental Scientist (2019, 2023-Current).

Conducted BNLL protocol level surveys on approximately 270-acres and construction monitoring for an approximate 2-acre parcel of land. Assisted with the exclusion of a WEBO and SJKF located within the Project area. Observed one adult WEBO and three active burrows within the vicinity of the Project site. Conducted den monitoring for five potential SJKF dens. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Conducting a three-year study for a required revegetation plot to determine the best methodology for reseeding at the termination of the quarry's lifespan. Conducted the data collection, analysis, and wrote the annual reports (Year 1 and 2).

Five Points Dairy Digester Cluster Project, Maas Energy Works – Fresno County, CA. Associate Environmental Scientist. (2019).

Conducted a reconnaissance level survey for the proposed development, construction, and operation of a series of biogas collection facilities (digesters) at five existing dairies, and one upgrading facility on the existing Open Sky Dairy, and gathering pipelines. Special-status wildlife species with the potential to occur in the vicinity



include tricolored blackbird, WEBO, SWHA, loggerhead shrike, AMBA, and SJKF. Observed one loggerhead shrike and one SWHA during the reconnaissance survey. Observed minimal suitable habitat for tricolored blackbird but no direct observation. No other special-status species observed. Drafted the Biological Analysis Report and associated figures.

Caltrans District 6: Lost Hills Rubber Rehabilitation Project (TO#20/TO#31/TO#42/TO#07) – Caltrans. – Kern County, CA. Senior Associate Environmental Scientist (2019 to 2023).

Conducted three seasons of BNLL protocol level surveys for a 5-mile stretch of the I-5, and associated laydown areas, north of Lost Hills, CA. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed two adult SWHA, a deceased AMBA, and variety of other raptors and bird species. Conducted SJKF protocol den monitoring for nine potential dens over the course of two years. Drafted 2019 and 2020 BNLL Survey Reports and monthly Pre-construction Survey Reports and used ArcMap to produce map figures for the client.

Lone Oak #1 and #2 Proposed Dairy Expansions, Maas Energy Works – Kings County, CA. Associate Environmental Scientist (2019).

Conducted two reconnaissance and two pre-construction surveys for a double lined, covered digester ponds and associated equipment at two existing dairies on approximately 20-acres. Potential special-status plant and wildlife species with the potential to occur in the vicinity include Earlimart orache, heartscale, lesser saltscale, mud nama, recurved larkspur, subtle orache, WEBO, SJKF, SWHA, tricolored blackbird, and nesting birds. No special-status plant or wildlife species observed. Drafted two pre-construction letter reports summarizing survey results.

Caltrans District 6: State Route 33/ State Route 119 Rumble Strip Project (TO#17) – Taft, Kern County, CA. Associate Environmental Scientist. (2018).

Conducted a pre-construction survey for six Traffic Element Count Stations (TCS) project site locations. Pre-construction survey was conducted to look for state and federally listed plant and wildlife species. Conducted daily sweeps on the project sites looking for threatened or endangered species or their sign. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Caltrans District 6: Famoso SR 46/99 Bridge (TO#17), Caltrans – Famoso, Kern County, CA. Assistant/Associate Environmental Scientist. (2017 to 2018).

Provided WEAT (Worker Environmental Awareness Training) to all field employees involved during construction. Maintained a complete record of all construction related activities, conducted threatened and endangered species training for construction crews, species observed, and monitoring photos taken. Conducted SJKF den monitoring on six potential dens and excavated vacant dens. Conducted several sweeps of the Project site during the duration of the construction.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. Assistant/Associate Environmental Scientist. (2017 to 2018).

Conducted a reconnaissance survey on a 2,550-acre parcel of the Hopkins Lease to identify the presence or absence of special-status species or their habitat. Potential state and federally listed species in the vicinity included SJKF, BNLL, GKR, SJAS, and several rare plants species including Kern mallow, California jewelflower, and San Joaquin woollythreads. Conducted floristic surveys and BNLL protocol level surveys. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed two SJKF, one active SJKF natal den, tracks, and scat, 10 GKR complexes, and 15 SJAS. Drafted a memo report, reviewed historical annual reports, drafted the BNLL and floristics survey report, and used ArcMap to produce map figures for the client on the results of the findings.

Caltrans District 6: Cottonwood East/Rehab Project (TO#57/#26) – Bakersfield, Kern County, CA. Assistant/Associate Environmental Scientist (2017 to 2020).

Conducted 11 pre-construction surveys and on-going SJKF den monitoring for the construction phase of the project to begin. A total of approximately 50 known and potential SJKF dens were monitored according to protocol. Maintained a complete record of all sign observed and photographs taken during the den monitoring and night monitoring periods. Conducted on-site monitoring in Environmental Sensitive Areas (ESAs) when



construction was activity in these areas. In 2018 and 2019, observed three active SJKF natal dens, remains (i.e. skull, limbs, etc), scat, and tracks. Installed a privacy fence for active SJKF natal den. Observed 2 adult WEBO. Implemented LOC #08ESMF00-2016-I-0219 mitigation measures during the construction phase of the Project. Conducted Worker Environmental Awareness Training for all new crew members during the duration of the Project.

Caltrans District 6: Golden State Avenue, Kern County Bridges Seismic Restoration Project (TO#25), Caltrans – Bakersfield, Kern County, CA. Assistant Environmental Scientist. (2017).

Conducted an avian survey and drafted the avian survey results report. Conducted multiple nights of night monitoring as required in the LOC#08ESMF00-2013-I-0350 during active construction activities. Observed an active natal SJKF den during the avian survey. Fresh scat, human food trash, and prey remains were observed at the entrances of the natal den. Drafted the final compliance report after the completion of the project.

Caltrans District 6: Kern Avenue – Pedestrian Over-Crossing (TO#17), Caltrans – McFarland, Kern County, CA. Assistant Environmental Scientist. (2017).

Project to replace a pedestrian overcrossing on State Route 99 at Post Mile Marker #49.6. Conducted SJKF protocol den monitoring for two potential dens on the Project site using tracking medium. After no sign was observed the potential dens were excavated, collapsed and backfilled. Provided Worker Environmental Awareness Training to all construction crews.

City of Bakersfield Water Resources Department – Bakersfield, CA. Senior Associate/Associate Environmental Scientist (2017 to Current).

Qualified Biologist approved to work on MBHCP (City of Bakersfield and County of Kern) projects for SJKF and SJAS under ITP #2081-2013-058-04. Conducted numerous reconnaissance and pre-construction surveys and protocol-level SJKF den monitoring for 50+ potential dens and excluded dens after inactivity:

- **On-Call Biological Services.** Senior Associate/Associate Environmental Scientist.
- **Back Up Weir Project** Senior Associate/Associate Environmental Scientist.
- **Kern River Maintenance Project.** Associate Environmental Scientist.
- **SCADA Project.** Associate Environmental Scientist.
- **Rock Crest Weir Emergency Maintenance Project.** Associate Environmental Scientist.
- **Campus Park South Biological Monitoring.** Associate Environmental Scientist.
- **Kern River Channel Maintenance at Bellevue Weir Project.** Associate Environmental Scientist.
- **TCP Mitigation Project – Site CBK-65 Facilities.** Associate Environmental Scientist.

ABLE-Olive (MBHCP), ABLE, LLC – Bakersfield, Kern County, CA. Assistant Environmental Scientist. (2017).

Conducted pre-construction clearance survey prior to the construction phase of the project beginning. Conducted four consecutive nights of SJKF den monitoring for three potential dens located within the 50-ft buffer. All three inactive potential dens were temporarily blocked with filled sandbags. Maintained a complete record of all sign observed and photographs taken during the den monitoring. No SJKF sign was observed. Drafted the pre-construction clearance report and used ArcMap to produce map figures.

Tract 6520 (MBHCP), K. Hovnanian Companies of California, Inc. – Bakersfield, Kern County, CA. Assistant Environmental Scientist (2017).

Conducted a reconnaissance survey and pre-construction clearance for covered species prior to land purchase. Maintained a complete record of all species observed and photographs taken during the surveys. Conducted protocol SJKF den monitoring on the Project site. Drafted the pre-construction clearance report and used ArcMap to produce map figures.

Kern-Tulare Water District Pipeline, Kern-Tulare Water District – Kern County, CA. Assistant/Associate Environmental Scientist (2017 to 2019).

Conducted a reconnaissance survey and pre-construction survey of an approximate 12-mile proposed oil field water reuse pipeline located in suitable BNLL, SJKF, WEBO, and SWHA habitat. Conducted protocol level BNLL surveys and maintained a complete record of all species observed, photographs taken, biological resources GPS points, and data sheets for the surveys. Drafted and finalized a letter report(s) and used ArcMap to produce map figures. Drafted the Biological Analysis Report for the permitting of the Project.



City of Bakersfield On-Call Biological Services – Bakersfield, Kern County, CA. *Assistant/Associate Environmental Scientist* (2017 to Current).

Qualified Biologist approved to work on MBHCP (City of Bakersfield and County of Kern) projects for SJKF and SJAS under Incidental Take Permit #2081-2013-058-04. Conducted numerous Worker Environmental Awareness Trainings (WEATs), pre-construction surveys and protocol-level SJKF den monitoring for 50+ potential dens and excluded dens after inactivity:

- **On-Call Biological Services.** *Senior Associate/Associate Environmental Scientist.*
- **Pavement Rehabilitation 2022-2023 SB1.** *Senior Associate Environmental Scientist.*
- **Street Improvements: Hosking Avenue from Stine Road to Leprechaun Way (T2K246).** *Senior Associate Environmental Scientist.*
- **Storm Drain Improvements Stockpile Yard Project.** *Senior Associate Environmental Scientist.*
- **Biological Services for Linnell-Brahma Park (P1C011).** *Senior Associate Environmental Scientist.*
- **Stockdale Ranch Bike Bath.** *Senior Associate Environmental Scientist.*
- **District Sump off Ashe Rd and District Blvd.** *Senior Environmental Scientist.*
- **Sports Village Phase IV.** *Associate Environmental Scientist.*
- **Street Improvements on Panama Lane from Cactus Patch to Esperanza.** *Associate Environmental Scientist.*
- **Street Improvements on Wible Road from Berkshire to Esperanza.** *Associate Environmental Scientist.*
- **Police Magazine Relocation Project.** *Associate Environmental Scientist.*
- **Parking Lot Modification Improvements at 4646 California Avenue Project.** *Associate Environmental Scientist.*
- **Westside Parkway Operational Improvements.** *Associate Environmental Scientist.*
- **Westside Parkway Calloway Ramps Project.** *Associate Environmental Scientist.*
- **Road Operational Improvements Project.** *Associate Environmental Scientist.*
- **Corporate Yard Parking Lot Expansion Project.** *Associate Environmental Scientist.*
- **Kern River Bike Path Rehabilitation Project.** *Associate Environmental Scientist.*
- **TCP Mitigation Project.** *Associate Environmental Scientist.*
- **4th of July Vacant Lot.** *Assistant Environmental Scientist.*
- **Municipal Airport Dust Control.** *Assistant Environmental Scientist.*

Arvin Aspire T5816, K. Hovnanian Company – Arvin, Kern County, CA. *Assistant Environmental Scientist* (2016 to 2017).

Conducted a pre-construction clearance survey for SJKF and WEB0. Conducted protocol level monitoring and assisted with excavating of two potential dens after no activity was observed.

Caltrans District 6: Airport Drive, Kern County Bridges Seismic Restoration Project (TO#25), Caltrans – Bakersfield, Kern County, CA. *Assistant Environmental Scientist* (2016 to 2017).

Conducted a pre-construction survey for SJKF and construction monitoring daily and weekly sweeps of the Project site after initial ground disturbance was completed per Lake and Streambed No. 1600-2015-0172-R4 and LOC No. #08ESMF00-2013-I-0350 mitigation measures. Provided Worker Environmental Awareness Training for all new construction crew members.

Panama-Buena Vista Union School District On-Call Biological Consulting Services, PBVUSD – Bakersfield, Kern County, CA. *Assistant Environmental Scientist.* (2016 to 2017).

Monitored SJKF for various PBVUSD schools utilizing tracking medium and trail cameras located throughout Bakersfield area. Excavated vacant dens after conduction protocol den monitoring.

Caltrans District 6: Visalia R2 Rehab/ Highway 198 Rehabilitation (TO#23) – Visalia, Tulare County, CA. *Assistant Environmental Scientist* (2016).

Conducted spotlighting for SJKF along 8-miles of Highway 198 and a 2-mile buffer in each direction of Highway 198. Observed one gray fox and one red fox during spotlighting surveys.

Paso Robles Solar Project, Lend Lease Energy Development, LLC. – Paso Robles, CA. *Assistant/Associate Environmental Scientist.* (2016 to 2018).



Conducted a reconnaissance level survey in potential SJKF, TKR, SWHA, and WEBO habitat. Conducted protocol level SWHA surveys. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed approximately 12 SWHA during the protocol level surveys. Drafted the Biological Analysis Report.

Jaye Street Bridge, 1602 Permit Compliance, VSCE – Porterville, Tulare County, CA. *Assistant Environmental Scientist* (2016 to 2017).

Provided biological monitoring during ground disturbance through areas of known SJKF habitat and sensitive plant species habitat. Maintained a complete record of all construction related activities, species observed, and monitoring photos taken. After initial ground disturbance, weekly project sweeps were conducted to observed non-compliance or compliance mitigation measures.

Caltrans District 6: Cherry Avenue Road Widening (TO#37), Caltrans – Bakersfield, Kern County, CA. *Assistant Environmental Scientist* (2016).

Provided biological monitoring during ground disturbance in areas of known SJKF, SJAS, BNLL, GKR, WEBO, SNKR, Kern mallow, California jewelflower, and San Joaquin woollythreads habitat. Implemented Incidental Take Permit #2081-2014-082-04 mitigation measures, Biological Opinion #81420-2009-F-0143-R003-2 mitigation measures, and Lake and Streambed Alteration Agreement #1600-2014-0216-R4 during the construction phase of the Project. Attended daily safety meetings with the crew and provided WEAT (Worker Environmental Awareness Training) to all field employees involved during construction. Maintained a complete record of all construction related activities, T&E trained personal, species observed, and monitoring photos taken. Assisted with small mammal trapping for SNKR, SJAS, and GKR for a total of 3 nights. Handled a total of two Heermann's kangaroo rats under the guidance of authorized biologist Curtis Uptain. Observed one deceased adult SJKF and 33 SJAS.

Plains All American Pipeline Anomaly Repair Projects (2016-2019)

Conducted pre-activity surveys and biological monitoring for several anomaly repair locations on sensitive environmental lands with a potential for protected, threatened and endangered species. Projects are conducted under a no-take, complete avoidance process except for a few projects that had specific permits. Protected, threatened and endangered with the potential to occur on site included SJKF, BNLL, TKR, SNKR, WEBO, SJAS, AMBA, raptors and nesting birds and Bakersfield cactus. Over the course of time Ms. Denney observed multiple raptors, several SJAS, SJKF tracks, and WEBO. Drafted multiple reports and used ArcMap to produce map figures. A complete list of Projects is listed below.

- **Line 304, Line 314 Derby Acres to Ten Section Anomaly Repair, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
- **Line 2000 Dig 13 on DWR ROW Anomaly Repair, Bakersfield, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
 - Department of Water Resources Encroachment Permit No. 1074-A
- **Line 915 Anomaly Repairs, Lost Hills, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
- **Line 904 Belridge to Pentland Anomaly Repair, Kern County, CA.** *Assistant Environmental Scientist.* (2016 to 2017).
- **Line 903 Sisquoc to Pentland Anomaly Repairs, Cuyama and New Cuyama, CA.** *Assistant Environmental Scientist.* (2017).
 - California Department of Fish and Wildlife Carrizo Plains Ecological Reserve Permission Letter: 8/25/17 to 12/31/17
- **Line 2000 Emidio to Wilmington Anomaly Repairs, Kern County, CA.** *Assistant Environmental Scientist.* (2017).
- **Line 56 Replacement Pipeline near CA Aqueduct, Kern County, CA.** *Assistant Environmental Scientist.* (2017)
 - Biological Opinion Permit #1-8-94-F-27
- **Line 2000 Angeles National Forest Anomaly Repairs, Los Angeles County, CA.** *Assistant Environmental Scientist.* (2017).
- **Line 62 Wind Wolves Preserve Anomaly Repairs, Kern County, CA.** *Associate Environmental Scientist.* (2018).
- **Line 307/308 Wind Wolves Preserve Anomaly Repairs, Kern County, CA.** *Associate Environmental Scientist.* (2019).



- **Line 904 Belridge to Pentland Anomaly Repairs, Bakersfield, Kern County, CA.** *Associate Environmental Scientist.* (2019).
- **Line 50 DWR Anomaly Repair Project, Bakersfield, Kern County, CA.** *Associate Environmental Scientist.* (2019)
 - Department of Water Resources Encroachment Permit No. 1872

Arvin-Edison Canal – Kern County, CA. (MBHCP) *Student Intern.* (2014).

Assisted with the process of reviewing trail camera footage to determine the presence or absence of a SJKF and the installation of a one-way door on an active den.

BLUNT-NOSED LEOPARD LIZARD

NLC Energy Project, California Resources Corporation (CRC) – Kern County, CA. *Senior Associate Environmental Scientist.* (2024 - Current).

Conducted a reconnaissance survey on approximately 75-acres of partially disturbed saltbush scrub habitat. Several potential special-status plant and wildlife species including SJKF, SJAS, Crotch's bumblebee, BNLL, WEBO, GKR and SNKR, Tulare grasshopper mouse, AMBA, Kern mallow, California jewelflower, recurved larkspur, San Joaquin woollythreads, and oil neststraw. Ms. Denney observed one WEBO and a potential owl burrow, eight SJAS, and eight potential SJKF dens. Drafted the Biological Analysis Report and supporting graphics.

Caltrans District 6: Blackwell's Corner CAPM Project (TO#40/10), Caltrans – Kern County, CA. *Senior/ Senior Associate Environmental Scientist.* (2024 - Current).

Approved as a Designated Biologist for SJKF, BNLL, and SJAS under Incidental Take Permit #2081-2023-029-04. Approved for BNLL pre-construction surveys, monitoring, and burrow excavating. Approved for Kern mallow pre-construction survey and monitoring. Provided biological monitoring during ground disturbance under ITP #2081-2023-029-04, USFWS Permit #2022-0023965-S7-002, LSA #EPIMS-KER-37203-R4, USACE 404 Permit No. 0710-0003, and Regional Water Quality Control Board 401 WDID Permit #5C15CR00130. Monitoring was conducted in potential habitat for several special-status species including SJAS, SJKF, AMBA, BNLL, WEBO, GKR, SNKR, nesting birds, and Kern mallow. Worker Environmental Awareness Training was provided to new crew members. Observed one known population of Kern mallow within the project site. Observed 30+ SJAS during construction monitoring efforts.

I conducted 7 days of hand burrow excavations. Excavated 51 SJAS burrows and 81 BNLL burrows. Assisted in SJAS trap set up, baiting, checking traps, and processing animals. Handled 1 non-scrotal male SJAS. Assisted Sarah Yates, a USFWS Kern mallow Designated Biologist, in identifying approximately 75 sprouts during 1 hour of surveying for relocation.

Caltrans District 6: Maricopa Highway CAPM Project (TO#37), Caltrans – Kern County, CA. *Senior Associate Environmental Scientist.* (2024 - Current).

Provided biological monitoring during ground disturbance under Streambed Alteration Agreement (SAA) No. EPIMS-KER-35971-R4 and Incidental Take Permit #2081-2022-078-04. Ms. Denney was approved as a Designated Biologist. Monitoring was conducted in potential habitat for several special-status species including SJAS, SJKF, AMBA, BNLL, WEBO, GKR, SNKR, and nesting birds. Ms. Denney observed six SJAS within the Project boundary. Five SJAS were visual observations, and one was identified via a trail camera. Hand excavated a total of 20 small mammal burrows that could potential be used SJAS, BNLL, or SNKR.

Countryside Dairy Digester Project, Maas Energy Works – Kings County, CA. *Senior Associate Environmental Scientist.* (2023).

Conducted pre-construction survey for the Countryside Dairy Digester Project as required by Kings County as part of Site Plan Review NO. 22-16, Standards and Requirement #25. Special-status species with the potential to occur include SJKF, TKR, WEBO, nesting birds, BNLL, NWPT, tricolored blackbird, and western spadefoot. No special-status species or their sign (i.e., tracks, dens, burrows, or nests) were observed during the survey. Drafted the pre-construction survey report and associated figures.



Caltrans District 6: Blackwell's Corner CAPM Project (TO#28), Caltrans – Kern County, CA. *Senior Associate/ Associate Environmental Scientist.* (2023).

Conducted protocol level BNLL surveys for a 8.0-mile stretch of State Route 33, within western Kern County, CA. Surveys were conducted in potential habitat for several other special-status species including SJKF, WEBO, SJAS, SWHA, and nesting birds. Observed a total of 1 SJAS during BNLL surveys. No BNLL, SJKF, WEBO, SWHA or nesting birds were observed during the BNLL surveys.

Caltrans District 6: Panoche Hills CAPM Project (TO#09/TO#14) – Fresno County, CA. *Senior Associate Environmental Scientist.* (2022 – 2023)

Conducted protocol level BNLL surveys, focused botanical survey, and small mammal trapping (XL Sherman Traps) for GKR, and other wildlife species in the vicinity, for a 12.0-mile stretch of the Interstate 5 (I-5), within western Fresno County, CA. Focused botanical surveys were conducted for the presence of San Joaquin woollythreads, showy golden madia, and Panoche peppergrass. Observed a total of 3 SJAS and one loggerhead shrike during BNLL surveys. Handled 35 Heermann's kangaroo rats and 3 California pocket mice under the guidance of authorized biologists Curtis Uptain and Martina Pernicano under Federal Recovery Permit TE-119861-2. No GKR was captured during the five consecutive nights of trapping. No special-status plant species observed during the botanical surveys.

Carbon TerraVault Project, California Resources Corporation (CRC) – Kern County, CA. *Senior Associate Environmental Scientist* (2022-Current).

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂) capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. The Project would inject the captured CO₂ into these well sites for sequestration into the ground for importunity as part of the goal to reduce CO₂ emissions for the State of California. Several special-status plant species have the potential to occur on site including heartscale, Lost Hills crownscale, California jewelflower, recurved larkspur, Kern mallow, Temblor buckwheat, Tejon poppy, showy golden madia, San Joaquin woollythreads, and oil neststraw. In addition, several special-status wildlife species have the potential to occur on site including Crotch's bumblebee, California glossy snake, BNLL, San Joaquin coachwhip, temblor legless lizard, coast horned lizard, WEBO, SWHA, prairie falcon, loggerhead shrike, LeConte's thrasher, SJAS, GKR, SNKR, Tulare grasshopper mouse, San Joaquin pocket mouse, AMBA, and SJKF. No special-status plant species were observed during the reconnaissance surveys. During the reconnaissance surveys Ms. Denney observed one adult BNLL, two potential WEBO burrows, one loggerhead shrike, two LeConte's thrashers, ten potential SJKF dens, 30 SJAS, potential GKR burrows with the appropriate size characteristics, potential kangaroo rat burrows with appropriate size characteristics for SNKR, and five stick nests that could be utilized by nesting birds. Assisted with the drafting of the Biological Analysis Report and associated figures.

After CRC received their approved EIR, Ms. Denney worked on several Biological Resources Mitigation Measures (MM) from the adopted Mitigation Measure and Report Program (MMRP). Ms. Denney conducted a reconnaissance survey to identify potential special-status plant and wildlife species or their suitable habitat and determined where focused/protocol surveys may be required. Ms. Denney conducted two botanical surveys, but no special-status plant species were identified. Wrote a Fence Plan, per MM 4.4-12, that requires a wildlife fence to be installed 500-feet from each injection well. Conducted numerous Biological Pre-Activity Surveys for the project prior to construction beginning. Conducted ten days of protocol SJKF den monitoring for ten potential dens. No SJKF was identified. Observed one AMBA on a trail camera during SJKF den monitoring efforts. Observed 40 SJAS and their active burrows over the course of numerous surveys. Ms. Denney has approximately 300 hours monitoring construction activities.

Gas Company Road Solar Project, Apex Energy Solutions, LLC – Kern County, CA. *Senior Associate/ Associate Environmental Scientist.* (2021-2022)

Conducted protocol BNLL and floristics surveys, and small mammal trapping for GKR on approximately 58 acres, in Taft, California. Special status plant species with the potential to occur include heartscale and Kern mallow. No direct observation of a BNLL or any special-status plant species. Observed approximately 15 SJAS during the field surveys. Small mammal trapping (XL Sherman Traps) for 2 nights for GKR. No GKR captured during the small mammal trapping effort. Handled 3 SJAS, 14 SNKR and 6 Heermann's kangaroo rats under the guidance of authorized biologist Curtis Uptain.



Caltrans District 6: Reward CAPM (TO#60/TO#10) – Kern County. *Senior Associate /Associate Environmental Scientist.* (2021-2022).

Approved for the following activities under Incidental Take Permit No. 2081-2020-044-04 and Streambed Alteration Agreement No. 1600-EPIMS-KER-128650-R4 for SJAS trapping, relocation, burrow excavation under a Designated Biologist, pre-activity surveys, migratory nesting bird surveys lead, botanical surveys, SJKF den/burrow monitoring under a Designated Biologist, and construction monitoring. Conducted protocol BNLL surveys, monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on State Route 58 between Post Mile (PM) 6.0 and 15.4 near McKittrick, California. Potential species to occur on site include SJKF, BNLL, WEBO, SJAS, AMBA, Kern mallow, Lemmon's jewelflower, and recurved larkspur. Observed 15 inactive and active stick nests occupied by American crows or ravens, 30 potential SJKF dens, and three active AMBA dens. Observed 15 SJAS and one loggerhead shrike within the Project boundary. No direct observation of a BNLL, SJKF, WEBO, AMBA, or special-status plant species. Drafted weekly summaries, pre-construction survey reports, and provided associated GIS figures for reports.

Sandrini Solar Park Project, EDP Renewables North America, LLC. – Kern County, CA. *Associate Environmental Scientist* (2020 to 2022).

Assisted with reconnaissance surveys for proposed 300-MW solar project, approximately 4,151.5-acres, in Kern County. Conducted multiple reconnaissance level surveys for BNLL, TKR, SJKF, SWHA, tricolored blackbird, least Bell's vireo, AMBA, Tulare grasshopper mouse, SJAS, WEBO, SNKR, loggerhead shrike, LeConte's thrasher, northern harrier, white-tailed kite, California glossy snake, San Joaquin coachwhip, western pond turtle, and nesting birds. Potential special-status plants include Horn's milk vetch, Bakersfield smallscale, Lost Hills crowscale, heartscale, alkali mariposa lily, hispid salty bird's beak, recurved larkspur, Kern mallow, and Comanche Point layia. Observed four SWHA and four loggerhead shrikes on the Project site. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures.

Caltrans District 6: Cherry Avenue Revegetation and Drainage Project (TO#21/#28) – Kern County, CA. *Associate Environmental Scientist* (2019).

Conducted BNLL protocol level surveys, protocol-level SJKF den monitoring for 19 potential dens and temporarily excluding all 19 dens, small mammal trapping (XL Sherman Traps and Tomahawk Traps) for GKR, SJAS, and other wildlife species in the vicinity, and daily construction monitoring for a 2.5-mile stretch of the State Route 119, west of Bakersfield, CA and east of Taft, CA. Observed a total of 5 of the 14 total SJAS captured and handled during the trapping effort. Hand excavated approximately 20 small mammal burrows that could potential be used SJAS or BNLL. Observed over 20 sightings of SJAS during construction monitoring. Maintained a complete record of all species observed and trapped, photographs taken, and GPS points of biological resources. Drafted BNLL survey report and used ArcMap to produce map figures for the client. All activities were conducted under mitigation measures within Incidental Take Permit No. 2081-2014-082-04 and Biological Opinion No. 2009-0143-R008-1.

Caltrans District 6: Grapevine Culvert Repair Project (TO#32), Bakersfield, CA. *Associate Environmental Scientist* (2020).

Conducted protocol-level BNLL surveys in areas of potential suitable habitat for the species. No direct observation of a BNLL. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Drafted the BNLL report for the client.

Solari Sand and Gravel Mine, Granite Construction Company – Kern County, CA. *Senior/Senior Associate/Associate Environmental Scientist* (2019, 2023-Current).

Conducted BNLL protocol level surveys on approximately 270-acres and construction monitoring for an approximate 2-acre parcel of land. Assisted with the exclusion of a WEBO and SJKF located within the Project area. Observed one adult WEBO and three active burrows within the vicinity of the Project site. Conducted den monitoring for five potential SJKF dens. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.



Conducting a three-year study for a required revegetation plot to determine the best methodology for reseeding at the termination of the quarry's lifespan. Conducted the data collection, analysis, and wrote the annual reports (Year 1 and 2).

Caltrans District 6: Lost Hills Rubber Rehabilitation Project (TO#20/TO#31/TO#42/TO#07) – Caltrans. Kern County, CA. Senior Associate/ Associate Environmental Scientist (2019 to 2023).

Conducted three seasons of BNLL protocol level surveys for a 5-mile stretch of the I-5, and associated laydown areas, north of Lost Hills, CA. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed two adult SWHA, a deceased AMBA, and variety of other raptors and bird species. Conducted SJKF protocol den monitoring for nine potential dens over the course of two years. Drafted 2019 and 2020 BNLL Survey Reports and monthly Pre-construction Survey Reports and used ArcMap to produce map figures for the client.

Caltrans District 6: Grapevine Channel Repair Project (TO#80/TO#22), - Caltrans. Bakersfield, Kern County, CA. Associate Environmental Scientist (2018 to 2019).

Tehachapi Slender Salamander (TSS) survey. Conducted surveys on three of the five Project site locations that had suitable habitat for TSS. Each site and 50-foot buffer were examined in random multiple locations within potential suitable habitat for TSS. Areas that had a higher potential were examined in a more intense fashion compared to those with less suitable habitat. Conducted protocol-level BNLL surveys in areas of potential suitable habitat for the species. Drafted the BNLL survey report.

Calgren Dairy Biofuels Project, Mass Energy – Tulare, Tulare County, CA. Associate Environmental Scientist (2018).

Conducted a reconnaissance survey for approximately 20-miles of low-pressure HDPE biogas gathering lines. Survey was conducted specifically looking for small mammal burrows and federally-listed special-status species. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed one BNLL during the reconnaissance survey.

Breitburn Ozena, Energy Project Solutions, LLC. – Kern County, CA. Assistant Environmental Scientist (2017).

Conducted biological monitoring as the construction crew removed pipeline that was staged on site. One juvenile BNLL was observed near the project site.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. Assistant/Associate Environmental Scientist. (2017 to 2018).

Conducted a reconnaissance survey on a 2,550-acre parcel of the Hopkins Lease to identify the presence or absence of special-status species or their habitat. Potential state and federally listed species in the vicinity included SJKF, BNLL, GKR, SJAS, and several rare plants species including Kern mallow, California jewelflower, and San Joaquin woollythreads. Conducted floristic surveys and BNLL protocol level surveys. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed two SJKF, one active SJKF natal den, tracks, and scat, 10 GKR complexes, and 15 SJAS. Drafted a memo report, reviewed historical annual reports, drafted the BNLL and floristics survey report, and used ArcMap to produce map figures for the client on the results of the findings.

Kern-Tulare Water District Pipeline, Kern-Tulare Water District – Kern County, CA. Assistant/Associate Environmental Scientist (2017 to 2019).

Conducted a reconnaissance survey and pre-construction survey of an approximate 12-mile proposed oil field water reuse pipeline located in suitable BNLL, SJKF, WEBO, and SWHA habitat. Conducted protocol level BNLL surveys and maintained a complete record of all species observed, photographs taken, biological resources GPS points, and data sheets for the surveys. Drafted and finalized a letter report(s) and used ArcMap to produce map figures. Drafted the Biological Analysis Report for the permitting of the Project

Trafalgar Solar Project, Lend Lease Energy Development, LLC. - Kings County, CA. Assistant Environmental Scientist (2016).

Conducted a reconnaissance survey of the site located in potential SJKF, BNLL, and GKR habitat. Conducted BNLL protocol level surveys and GKR trapping (XL Sherman Traps) to determine the presence or absence of



the species. Conducted GKR trapping for a total of two days. Handled three Heermann's kangaroo rats under the guidance of authorized biologists Curtis Uptain and Belen Perez.

Caltrans District 6: Cherry Avenue Road Widening (TO#37), Caltrans – Bakersfield, Kern County, CA. Assistant Environmental Scientist (2016).

Provided biological monitoring during ground disturbance in areas of known SJKF, SJAS, BNLL, GKR, WEBO, SNKR, Kern mallow, California jewelflower, and San Joaquin woollythreads habitat. Implemented Incidental Take Permit #2081-2014-082-04 mitigation measures, Biological Opinion #81420-2009-F-0143-R003-2 mitigation measures, and Lake and Streambed Alteration Agreement #1600-2014-0216-R4 during the construction phase of the Project. Attended daily safety meetings with the crew and provided WEAT (Worker Environmental Awareness Training) to all field employees involved during construction. Maintained a complete record of all construction related activities, T&E trained personal, species observed, and monitoring photos taken. Assisted with small mammal trapping for SNKR, SJAS, and GKR for a total of 3 nights. Handled a total of two Heermann's kangaroo rats under the guidance of authorized biologist Curtis Uptain. Observed one deceased adult SJKF and 33 SJAS.

Plains All American Pipeline Anomaly Repair Projects (2016-2019)

Conducted pre-activity surveys and biological monitoring for several anomaly repair locations on sensitive environmental lands with a potential for protected, threatened and endangered species. Projects are conducted under a no-take, complete avoidance process except for a few projects that had specific permits. Protected, threatened and endangered with the potential to occur on site included SJKF, BNLL, TKR, SNKR, WEBO, SJAS, AMBA, raptors and nesting birds and Bakersfield cactus. Over the course of time Ms. Denney observed multiple raptors, several SJAS, SJKF tracks, and WEBO. Drafted multiple reports and used ArcMap to produce map figures. A complete list of Projects is listed below.

- **Line 304, Line 314 Derby Acres to Ten Section Anomaly Repair, Kern County, CA. Assistant Environmental Scientist. (2016).**
- **Line 2000 Dig 13 on DWR ROW Anomaly Repair, Bakersfield, Kern County, CA. Assistant Environmental Scientist. (2016).**
 - Department of Water Resources Encroachment Permit No. 1074-A
- **Line 915 Anomaly Repairs, Lost Hills, Kern County, CA. Assistant Environmental Scientist. (2016).**
- **Line 904 Belridge to Pentland Anomaly Repair, Kern County, CA. Assistant Environmental Scientist. (2016 to 2017).**
- **Line 903 Sisquoc to Pentland Anomaly Repairs, Cuyama and New Cuyama, CA. Assistant Environmental Scientist. (2017).**
 - California Department of Fish and Wildlife Carrizo Plains Ecological Reserve Permission Letter: 8/25/17 to 12/31/17
- **Line 2000 Emidio to Wilmington Anomaly Repairs, Kern County, CA. Assistant Environmental Scientist. (2017).**
- **Line 56 Replacement Pipeline near CA Aqueduct, Kern County, CA. Assistant Environmental Scientist. (2017)**
 - Biological Opinion Permit #1-8-94-F-27
- **Line 2000 Angeles National Forest Anomaly Repairs, Los Angeles County, CA. Assistant Environmental Scientist. (2017).**
- **Line 62 Wind Wolves Preserve Anomaly Repairs, Kern County, CA. Associate Environmental Scientist. (2018).**
- **Line 307/308 Wind Wolves Preserve Anomaly Repairs, Kern County, CA. Associate Environmental Scientist. (2019).**
- **Line 904 Belridge to Pentland Anomaly Repairs, Bakersfield, Kern County, CA. Associate Environmental Scientist. (2019).**
- **Line 50 DWR Anomaly Repair Project, Bakersfield, Kern County, CA. Associate Environmental Scientist. (2019)**
 - Department of Water Resources Encroachment Permit No. 1872

Pipeline Relocation – Chevron North America – Kern County, CA. Biological Field Technician I. (2015).

Conducted BNLL protocol level surveys to determine the presence or absence of the species prior to the construction of the relocation of a pipeline. No BNLL observed.



Westminister Project – Kern County, CA. *Biologist I.* (2015).

Conducted BNLL protocol level surveys to determine the presence or absence of the species prior to the construction of a housing development. No BNLL observed.

El Dorado Pipeline – Fresno County, CA. *Student Intern* (2014).

Conducted BNLL protocol level surveys to determine the presence or absence of the species prior to the construction of a pipeline to a factory building. No BNLL observed.

PROTOCOL-RARE PLANT SURVEYS

Caltrans District 9: Sonora Junction Shoulders (TO#38) - Mono County, CA. *Senior Associate Environmental Scientist* (2024-Current).

Approved as a Designated Biologist for fish rescue and relocation and nesting birds. Provided biological monitoring during ground disturbance under Streambed Alteration Agreement (SAA) No. EPIMS-M00-37443-R6, US Army Corps of Engineers (USACE) Nationwide Permit #SPL-2023-00224-TS, and Lahontan Regional Water Quality Control Board (RWQCB) 401 Water Quality Certification WDID #6B262303001. Approved by CDFW, under SAA permit for channel inspection for aquatic species (MM #2.28) and fish relocation (MM #2.31). Project site is located within potential habitat for sage grouse, AMBA, Sierra Nevada Mountain beaver, Western white-tailed jackrabbit, nesting birds and raptors, and several rare plants. Ms. Denney observed several individuals of golden violets (*Viola purpurea* ssp. *aurea*), a CRPR 2B.2, within the Project area.

Caltrans District 6: Panoche Hills CAPM Project (TO#09/TO#14) – Fresno County, CA. *Senior Associate Environmental Scientist.* (2022 – 2023)

Conducted protocol level BNLL surveys, focused botanical survey, and small mammal trapping (XL Sherman Traps) for GKR, and other wildlife species in the vicinity, for a 12.0-mile stretch of the Interstate 5 (I-5), within western Fresno County, CA. Focused botanical surveys were conducted for the presence of San Joaquin woollythreads, showy golden madia, and Panoche peppergrass. Observed a total of 3 SJAS and one loggerhead shrike during BNLL surveys. Handled 35 Heermann's kangaroo rats and 3 California pocket mice under the guidance of authorized biologists Curtis Uptain and Martina Pernicano under Federal Recovery Permit TE-119861-2. No GKR was captured during the five consecutive nights of trapping. No special-status plant species observed during the botanical surveys.

Keyhole Wind Project, EDF Renewables – Kern County, CA. *Senior Associate/ Associate Environmental Scientist* (2021 to 2023).

Conducted reconnaissance level survey, protocol DETO, and botanical surveys for approximately 4,182-acres. Maintained all data collected on the site and used ArcMap to produce maps for data collecting in the field and figures for identified biological resources. Observed numerous potential DKF dens, three potential DT burrows, thousands of Joshua trees, and numerous nesting birds. Assisted with writing the Biological Analysis Report and created the figures that would be used in the Environmental Impact Report.

Caltrans District 6: Reward CAPM (TO#60/TO#10) – Kern County. *Senior Associate /Associate Environmental Scientist.* (2021-2022).

Approved for the following activities under Incidental Take Permit No. 2081-2020-044-04 and Streambed Alteration Agreement No. 1600-EPIMS-KER-128650-R4 for SJAS trapping, relocation, burrow excavation under a Designated Biologist, pre-activity surveys, migratory nesting bird surveys lead, botanical surveys, SJKF den/burrow monitoring under a Designated Biologist, and construction monitoring. Conducted protocol BNLL surveys, monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on State Route 58 between Post Mile (PM) 6.0 and 15.4 near McKittrick, California. Potential species to occur on site include SJKF, BNLL, WEBO, SJAS, AMBA, Kern mallow, Lemmon's jewelflower, and recurved larkspur. Observed 15 inactive and active stick nests occupied by American crows or ravens, 30 potential SJKF dens, and three active AMBA dens. Observed 15 SJAS and one loggerhead shrike within the Project boundary. No direct observation of a BNLL, SJKF, WEBO, AMBA, or special-status plant species. Drafted weekly summaries, pre-construction survey reports, and provided associated GIS figures for reports.



Kern River Canal Backup Weir Reconstruction Project, City of Bakersfield Water Resources Department – Kern County, CA. Senior Associate/ Associate Environmental Scientist (2021-Current).

Conducted biological reconnaissance surveys over the course of several years for the replacement of the Kern River Backup Weir. Project activities included demolition and removal of an existing concrete weir, retaining wall, riprap, and sheet piling, and construction of a new weir system and recontouring of the Kern River channel bed. Ms. Denney assisted with data analysis, drafting of the Biological Assessment and associated map figures. The Project site has the potential for several special-status plant and wildlife species including California jewelflower, recurved larkspur, San Joaquin woollythreads, Bakersfield legless lizard, California glossy snake, western spadefoot, WEBO, Crotch's bumble bee, AMBA, SJKF, nesting birds and raptors, and roosting bats. Ms. Denney conducted two bat flyout surveys prior to the construction activities beginning. No bat activity was observed. Ms. Denney conducted a Bakersfield legless lizard survey, but no legless lizards were observed. Observed active nesting cliff swallows under the Coffee Road Bridge located south of the Project site. Conducted SJKF den monitoring (i.e., tracking medium) on a potential den. No SJKF sign (i.e., tracks, scat, prey remains) were observed during the den monitoring.

Exchequer Mountain Bike Path Project, Merced Irrigation District – Mariposa County, CA. Associate Environmental Scientist (2020).

Conducted rare-plant protocol-level surveys for the Phase 3 bike paths which is approximately 1,067-acres. No special-status plant species observed.

Rosamond South Solar Project, Clearway Energy Group, LLC. – Kern County, CA. Associate Environmental Scientist (2019 to Current).

Assisted with preparing and submitting three Conditional Use Permits and associated forms for proposed 100-MW solar project, approximately 1,292-acres, to the Kern County Planning Department for review. Conducted multiple reconnaissance level surveys, nesting bird surveys, Joshua tree census (*Yucca brevifolia*) and three seasons of rare-plant surveys. Observed three desert kit fox, one deceased desert kit fox pup, two adult SWHA, one adult WEBO, and a population of alkali mariposa lily (*Calochortus striatus*). Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures. Assisted with drafting an initial Joshua Tree Incidental Take Permit (ITP) application package, and associated figures and calculations submitted to CDFW for approval. Following the initial ITP, Ms. Denney assisted with four amendments to the permit including additional census data collection, figures, and calculations submitted to CDFW for approval.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. Assistant/Associate Environmental Scientist. (2017 to 2018).

Conducted a reconnaissance survey on a 2,550-acre parcel of the Hopkins Lease to identify the presence or absence of special-status species or their habitat. Potential state and federally listed species in the vicinity included SJKF, BNLL, GKR, SJAS, and several rare plants species including Kern mallow, California jewelflower, and San Joaquin woollythreads. Conducted floristic surveys and BNLL protocol level surveys. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed two SJKF, one active SJKF natal den, tracks, and scat, 10 GKR complexes, and 15 SJAS. Drafted a memo report, reviewed historical annual reports, drafted the BNLL and floristics survey report, and used ArcMap to produce map figures for the client on the results of the findings.

AV Apollo Solar Project, Lend Lease Energy Development, LLC. – Rosamond, Kern County, CA. Assistant/Associate Environmental Scientist (2016 to 2018).

Conducted a reconnaissance and rare-plant protocol level surveys on approximately 493- acres in potential DETO, desert kit fox, and Mojave ground squirrel habitat. Conducted protocol level SWHA surveys and floristic surveys for several special-status plant species. Maintained a complete record of all species observed and photographs taken of the Project site. Shadowed two expert DETO biologists during protocol level DETO surveys. Observed a small population of Lemmon's jewelflower (*Caulanthus lemmonii*). Drafted the Biological Analysis Report for the permitting of the Project.



NESTING BIRDS

Caltrans District 6: Blackwell's Corner CAPM Project (TO#40/10), Caltrans – Kern County, CA. *Senior/ Senior Associate Environmental Scientist.* (2024 - Current).

Approved as a Designated Biologist for SJKF, BNLL, and SJAS under Incidental Take Permit #2081-2023-029-04. Approved for BNLL pre-construction surveys, monitoring, and burrow excavating. Approved for Kern mallow pre-construction survey and monitoring. Provided biological monitoring during ground disturbance under ITP #2081-2023-029-04, USFWS Permit #2022-0023965-S7-002, LSA #EPIMS-KER-37203-R4, USACE 404 Permit No. 0710-0003, and Regional Water Quality Control Board 401 WDID Permit #5C15CR00130. Monitoring was conducted in potential habitat for several special-status species including SJAS, SJKF, AMBA, BNLL, WEBO, GKR, SNKR, nesting birds, and Kern mallow. Worker Environmental Awareness Training was provided to new crew members. Observed one known population of Kern mallow within the project site. Observed 30+ SJAS during construction monitoring efforts.

I conducted 7 days of hand burrow excavations. Excavated 51 SJAS burrows and 81 BNLL burrows. Assisted in SJAS trap set up, baiting, checking traps, and processing animals. Handled 1 non-scrotal male SJAS. Assisted Sarah Yates, a USFWS Kern mallow Designated Biologist, in identifying approximately 75 sprouts during 1 hour of surveying for relocation.

Caltrans District 6: Stratford Kings River Bridge Replacement Project (TO#36 and #39), Caltrans - Stratford, CA. *Senior Associate Environmental Scientist.* (05/2024 – 08/2024).

Conducted a biological monitoring, as a CDFW approved Designated Biologist, under Incidental Take Permit #2081-2022-046-04. Ms. Denney observed one active SWHA nest with two adult SWHA and two chicks/nestlings. Behavior observed during the monitoring efforts included: hunting, bringing prey back to the nest, feeding the chicks, vocalizations, soaring, stretching, flapping, and sitting/perching. Approximately 95 hours total for SWHA monitoring.

Caltrans District 9: Sonora Junction Shoulders (TO#38) - Mono County, CA. *Senior Associate Environmental Scientist* (2024-Current).

Approved as a Designated Biologist for fish rescue and relocation and nesting birds. Provided biological monitoring during ground disturbance under Streambed Alteration Agreement (SAA) No. EPIMS-M00-37443-R6, US Army Corps of Engineers (USACE) Nationwide Permit #SPL-2023-00224-TS, and Lahontan Regional Water Quality Control Board (RWQCB) 401 Water Quality Certification WDID #6B262303001. Approved by CDFW, under SAA permit for channel inspection for aquatic species (MM #2.28) and fish relocation (MM #2.31). Project site is located within potential habitat for sage grouse, AMBA, Sierra Nevada Mountain beaver, Western white-tailed jackrabbit, nesting birds and raptors, and several rare plants. Ms. Denney observed several individuals of golden violets (*Viola purpurea ssp. aurea*), a CRPR 2B.2, within the Project area.

Caltrans District 6: Maricopa Highway CAPM Project (TO#37), Caltrans – Kern County, CA. *Senior Associate Environmental Scientist.* (2024 - Current).

Provided biological monitoring during ground disturbance under Streambed Alteration Agreement (SAA) No. EPIMS-KER-35971-R4 and Incidental Take Permit #2081-2022-078-04. Ms. Denney was approved as a Designated Biologist. Monitoring was conducted in potential habitat for several special-status species including SJAS, SJKF, AMBA, BNLL, WEBO, GKR, SNKR, and nesting birds. Ms. Denney observed six SJAS within the Project boundary. Five SJAS were visual observations, and one was identified via a trail camera. Hand excavated a total of 20 small mammal burrows that could potential be used SJAS, BNLL, or SNKR.

Caltrans District 9: Conway Ranch Project (TO#19), Caltrans – Mono County, CA. *Senior Associate Environmental Scientist.* (2023).

Conducted biological monitoring during the construction of expanding the road shoulder and the replacement of five culverts, which included water diversions, along a 0.4-mile stretch of State Route 395 in Mono County. This work included monitoring for the presence of several special-status species including AMBA, wolverine, golden eagle, and nesting birds. Replacement of the culverts and water diversions was conducted under Army Corp of Engineers 404 Permit Nationwide Permit (NWP) #SPL-2022-00193-TS, Regional Water Quality Control Board (RWQCB) 401 Permit Waste Discharge Identification (WDID) No. 6B262203004, and Lake and Streambed



Alternation Agreement (LSAA) Permit #EPIMS-MOO-27207-R6. No AMBA, wolverine, nesting birds, or any of these species' sign (e.g., tracks, scat) were observed during the construction monitoring.

Countryside Dairy Digester Project, Maas Energy Works – Kings County, CA. Senior Associate Environmental Scientist (2023).

Conducted pre-construction survey for the Countryside Dairy Digester Project as required by Kings County as part of Site Plan Review NO. 22-16, Standards and Requirement #25. Special-status species with the potential to occur include SJKF, TKR, WEBO, nesting birds, BNLL, NWPT, tricolored blackbird, and western spadefoot. No special-status species or their sign (i.e., tracks, dens, burrows, or nests) were observed during the survey. Drafted the pre-construction survey report and associated figures.

Mohawk Street Project, Bakersfield, CA. Senior Associate Environmental Scientist. (06/2023).

Conducted a reconnaissance survey for a proposed tentative tract map project located in Bakersfield, CA. Surveyed for SJKF, WEBO, AMBA, SWHA, and nesting migratory birds and raptors. Drafted the Biological Analysis Report and used ArcMap to produce maps and figures for the report.

Rosamond Central Solar Project, Clearway Energy Group, LLC. – Kern County, CA. Senior Associate Environmental Scientist (2023).

Conducted biological monitoring during the construction of battery energy storage system (BESS) on the existing Rosamond Central Solar Project. Potential special-status species in the vicinity include desert kit fox, DETO, WEBO, AMBA, SWHA, and nesting birds. No special-status species observed during the 6 months of construction monitoring.

Buena Vista Hills and Mt. Poso Well Sites Project - California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist. (05/2022-Current).

Conducted biological reconnaissance surveys for numerous well site locations in Mt Poso and Buena Vista (BV) Hills existing oil and gas properties. Observed 10 potential SJKF dens, over 25 SJAS, and active nesting birds. Conducted a month long, protocol level, SJKF den monitoring for two potential SJKF dens using trail cameras to determine activity. Observed one SJKF and one AMBA on the trail cameras. Drafted the biological section for eight Initial Study Mitigation Negative Declarations (ISMND). Create associated figures for ISMNDs to represent survey results.

Tract 7337 (MBHCP), K. Hovnanian Companies of California, Inc. – Bakersfield, Kern County, CA. Senior Associate Environmental Scientist. (2021 – 2022)

Conducted a reconnaissance survey and pre-construction clearance for covered species prior to land purchase and construction phases. Maintained a complete record of all species observed and photographs taken during the surveys. Prepared two pre-construction clearance reports, provided WEAT for construction staff, and used ArcMap to produce map figures.

Caltrans District 6: State Route 99 Union Avenue to White Lane 2R Project (TO#04), Caltrans – Kern County, CA. Senior Associate/Associate Environmental Scientist. (10/2021 – 10/2023)

Conducted SWHA and red-tailed hawk nest monitoring during active construction activities and daily night sweeps to monitor for SJKF sign or activity. Observed one active SWHA nest and six active RTHA nests. No SJKF or sign (e.g., dens, tracks, scat) was observed.

Keyhole Wind Project, EDF Renewables – Kern County, CA. Senior Associate/ Associate Environmental Scientist (2021 to 2023).

Conducted reconnaissance level survey, protocol DETO, and botanical surveys for approximately 4,182-acres. Maintained all data collected on the site and used ArcMap to produce maps for data collecting in the field and figures for identified biological resources. Observed numerous potential DKF dens, three potential DT burrows, thousands of Joshua trees, and numerous nesting birds. Assisted with writing the Biological Analysis Report and created the figures that would be used in the Environmental Impact Report.

Caltrans District 6: Reward CAPM (TO#60/TO#10) – Kern County. Senior Associate /Associate Environmental Scientist. (2021-2022).



Approved for the following activities under Incidental Take Permit No. 2081-2020-044-04 and Streambed Alteration Agreement No. 1600-EPIMS-KER-128650-R4 for SJAS trapping, relocation, burrow excavation under a Designated Biologist, pre-activity surveys, migratory nesting bird surveys lead, botanical surveys, SJKF den/burrow monitoring under a Designated Biologist, and construction monitoring. Conducted protocol BNLL surveys, monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on State Route 58 between Post Mile (PM) 6.0 and 15.4 near McKittrick, California. Potential species to occur on site include SJKF, BNLL, WEBO, SJAS, AMBA, Kern mallow, Lemmon's jewelflower, and recurved larkspur. Observed 15 inactive and active stick nests occupied by American crows or ravens, 30 potential SJKF dens, and three active AMBA dens. Observed 15 SJAS and one loggerhead shrike within the Project boundary. No direct observation of a BNLL, SJKF, WEBO, AMBA, or special-status plant species. Drafted weekly summaries, pre-construction survey reports, and provided associated GIS figures for reports.

Kern River Canal Backup Weir Reconstruction Project, City of Bakersfield Water Resources Department – Kern County, CA. Senior Associate/ Associate Environmental Scientist (2021-Current).

Conducted biological reconnaissance surveys over the course of several years for the replacement of the Kern River Backup Weir. Project activities included demolition and removal of an existing concrete weir, retaining wall, riprap, and sheet piling, and construction of a new weir system and recontouring of the Kern River channel bed. Ms. Denney assisted with data analysis, drafting of the Biological Assessment and associated map figures. The Project site has the potential for several special-status plant and wildlife species including California jewelflower, recurved larkspur, San Joaquin woollythreads, Bakersfield legless lizard, California glossy snake, western spadefoot, WEBO, Crotch's bumble bee, AMBA, SJKF, nesting birds and raptors, and roosting bats. Ms. Denney conducted two bat flyout surveys prior to the construction activities beginning. No bat activity was observed. Ms. Denney conducted a Bakersfield legless lizard survey, but no legless lizards were observed. Observed active nesting cliff swallows under the Coffee Road Bridge located south of the Project site. Conducted SJKF den monitoring (i.e., tracking medium) on a potential den. No SJKF sign (i.e., tracks, scat, prey remains) were observed during the den monitoring.

Merced Biogas Pipeline Project, Maas Energy Works – Merced County, CA. Associate Environmental Scientist (2020).

Conducted pre-construction survey for proposed pipeline as required by the adopted Mitigation Monitoring and Reporting Program. The pipeline will run along existing paved and dirt roads to collect biogas from several dairy digesters in the area. Special-status species with the potential to occur include SWHA, tricolored blackbird, nesting birds, SJKF and AMBA. No suitable tricolored blackbird foraging or nesting habitat was observed. Numerous potential stick nests were observed that SWHA or other nesting birds could occupy. No SJKF or AMBA or their sign was observed.

BigBeau Solar Project, EDF Renewables – Kern County, CA. Senior/Senior Associate/Associate Environmental Scientist (2020 to 2025).

Approved as a Designated Monitor for DETO, WEBO, SWHA, and nesting birds. Conducted den monitoring on 51 potential desert kit fox dens. Collapsed 35 of the 51 potential desert kit fox dens. Conducted Joshua tree (*Yucca brevifolia*) census surveys and drafted Joshua Tree Census 2084 Report. Assisted with eight DETO preconstruction clearance surveys under the guidance of an authorized DETO biologist Jeff Erway. Monitor for DETO, SWHA, desert kit fox, WEBO, golden eagle, and nesting birds and raptors or any of their sign (i.e. dens, burrows, scat, tracks, or nests) during the Joshua tree removal and construction phases. Observed 3 desert kit fox, 2 WEBO, and one active SWHA, mourning dove and red-tailed hawk nests. Conducting two years of annual revegetation surveys and drafted annual reports. Drafted 28 monthly monitoring reports during the construction phase as part of the EIR Mitigation Measure 4.4-4. Provided Worker Environmental Awareness Training to new crew members as part of the EIR Mitigation Measure 4.4-2. Monitored Arizona crossing construction installation following the Lake and Streambed Alteration Agreement Notification No. 600-2020-0086-R4. Conducted three years of revegetation monitoring, data analysis, and reporting for the road crossings and temporary staging yards. Wrote three annual reports on the revegetation monitoring efforts.

Sandrini Solar Park Project, EDP Renewables North America, LLC. – Kern County, CA. Associate Environmental Scientist (2020 to 2022).



Assisted with reconnaissance surveys for proposed 300-MW solar project, approximately 4,151.5-acres, in Kern County. Conducted multiple reconnaissance level surveys for BNLL, TKR, SJKF, SWHA, tricolored blackbird, least Bell's vireo, AMBA, Tulare grasshopper mouse, SJAS, WEBO, SNKR, loggerhead shrike, LeConte's thrasher, northern harrier, white-tailed kite, California glossy snake, San Joaquin coachwhip, western pond turtle, and nesting birds. Potential special-status plants include Horn's milk vetch, Bakersfield smallscale, Lost Hills crownscale, heartscale, akali mariposa lily, hispid salty bird's beak, recurved larkspur, Kern mallow, and Comanche Point layia. Observed four SWHA and four loggerhead shrikes on the Project site. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures.

Rosamond South Solar Project, Clearway Energy Group, LLC. – Kern County, CA. Associate Environmental Scientist (2019 to Current).

Assisted with preparing and submitting three Conditional Use Permits and associated forms for proposed 100-MW solar project, approximately 1,292-acres, to the Kern County Planning Department for review. Conducted multiple reconnaissance level surveys, nesting bird surveys, Joshua tree census (*Yucca brevifolia*) and three seasons of rare-plant surveys. Observed three desert kit fox, one deceased desert kit fox pup, two adult SWHA, one adult WEBO, and a population of alkali mariposa lily (*Calochortus striatus*). Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures. Assisted with drafting an initial Joshua Tree Incidental Take Permit (ITP) application package, and associated figures and calculations submitted to CDFW for approval. Following the initial ITP, Ms. Denney assisted with four amendments to the permit including additional census data collection, figures, and calculations submitted to CDFW for approval.

Caltrans District 9: Cartago Wildlife Area Restoration Project– Inyo County, CA. Associate Environmental Scientist (2019).

Caltrans proposed to protect, enhance, create and enlarge wetland and riparian habitat at the Cartago Wildlife Area (CWA), approximately 218-acres, owned and managed by the California Department of Fish and Wildlife. To determine presence of sensitive wildlife and plant species and the need for avoidance, minimization or mitigation measures as well as the type of permits that will be required for the proposed actions, Ms. Denney conducted protocol level surveys for nesting upland and marshland birds.

Lone Oak #1 and #2 Proposed Dairy Expansions, Maas Energy Works – Kings County, CA. Associate Environmental Scientist (2019).

Conducted two reconnaissance and two pre-construction surveys for a double lined, covered digester ponds and associated equipment at two existing dairies on approximately 20-acres. Potential special-status plant and wildlife species with the potential to occur in the vicinity include Earlimart orache, heartscale, lesser saltscale, mud nama, recurved larkspur, subtle orache, WEBO, SJKF, SWHA, tricolored blackbird, and nesting birds. No special-status plant or wildlife species observed. Drafted two pre-construction letter reports summarizing survey results.

Caltrans District 6: Cottonwood East/Rehab Project (TO#57/#26) – Bakersfield, Kern County, CA. Assistant/Associate Environmental Scientist (2017 to 2020).

Conducted 11 pre-construction surveys and on-going SJKF den monitoring for the construction phase of the project to begin. A total of approximately 50 known and potential SJKF dens were monitored according to protocol. Maintained a complete record of all sign observed and photographs taken during the den monitoring and night monitoring periods. Conducted on-site monitoring in Environmental Sensitive Areas (ESAs) when construction was activity in these areas. In 2018 and 2019, observed three active SJKF natal dens, remains (i.e. skull, limbs, etc), scat, and tracks. Installed a privacy fence for active SJKF natal den. Observed 2 adult WEBO. Implemented LOC #08ESMF00-2016-I-0219 mitigation measures during the construction phase of the Project. Conducted Worker Environmental Awareness Training for all new crew members during the duration of the Project.

City of Bakersfield On-Call Biological Services – Bakersfield, Kern County, CA. Senior Associate/Associate/Assistant Environmental Scientist (2017 to Current).



Qualified Biologist approved to work on MBHCP (City of Bakersfield and County of Kern) projects for SJKF and SJAS under Incidental Take Permit #2081-2013-058-04. Conducted numerous Worker Environmental Awareness Trainings (WEATs), pre-construction surveys and protocol-level SJKF den monitoring for 50+ potential dens and excluded dens after inactivity:

- **On-Call Biological Services.** *Senior Associate/Associate Environmental Scientist.*
- **Pavement Rehabilitation 2022-2023 SB1.** *Senior Associate Environmental Scientist.*
- **Street Improvements: Hosking Avenue from Stine Road to Leprechaun Way (T2K246).** *Senior Associate Environmental Scientist.*
- **Storm Drain Improvements Stockpile Yard Project.** *Senior Associate Environmental Scientist.*
- **Biological Services for Linnell-Brahma Park (P1C011).** *Senior Associate Environmental Scientist.*
- **Stockdale Ranch Bike Bath.** *Senior Associate Environmental Scientist.*
- **District Sump off Ashe Rd and District Blvd.** *Senior Associate Environmental Scientist.*
- **Sports Village Phase IV.** *Associate Environmental Scientist.*
- **Street Improvements on Panama Lane from Cactus Patch to Esperanza.** *Associate Environmental Scientist.*
- **Street Improvements on Wible Road from Berkshire to Esperanza.** *Associate Environmental Scientist.*
- **Police Magazine Relocation Project.** *Associate Environmental Scientist.*
- **Parking Lot Modification Improvements at 4646 California Avenue Project.** *Associate Environmental Scientist.*
- **Westside Parkway Operational Improvements.** *Associate Environmental Scientist.*
- **Westside Parkway Calloway Ramps Project.** *Associate Environmental Scientist.*
- **Road Operational Improvements Project.** *Associate Environmental Scientist.*
- **Corporate Yard Parking Lot Expansion Project.** *Associate Environmental Scientist.*
- **Kern River Bike Path Rehabilitation Project.** *Associate Environmental Scientist.*
- **TCP Mitigation Project.** *Associate Environmental Scientist.*
- **4th of July Vacant Lot.** *Assistant Environmental Scientist.*
- **Municipal Airport Dust Control.** *Assistant Environmental Scientist.*

Plains All American Pipeline Anomaly Repair Projects (2016-2019)

Conducted pre-activity surveys and biological monitoring for several anomaly repair locations on sensitive environmental lands with a potential for protected, threatened and endangered species. Projects are conducted under a no-take, complete avoidance process except for a few projects that had specific permits. Protected, threatened and endangered with the potential to occur on site included SJKF, BNLL, TKR, SNKR, WEBO, SJAS, AMBA, raptors and nesting birds and Bakersfield cactus. Over the course of time Ms. Denney observed multiple raptors, several SJAS, SJKF tracks, and WEBO. Drafted multiple reports and used ArcMap to produce map figures. A complete list of Projects is listed below.

- **Line 304, Line 314 Derby Acres to Ten Section Anomaly Repair, Kern County, CA.** *Assistant Environmental Scientist. (2016).*
- **Line 2000 Dig 13 on DWR ROW Anomaly Repair, Bakersfield, Kern County, CA.** *Assistant Environmental Scientist. (2016).*
 - Department of Water Resources Encroachment Permit No. 1074-A
- **Line 915 Anomaly Repairs, Lost Hills, Kern County, CA.** *Assistant Environmental Scientist. (2016).*
- **Line 904 Belridge to Pentland Anomaly Repair, Kern County, CA.** *Assistant Environmental Scientist. (2016 to 2017).*
- **Line 903 Sisquoc to Pentland Anomaly Repairs, Cuyama and New Cuyama, CA.** *Assistant Environmental Scientist. (2017).*
 - California Department of Fish and Wildlife Carrizo Plains Ecological Reserve Permission Letter: 8/25/17 to 12/31/17
- **Line 2000 Emidio to Wilmington Anomaly Repairs, Kern County, CA.** *Assistant Environmental Scientist. (2017).*
- **Line 56 Replacement Pipeline near CA Aqueduct, Kern County, CA.** *Assistant Environmental Scientist. (2017)*
 - Biological Opinion Permit #1-8-94-F-27
- **Line 2000 Angeles National Forest Anomaly Repairs, Los Angeles County, CA.** *Assistant Environmental Scientist. (2017).*
- **Line 62 Wind Wolves Preserve Anomaly Repairs, Kern County, CA.** *Associate Environmental Scientist. (2018).*



- Line 307/308 Wind Wolves Preserve Anomaly Repairs, Kern County, CA. *Associate Environmental Scientist*. (2019).
- Line 904 Belridge to Pentland Anomaly Repairs, Bakersfield, Kern County, CA. *Associate Environmental Scientist*. (2019).
- Line 50 DWR Anomaly Repair Project, Bakersfield, Kern County, CA. *Associate Environmental Scientist*. (2019)
 - Department of Water Resources Encroachment Permit No. 1872

WESTERN BURROWING OWL

NLC Energy Project, California Resources Corporation (CRC) – Kern County, CA. *Senior Associate Environmental Scientist*. (2024 - Current).

Conducted a reconnaissance survey on approximately 75-acres of partially disturbed saltbush scrub habitat. Several potential special-status plant and wildlife species including SJKF, SJAS, Crotch's bumblebee, BNLL, WEBO, GKR and SNKR, Tulare grasshopper mouse, AMBA, Kern mallow, California jewelflower, recurved larkspur, San Joaquin woollythreads, and oil neststraw. Ms. Denney observed one WEBO and a potential owl burrow, eight SJAS, and eight potential SJKF dens. Drafted the Biological Analysis Report and supporting graphics.

Caltrans District 6: Blackwell's Corner CAPM Project (TO#40/10), Caltrans – Kern County, CA. *Senior/ Senior Associate Environmental Scientist*. (2024 - Current).

Approved as a Designated Biologist for SJKF, BNLL, and SJAS under Incidental Take Permit #2081-2023-029-04. Approved for BNLL pre-construction surveys, monitoring, and burrow excavating. Approved for Kern mallow pre-construction survey and monitoring. Provided biological monitoring during ground disturbance under ITP #2081-2023-029-04, USFWS Permit #2022-0023965-S7-002, LSA #EPIMS-KER-37203-R4, USACE 404 Permit No. 0710-0003, and Regional Water Quality Control Board 401 WDID Permit #5C15CR00130. Monitoring was conducted in potential habitat for several special-status species including SJAS, SJKF, AMBA, BNLL, WEBO, GKR, SNKR, nesting birds, and Kern mallow. Worker Environmental Awareness Training was provided to new crew members. Observed one known population of Kern mallow within the project site. Observed 30+ SJAS during construction monitoring efforts.

I conducted 7 days of hand burrow excavations. Excavated 51 SJAS burrows and 81 BNLL burrows. Assisted in SJAS trap set up, baiting, checking traps, and processing animals. Handled 1 non-scrotal male SJAS. Assisted Sarah Yates, a USFWS Kern mallow Designated Biologist, in identifying approximately 75 sprouts during 1 hour of surveying for relocation.

Caltrans District 6: Maricopa Highway CAPM Project (TO#37), Caltrans – Kern County, CA. *Senior Associate Environmental Scientist*. (2024 - Current).

Provided biological monitoring during ground disturbance under Streambed Alteration Agreement (SAA) No. EPIMS-KER-35971-R4 and Incidental Take Permit #2081-2022-078-04. Ms. Denney was approved as a Designated Biologist. Monitoring was conducted in potential habitat for several special-status species including SJAS, SJKF, AMBA, BNLL, WEBO, GKR, SNKR, and nesting birds. Ms. Denney observed six SJAS within the Project boundary. Five SJAS were visual observations, and one was identified via a trail camera. Hand excavated a total of 20 small mammal burrows that could potential be used SJAS, BNLL, or SNKR.

RB Inyokern Solar Project, Dimension RE LLC - Inyokern, CA. *Senior Associate Environmental Scientist* (2023 to 2025).

Conducted a pre-construction clearance survey in potential DETO, MGS, desert kit fox, and WEBO habitat. No protocol-level DETO surveys were conducted. Conducted biological monitoring, approximately 260 hours, during the construction of a 32-megawatt photovoltaic solar project on approximately 166.5 acres. Provided WEAT to new construction crew members. Monitoring was conducted under ITP No. 2081-2020-001-04 Condition of Approval (COA) measures. Wrote six Quarterly Compliance Reports, between 2023 and 2024, as required under ITP COA 5.4. Wrote two Annual Reports (2023 and 2024) as required under ITP COA 5.5. Wrote the Final Report (2025) as required under ITP COA 5.7. Monitor observed five WEBO, four desert kit foxes, and three loggerhead shrikes during construction monitoring activities.



Countryside Dairy Digester Project, Maas Energy Works – Kings County, CA. Senior Associate Environmental Scientist (2023).

Conducted pre-construction survey for the Countryside Dairy Digester Project as required by Kings County as part of Site Plan Review NO. 22-16, Standards and Requirement #25. Special-status species with the potential to occur include SJKF, TKR, WEBO, nesting birds, BNLL, NWPT, tricolored blackbird, and western spadefoot. No special-status species or their sign (i.e., tracks, dens, burrows, or nests) were observed during the survey. Drafted the pre-construction survey report and associated figures.

Mohawk Street Project, Bakersfield, CA. Senior Associate Environmental Scientist. (06/2023).

Conducted a reconnaissance survey for a proposed tentative tract map project located in Bakersfield, CA. Surveyed for SJKF, WEBO, AMBA, SWHA, and nesting migratory birds and raptors. Drafted the Biological Analysis Report and used ArcMap to produce maps and figures for the report.

Rosamond Central Solar Project, Clearway Energy Group, LLC. – Kern County, CA. Senior Associate Environmental Scientist (2023).

Conducted biological monitoring during the construction of battery energy storage system (BESS) on the existing Rosamond Central Solar Project. Potential special-status species in the vicinity include desert kit fox, DETO, WEBO, AMBA, SWHA, and nesting birds. No special-status species observed during the 6 months of construction monitoring.

Greenwood Tract Phases 1 & 2 – NEPA – D.R. Horton, America's Builder – Woodlake, Tulare County, CA. Senior Associate Environmental Scientist. (2022-2023).

Conducted a reconnaissance survey for covered species. Maintained a complete record of all species observed and photographs taken during the surveys. Prepared a Biological Assessment (BA), with associated figures produced through ArcMap, to be used in NEPA documents. No WEBO or their sign observed during the survey.

Buena Vista Hills and Mt. Poso Well Sites Project - California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist. (05/2022-Current).

Conducted biological reconnaissance surveys for numerous well site locations in Mt Poso and Buena Vista (BV) Hills existing oil and gas properties. Observed 10 potential SJKF dens, over 25 SJAS, and active nesting birds. Conducted a month long, protocol level, SJKF den monitoring for two potential SJKF dens using trail cameras to determine activity. Observed one SJKF and one AMBA on the trail cameras. Drafted the biological section for eight Initial Study Mitigation Negative Declarations (ISMND). Create associated figures for ISMNDs to represent survey results.

Carbon TerraVault Project, California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist (2022-Current).

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂) capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. The Project would inject the captured CO₂ into these well sites for sequestration into the ground for importunity as part of the goal to reduce CO₂ emissions for the State of California. Several special-status plant species have the potential to occur on site including heartscale, Lost Hills crownscale, California jewelflower, recurved larkspur, Kern mallow, Temblor buckwheat, Tejon poppy, showy golden madia, San Joaquin woollythreads, and oil neststraw. In addition, several special-status wildlife species have the potential to occur on site including Crotch's bumblebee, California glossy snake, BNLL, San Joaquin coachwhip, temblor legless lizard, coast horned lizard, WEBO, SWHA, prairie falcon, loggerhead shrike, LeConte's thrasher, SJAS, GKR, SNKR, Tulare grasshopper mouse, San Joaquin pocket mouse, AMBA, and SJKF. No special-status plant species were observed during the reconnaissance surveys. During the reconnaissance surveys Ms. Denney observed one adult BNLL, two potential WEBO burrows, one loggerhead shrike, two LeConte's thrashers, ten potential SJKF dens, 30 SJAS, potential GKR burrows with the appropriate size characteristics, potential kangaroo rat burrows with appropriate size characteristics for SNKR, and five stick nests that could be utilized by nesting birds. Assisted with the drafting of the Biological Analysis Report and associated figures.



After CRC received their approved EIR, Ms. Denney worked on several Biological Resources Mitigation Measures (MM) from the adopted Mitigation Measure and Report Program (MMRP). Ms. Denney conducted a reconnaissance survey to identify potential special-status plant and wildlife species or their suitable habitat and determined where focused/protocol surveys may be required. Ms. Denney conducted two botanical surveys, but no special-status plant species were identified. Wrote a Fence Plan, per MM 4.4-12, that requires a wildlife fence to be installed 500-feet from each injection well. Conducted numerous Biological Pre-Activity Surveys for the project prior to construction beginning. Conducted ten days of protocol SJKF den monitoring for ten potential dens. No SJKF was identified. Observed one AMBA on a trail camera during SJKF den monitoring efforts. Observed 40 SJAS and their active burrows over the course of numerous surveys. Ms. Denney has approximately 300 hours monitoring construction activities.

Tract 7337 (MBHCP), K. Hovnanian Companies of California, Inc. – Bakersfield, Kern County, CA. *Senior Associate Environmental Scientist. (2021 – 2022)*

Conducted a reconnaissance survey and pre-construction clearance for covered species prior to land purchase and construction phases. Maintained a complete record of all species observed and photographs taken during the surveys. Prepared two pre-construction clearance reports, provided WEAT for construction staff, and used ArcMap to produce map figures.

Organic Waste – Renewable Energy Facility, True North Renewable Energy, LLC. – Mojave, Kern County, CA. *Senior Associate/Associate Environmental Scientist (2021-2023).*

Conducted a fatal flaw analysis survey for the proposed 117-acre project. Potential threatened and/or endangered species that have the potential to occur included MGS, DETO, desert kit fox, WEBO, and SWHA. No protocol level surveys were conducted. Observed several potential desert kit fox dens.

Caltrans District 6: Reward CAPM (TO#60/TO#10) – Kern County. *Senior Associate /Associate Environmental Scientist. (2021-2022).*

Approved for the following activities under Incidental Take Permit No. 2081-2020-044-04 and Streambed Alteration Agreement No. 1600-EPIMS-KER-128650-R4 for SJAS trapping, relocation, burrow excavation under a Designated Biologist, pre-activity surveys, migratory nesting bird surveys lead, botanical surveys, SJKF den/burrow monitoring under a Designated Biologist, and construction monitoring. Conducted protocol BNLL surveys, monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on State Route 58 between Post Mile (PM) 6.0 and 15.4 near McKittrick, California. Potential species to occur on site include SJKF, BNLL, WEBO, SJAS, AMBA, Kern mallow, Lemmon's jewelflower, and recurved larkspur. Observed 15 inactive and active stick nests occupied by American crows or ravens, 30 potential SJKF dens, and three active AMBA dens. Observed 15 SJAS and one loggerhead shrike within the Project boundary. No direct observation of a BNLL, SJKF, WEBO, AMBA, or special-status plant species. Drafted weekly summaries, pre-construction survey reports, and provided associated GIS figures for reports.

Kern River Canal Backup Weir Reconstruction Project, City of Bakersfield Water Resources Department – Kern County, CA. *Senior Associate/ Associate Environmental Scientist (2021-Current).*

Conducted biological reconnaissance surveys over the course of several years for the replacement of the Kern River Backup Weir. Project activities included demolition and removal of an existing concrete weir, retaining wall, riprap, and sheet piling, and construction of a new weir system and recontouring of the Kern River channel bed. Ms. Denney assisted with data analysis, drafting of the Biological Assessment and associated map figures. The Project site has the potential for several special-status plant and wildlife species including California jewelflower, recurved larkspur, San Joaquin woollythreads, Bakersfield legless lizard, California glossy snake, western spadefoot, WEBO, Crotch's bumble bee, AMBA, SJKF, nesting birds and raptors, and roosting bats. Ms. Denney conducted two bat flyout surveys prior to the construction activities beginning. No bat activity was observed. Ms. Denney conducted a Bakersfield legless lizard survey, but no legless lizards were observed. Observed active nesting cliff swallows under the Coffee Road Bridge located south of the Project site. Conducted SJKF den monitoring (i.e., tracking medium) on a potential den. No SJKF sign (i.e., tracks, scat, prey remains) were observed during the den monitoring.



BigBeau Solar Project, EDF Renewables – Kern County, CA. Senior/Senior Associate/Associate Environmental Scientist (2020 to 2025).

Approved as a Designated Monitor for DETO, WEBO, SWHA, and nesting birds. Conducted den monitoring on 51 potential desert kit fox dens. Collapsed 35 of the 51 potential desert kit fox dens. Conducted Joshua tree (*Yucca brevifolia*) census surveys and drafted Joshua Tree Census 2084 Report. Assisted with eight DETO preconstruction clearance surveys under the guidance of an authorized DETO biologist Jeff Erway. Monitor for DETO, SWHA, desert kit fox, WEBO, golden eagle, and nesting birds and raptors or any of their sign (i.e. dens, burrows, scat, tracks, or nests) during the Joshua tree removal and construction phases. Observed 3 desert kit fox, 2 WEBO, and one active SWHA, mourning dove and red-tailed hawk nests. Conducting two years of annual revegetation surveys and drafted annual reports. Drafted 28 monthly monitoring reports during the construction phase as part of the EIR Mitigation Measure 4.4-4. Provided Worker Environmental Awareness Training to new crew members as part of the EIR Mitigation Measure 4.4-2. Monitored Arizona crossing construction installation following the Lake and Streambed Alteration Agreement Notification No. 600-2020-0086-R4. Conducted three years of revegetation monitoring, data analysis, and reporting for the road crossings and temporary staging yards. Wrote three annual reports on the revegetation monitoring efforts.

Sandrini Solar Park Project, EDP Renewables North America, LLC. – Kern County, CA. Associate Environmental Scientist (2020 to 2022).

Assisted with reconnaissance surveys for proposed 300-MW solar project, approximately 4,151.5-acres, in Kern County. Conducted multiple reconnaissance level surveys for BNLL, TKR, SJKF, SWHA, tricolored blackbird, least Bell's vireo, AMBA, Tulare grasshopper mouse, SJAS, WEBO, SNKR, loggerhead shrike, LeConte's thrasher, northern harrier, white-tailed kite, California glossy snake, San Joaquin coachwhip, western pond turtle, and nesting birds. Potential special-status plants include Horn's milk vetch, Bakersfield smallscale, Lost Hills crowscale, heartscale, alkali mariposa lily, hispid salty bird's beak, recurved larkspur, Kern mallow, and Comanche Point layia. Observed four SWHA and four loggerhead shrikes on the Project site. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures.

Rosamond South Solar Project, Clearway Energy Group, LLC. – Kern County, CA. Associate Environmental Scientist (2019 to Current).

Assisted with preparing and submitting three Conditional Use Permits and associated forms for proposed 100-MW solar project, approximately 1,292-acres, to the Kern County Planning Department for review. Conducted multiple reconnaissance level surveys, nesting bird surveys, Joshua tree census (*Yucca brevifolia*) and three seasons of rare-plant surveys. Observed three desert kit fox, one deceased desert kit fox pup, two adult SWHA, one adult WEBO, and a population of alkali mariposa lily (*Calochortus striatus*). Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures. Assisted with drafting an initial Joshua Tree Incidental Take Permit (ITP) application package, and associated figures and calculations submitted to CDFW for approval. Following the initial ITP, Ms. Denney assisted with four amendments to the permit including additional census data collection, figures, and calculations submitted to CDFW for approval.

Solari Sand and Gravel Mine, Granite Construction Company – Kern County, CA. Senior/Senior Associate/Associate Environmental Scientist (2019, 2023-Current).

Conducted BNLL protocol level surveys on approximately 270-acres and construction monitoring for an approximate 2-acre parcel of land. Assisted with the exclusion of a WEBO and SJKF located within the Project area. Observed one adult WEBO and three active burrows within the vicinity of the Project site. Conducted den monitoring for five potential SJKF dens. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Conducting a three-year study for a required revegetation plot to determine the best methodology for reseeding at the termination of the quarry's lifespan. Conducted the data collection, analysis, and wrote the annual reports (Year 1 and 2).

Five Points Dairy Digester Cluster Project, Maas Energy Works – Fresno County, CA. Associate Environmental Scientist. (2019).



Conducted a reconnaissance level survey for the proposed development, construction, and operation of a series of biogas collection facilities (digesters) at five existing dairies, and one upgrading facility on the existing Open Sky Dairy, and gathering pipelines. Special-status wildlife species with the potential to occur in the vicinity include tricolored blackbird, WEBO, SWHA, loggerhead shrike, AMBA, and SJKF. Observed one loggerhead shrike and one SWHA during the reconnaissance survey. Observed minimal suitable habitat for tricolored blackbird but no direct observation. No other special-status species observed. Drafted the Biological Analysis Report and associated figures.

Caltrans District 6: Cottonwood East/Rehab Project (TO#57/#26) – Bakersfield, Kern County, CA. *Assistant/Associate Environmental Scientist (2017 to 2020).*

Conducted 11 pre-construction surveys and on-going SJKF den monitoring for the construction phase of the project to begin. A total of approximately 50 known and potential SJKF dens were monitored according to protocol. Maintained a complete record of all sign observed and photographs taken during the den monitoring and night monitoring periods. Conducted on-site monitoring in Environmental Sensitive Areas (ESAs) when construction was activity in these areas. In 2018 and 2019, observed three active SJKF natal dens, remains (i.e. skull, limbs, etc), scat, and tracks. Installed a privacy fence for active SJKF natal den. Observed 2 adult WEBO. Implemented LOC #08ESMF00-2016-I-0219 mitigation measures during the construction phase of the Project. Conducted Worker Environmental Awareness Training for all new crew members during the duration of the Project.

Arvin Aspire T5816, K. Hovnanian Company – Arvin, Kern County, CA. *Assistant Environmental Scientist (2016 to 2017).*

Conducted a pre-construction clearance survey for SJKF and WEBO. Conducted protocol level monitoring and assisted with excavating of two potential dens after no activity was observed.

Greenhouse Biological Support and Consulting Services – California City, Kern County, CA. *Associate Environmental Scientist (2019).*

Conducted reconnaissance surveys for a total of nine proposed Project sites. Project sites are located on potential MGS, DETO, desert kit fox, WEBO, and has the potential for rare plants. Drafted and reviewed the Biological Analysis Report and used ArcMap to produce map figures that would be used for supporting. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Solari Sand and Gravel Mine, Granite Construction Company – Kern County, CA. *Senior/Senior Associate/Associate Environmental Scientist (2019, 2023-Current).*

Conducted BNLL protocol level surveys on approximately 270-acres and construction monitoring for an approximate 2-acre parcel of land. Assisted with the exclusion of a WEBO and SJKF located within the Project area. Observed one adult WEBO and three active burrows within the vicinity of the Project site. Conducted den monitoring for five potential SJKF dens. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Conducting a three-year study for a required revegetation plot to determine the best methodology for reseeding at the termination of the quarry's lifespan. Conducted the data collection, analysis, and wrote the annual reports (Year 1 and 2).

Kern-Tulare Water District Pipeline, Kern-Tulare Water District – Kern County, CA. *Assistant/Associate Environmental Scientist (2017 to 2019).*

Conducted a reconnaissance survey and pre-construction survey of an approximate 12-mile proposed oil field water reuse pipeline located in suitable BNLL, SJKF, WEBO, and SWHA habitat. Conducted protocol level BNLL surveys and maintained a complete record of all species observed, photographs taken, biological resources GPS points, and data sheets for the surveys. Drafted and finalized a letter report(s) and used ArcMap to produce map figures. Drafted the Biological Analysis Report for the permitting of the Project

Paso Robles Solar Project, Lend Lease Energy Development, LLC. – Paso Robles, CA. *Assistant/Associate Environmental Scientist. (2016 to 2018).*



Conducted a reconnaissance level survey in potential SJKF, TKR, SWHA, and WEBO habitat. Conducted protocol level SWHA surveys. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed approximately 12 SWHA during the protocol level surveys. Drafted the Biological Analysis Report.

Plains All American Pipeline Anomaly Repair Projects (2016-2019)

Conducted pre-activity surveys and biological monitoring for several anomaly repair locations on sensitive environmental lands with a potential for protected, threatened and endangered species. Projects are conducted under a no-take, complete avoidance process except for a few projects that had specific permits. Protected, threatened and endangered with the potential to occur on site included SJKF, BNLL, TKR, SNKR, WEBO, SJAS, AMBA, raptors and nesting birds and Bakersfield cactus. Over the course of time Ms. Denney observed multiple raptors, several SJAS, SJKF tracks, and WEBO. Drafted multiple reports and used ArcMap to produce map figures. A complete list of Projects is listed below.

- **Line 304, Line 314 Derby Acres to Ten Section Anomaly Repair, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
- **Line 2000 Dig 13 on DWR ROW Anomaly Repair, Bakersfield, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
 - Department of Water Resources Encroachment Permit No. 1074-A
- **Line 915 Anomaly Repairs, Lost Hills, Kern County, CA.** *Assistant Environmental Scientist.* (2016).
- **Line 904 Belridge to Pentland Anomaly Repair, Kern County, CA.** *Assistant Environmental Scientist.* (2016 to 2017).
- **Line 903 Sisquoc to Pentland Anomaly Repairs, Cuyama and New Cuyama, CA.** *Assistant Environmental Scientist.* (2017).
 - California Department of Fish and Wildlife Carrizo Plains Ecological Reserve Permission Letter: 8/25/17 to 12/31/17
- **Line 2000 Emidio to Wilmington Anomaly Repairs, Kern County, CA.** *Assistant Environmental Scientist.* (2017).
- **Line 56 Replacement Pipeline near CA Aqueduct, Kern County, CA.** *Assistant Environmental Scientist.* (2017)
 - Biological Opinion Permit #1-8-94-F-27
- **Line 2000 Angeles National Forest Anomaly Repairs, Los Angeles County, CA.** *Assistant Environmental Scientist.* (2017).
- **Line 62 Wind Wolves Preserve Anomaly Repairs, Kern County, CA.** *Associate Environmental Scientist.* (2018).
- **Line 307/308 Wind Wolves Preserve Anomaly Repairs, Kern County, CA.** *Associate Environmental Scientist.* (2019).
- **Line 904 Belridge to Pentland Anomaly Repairs, Bakersfield, Kern County, CA.** *Associate Environmental Scientist.* (2019).
- **Line 50 DWR Anomaly Repair Project, Bakersfield, Kern County, CA.** *Associate Environmental Scientist.* (2019)
 - Department of Water Resources Encroachment Permit No. 1872

DESERT TORTOISE

RB Inyokern Solar Project, Dimension RE LLC - Inyokern, CA. *Senior Associate Environmental Scientist* (2023 to 2025).

Conducted a pre-construction clearance survey in potential DETO, MGS, desert kit fox, and WEBO habitat. No protocol-level DETO surveys were conducted. Conducted biological monitoring, approximately 260 hours, during the construction of a 32-megawatt photovoltaic solar project on approximately 166.5 acres. Provided WEAT to new construction crew members. Monitoring was conducted under ITP No. 2081-2020-001-04 Condition of Approval (COA) measures. Wrote six Quarterly Compliance Reports, between 2023 and 2024, as required under ITP COA 5.4. Wrote two Annual Reports (2023 and 2024) as required under ITP COA 5.5. Wrote the Final Report (2025) as required under ITP COA 5.7. Monitor observed five WEBO, four desert kit foxes, and three loggerhead shrikes during construction monitoring activities.

Rosamond Central Solar Project, Clearway Energy Group, LLC. – Kern County, CA. *Senior Associate Environmental Scientist* (2023).



Conducted biological monitoring during the construction of battery energy storage system (BESS) on the existing Rosamond Central Solar Project. Potential special-status species in the vicinity include desert kit fox, DETO, WEBO, AMBA, SWHA, and nesting birds. No special-status species observed during the 6 months of construction monitoring.

Desert Tortoise Training with Dr. Paul Delaney, Copper Mountain College, San Bernardino County, CA. *Senior Associate Environmental Scientist (April 30, 2022).*

Attended training on the desert tortoise (*Gopherus agassizii*) taught by Dr. Paul Delaney, from Copper Mountain College, and Jeff Erway, both authorized DETO biologists. Observed one hatchling and one adult DETO. The hatchling was observed basking and the adult was observed inside the burrow. Identified 10+ potential DETO burrows, 10+ scat pieces both fresh and old, and tracks. Two and half hours were spent attending DETO training in the field.

Olancha Cartago 4-lane Project - Caltrans, Inyo County, CA. *Senior Associate/Associate Environmental Scientist (2022).*

Conducted six days of construction monitoring during initial ground disturbance and Joshua tree/cacti relocation. Observed one DETO in a burrow. Provided WEAT to new construction crew members. Monitoring was conducted under ITP No. 2081-2018-055-06, Biological Opinion (BO) FWS-INY-13B0156-14F0013, LSAA No. 1600-2020-0008-R6, and BLM Letter of Concurrence measures. One previously identified DETO observed within the Project limits.

Olancha Cartago 4-lane Project Desert Tortoise Training, Caltrans, Inyo County, CA. *Associate Environmental Scientist (September 18, 2021).*

Attended training on the DETO taught by Curtis Uptain. Observed one hatchling and one adult DETO. The hatchling was seen in the burrow opening and the adult tortoise was seen both inside the burrow and basking outside of the burrow. Identified one active hatchling burrow, three active adult burrows, two inactive adult burrows, and DETO scat and tracks. Six hours were spent attending DETO training in the field.

Keyhole Wind Project, EDF Renewables – Kern County, CA. *Senior Associate/ Associate Environmental Scientist (2021 to 2023).*

Conducted reconnaissance level survey, protocol DETO, and botanical surveys for approximately 4,182-acres. Maintained all data collected on the site and used ArcMap to produce maps for data collecting in the field and figures for identified biological resources. Observed numerous potential DKF dens, three potential DT burrows, thousands of Joshua trees, and numerous nesting birds. Assisted with writing the Biological Analysis Report and created the figures that would be used in the Environmental Impact Report.

Organic Waste – Renewable Energy Facility, True North Renewable Energy, LLC. – Mojave, Kern County, CA. *Associate Environmental Scientist (2021-2023).*

Conducted a fatal flaw analysis survey for the proposed 117-acre project. Potential threatened and/or endangered species that have the potential to occur included MGS, DETO, desert kit fox, WEBO, and SWHA. No protocol level surveys were conducted. Observed several potential desert kit fox dens.

BigBeau Solar Project, EDF Renewables – Kern County, CA. *Senior/Senior Associate/Associate Environmental Scientist (2020 to 2025).*

Approved as a Designated Monitor for DETO, WEBO, SWHA, and nesting birds. Conducted den monitoring on 51 potential desert kit fox dens. Collapsed 35 of the 51 potential desert kit fox dens. Conducted Joshua tree (*Yucca brevifolia*) census surveys and drafted Joshua Tree Census 2084 Report. Assisted with eight DETO preconstruction clearance surveys under the guidance of an authorized DETO biologist Jeff Erway. Monitor for DETO, SWHA, desert kit fox, WEBO, golden eagle, and nesting birds and raptors or any of their sign (i.e. dens, burrows, scat, tracks, or nests) during the Joshua tree removal and construction phases. Observed 3 desert kit fox, 2 WEBO, and one active SWHA, mourning dove and red-tailed hawk nests. Conducting two years of annual revegetation surveys and drafted annual reports. Drafted 28 monthly monitoring reports during the construction phase as part of the EIR Mitigation Measure 4.4-4. Provided Worker Environmental Awareness Training to new crew members as part of the EIR Mitigation Measure 4.4-2. Monitored Arizona crossing construction installation following the Lake and Streambed Alteration Agreement Notification No. 600-2020-



0086-R4. Conducted three years of revegetation monitoring, data analysis, and reporting for the road crossings and temporary staging yards. Wrote three annual reports on the revegetation monitoring efforts.

Greenhouse Biological Support and Consulting Services – California City, Kern County, CA. Associate Environmental Scientist (2019).

Conducted reconnaissance surveys for a total of nine proposed Project sites. Project sites are located on potential MGS, DETO, desert kit fox, WEBO, and has the potential for rare plants. Drafted and reviewed the Biological Analysis Report and used ArcMap to produce map figures that would be used for supporting. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Environmental Compliance – CMQA, RSTP & HSIP Highway and Roads Improvement Projects, City of Ridgecrest – Kern County, CA. Assistant Environmental Scientist (2018).

Conducted a pre-construction clearance survey in potential DETO habitat. No protocol-level DETO surveys were conducted. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Borax Solar Project, Lend Lease Energy Development, LLC. – Boron, Kern County, CA. Assistant Environmental Scientist (2017).

Conducted a reconnaissance level survey in potential DETO, desert kit fox, and Mojave ground squirrel habitat. Maintained a complete record of all species observed and photographs taken of the Project site. No protocol-level DETO surveys were conducted. Drafted a memo report for the client on the results of the reconnaissance survey.

AV Apollo Solar Project, Lend Lease Energy Development, LLC. – Rosamond, Kern County, CA. Assistant/Associate Environmental Scientist (2016 - 2018).

Conducted a reconnaissance and rare-plant protocol level surveys on approximately 493- acres in potential DETO, desert kit fox, and Mojave ground squirrel habitat. Conducted protocol level SWHA surveys and floristic surveys for several special-status plant species. Maintained a complete record of all species observed and photographs taken of the Project site. Shadowed two expert DETO biologists during protocol level DETO surveys. Observed a small population of Lemmon's jewelflower (*Caulanthus lemmonii*). Drafted the Biological Analysis Report for the permitting of the Project.

DESERT KIT FOX

RB Inyokern Solar Project, Dimension RE LLC - Inyokern, CA. Senior Associate Environmental Scientist (2023 to 2025).

Conducted a pre-construction clearance survey in potential DETO, MGS, desert kit fox, and WEBO habitat. No protocol-level DETO surveys were conducted. Conducted biological monitoring, approximately 260 hours, during the construction of a 32-megawatt photovoltaic solar project on approximately 166.5 acres. Provided WEAT to new construction crew members. Monitoring was conducted under ITP No. 2081-2020-001-04 Condition of Approval (COA) measures. Wrote six Quarterly Compliance Reports, between 2023 and 2024, as required under ITP COA 5.4. Wrote two Annual Reports (2023 and 2024) as required under ITP COA 5.5. Wrote the Final Report (2025) as required under ITP COA 5.7. Monitor observed five WEBO, four desert kit foxes, and three loggerhead shrikes during construction monitoring activities.

Rosamond Central Solar Project, Clearway Energy Group, LLC. – Kern County, CA. Senior Associate Environmental Scientist (2023).

Conducted biological monitoring during the construction of battery energy storage system (BESS) on the existing Rosamond Central Solar Project. Potential special-status species in the vicinity include desert kit fox, DETO, WEBO, AMBA, SWHA, and nesting birds. No special-status species observed during the 6 months of construction monitoring.

Keyhole Wind Project, EDF Renewables – Kern County, CA. Senior Associate/ Associate Environmental Scientist (2021 to 2023).

Conducted reconnaissance level survey, protocol DETO, and botanical surveys for approximately 4,182-acres. Maintained all data collected on the site and used ArcMap to produce maps for data collecting in the field and figures for identified biological resources. Observed numerous potential DKF dens, three potential DT burrows,



thousands of Joshua trees, and numerous nesting birds. Assisted with writing the Biological Analysis Report and created the figures that would be used in the Environmental Impact Report.

Organic Waste – Renewable Energy Facility, True North Renewable Energy, LLC. – Mojave, Kern County, CA. Senior Associate/Associate Environmental Scientist (2021-2023).

Conducted a fatal flaw analysis survey for the proposed 117-acre project. Potential threatened and/or endangered species that have the potential to occur included MGS, DETO, desert kit fox, WEBO, and SWHA. No protocol level surveys were conducted. Observed several potential desert kit fox dens.

BigBeau Solar Project, EDF Renewables – Kern County, CA. Senior/Senior Associate/Associate Environmental Scientist (2020 to 2025).

Approved as a Designated Monitor for DETO, WEBO, SWHA, and nesting birds. Conducted den monitoring on 51 potential desert kit fox dens. Collapsed 35 of the 51 potential desert kit fox dens. Conducted Joshua tree (*Yucca brevifolia*) census surveys and drafted Joshua Tree Census 2084 Report. Assisted with eight DETO preconstruction clearance surveys under the guidance of an authorized DETO biologist Jeff Erway. Monitor for DETO, SWHA, desert kit fox, WEBO, golden eagle, and nesting birds and raptors or any of their sign (i.e. dens, burrows, scat, tracks, or nests) during the Joshua tree removal and construction phases. Observed 3 desert kit fox, 2 WEBO, and one active SWHA, mourning dove and red-tailed hawk nests. Conducting two years of annual revegetation surveys and drafted annual reports. Drafted 28 monthly monitoring reports during the construction phase as part of the EIR Mitigation Measure 4.4-4. Provided Worker Environmental Awareness Training to new crew members as part of the EIR Mitigation Measure 4.4-2. Monitored Arizona crossing construction installation following the Lake and Streambed Alteration Agreement Notification No. 600-2020-0086-R4. Conducted three years of revegetation monitoring, data analysis, and reporting for the road crossings and temporary staging yards. Wrote three annual reports on the revegetation monitoring efforts.

Rosamond South Solar Project, Clearway Energy Group, LLC. – Kern County, CA. Associate Environmental Scientist (2019 to Current).

Assisted with preparing and submitting three Conditional Use Permits and associated forms for proposed 100-MW solar project, approximately 1,292-acres, to the Kern County Planning Department for review. Conducted multiple reconnaissance level surveys, nesting bird surveys, Joshua tree census (*Yucca brevifolia*) and three seasons of rare-plant surveys. Observed three desert kit fox, one deceased desert kit fox pup, two adult SWHA, one adult WEBO, and a population of alkali mariposa lily (*Calochortus striatus*). Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures. Assisted with drafting an initial Joshua Tree Incidental Take Permit (ITP) application package, and associated figures and calculations submitted to CDFW for approval. Following the initial ITP, Ms. Denney assisted with four amendments to the permit including additional census data collection, figures, and calculations submitted to CDFW for approval.

Greenhouse Biological Support and Consulting Services – California City, Kern County, CA. Associate Environmental Scientist (2019).

Conducted reconnaissance surveys for a total of nine proposed Project sites. Project sites are located on potential MGS, DETO, desert kit fox, WEBO, and has the potential for rare plants. Drafted and reviewed the Biological Analysis Report and used ArcMap to produce map figures that would be used for supporting. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Gettysburg Solar Project, Lend Lease Energy Development, LLC. – Rosemond, Kern County, CA. Associate Environmental Scientist (2018-2021, 2022).

In 2018 and 2020, conducted protocol level SWHA surveys, and floristics surveys on approximately 160-acres. In 2020, conducted a reconnaissance survey for special-status species known to occur in the vicinity. Observed one deceased desert kit fox pup. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report.

Borax Solar Project, Lend Lease Energy Development, LLC. – Boron, Kern County, CA. Assistant Environmental Scientist (2017).



Conducted a reconnaissance level survey in potential DETO, desert kit fox, and Mojave ground squirrel habitat. Maintained a complete record of all species observed and photographs taken of the Project site. No protocol-level DETO surveys were conducted. Drafted a memo report for the client on the results of the reconnaissance survey.

Beacon Solar, S*Power Solar Projects - Mojave, Kern County, CA. *Assistant/Associate Environmental Scientist* (2016 to 2019).

Assisted with conducting desert kit fox exclusion and three years of revegetation surveys to determine plant composition and density. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

AV Apollo Solar Project, Lend Lease Energy Development, LLC. – Rosamond, Kern County, CA. *Assistant/Associate Environmental Scientist* (2016 to 2018).

Conducted a reconnaissance and rare-plant protocol level surveys on approximately 493- acres in potential DETO, desert kit fox, and Mojave ground squirrel habitat. Conducted protocol level SWHA surveys and floristic surveys for several special-status plant species. Maintained a complete record of all species observed and photographs taken of the Project site. Shadowed two expert DETO biologists during protocol level DETO surveys. Observed a small population of Lemmon's jewelflower (*Caulanthus lemmonii*). Drafted the Biological Analysis Report for the permitting of the Project.

MOHAVE GROUND SQUIRREL

RB Inyokern Solar Project, Dimension RE LLC - Inyokern, CA. *Senior Associate Environmental Scientist* (2023 to 2025).

Conducted a pre-construction clearance survey in potential DETO, MGS, desert kit fox, and WEBO habitat. No protocol-level DETO surveys were conducted. Conducted biological monitoring, approximately 260 hours, during the construction of a 32-megawatt photovoltaic solar project on approximately 166.5 acres. Provided WEAT to new construction crew members. Monitoring was conducted under ITP No. 2081-2020-001-04 Condition of Approval (COA) measures. Wrote six Quarterly Compliance Reports, between 2023 and 2024, as required under ITP COA 5.4. Wrote two Annual Reports (2023 and 2024) as required under ITP COA 5.5. Wrote the Final Report (2025) as required under ITP COA 5.7. Monitor observed five WEBO, four desert kit foxes, and three loggerhead shrikes during construction monitoring activities.

Organic Waste – Renewable Energy Facility, True North Renewable Energy, LLC. – Mojave, Kern County, CA. *Senior Associate/Associate Environmental Scientist* (2021-2023).

Conducted a fatal flaw analysis survey for the proposed 117-acre project. Potential threatened and/or endangered species that have the potential to occur included MGS, DETO, desert kit fox, WEBO, and SWHA. No protocol level surveys were conducted. Observed several potential desert kit fox dens.

Greenhouse Biological Support and Consulting Services – California City, Kern County, CA. *Associate Environmental Scientist* (2019).

Conducted reconnaissance surveys for a total of nine proposed Project sites. Project sites are located on potential MGS, DETO, desert kit fox, WEBO, and has the potential for rare plants. Drafted and reviewed the Biological Analysis Report and used ArcMap to produce map figures that would be used for supporting. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Borax Solar Project, Lend Lease Energy Development, LLC. – Boron, Kern County, CA. *Assistant Environmental Scientist* (2017).

Conducted a reconnaissance level survey in potential DETO, desert kit fox, and Mojave ground squirrel habitat. Maintained a complete record of all species observed and photographs taken of the Project site. No protocol-level DETO surveys were conducted. Drafted a memo report for the client on the results of the reconnaissance survey.

TEHACHAPI SLENDER SALAMANDER

Caltrans District 6: Grapevine Channel Repair Project (TO#80/TO#22) – Kern County, CA. *Associate Environmental Scientist* (2018 to 2019).



Tehachapi Slender Salamander (TSS) survey. Conducted surveys on three of the five Project site locations that had suitable habitat for TSS. Each site and 50-foot buffer were examined in random multiple locations within potential suitable habitat for TSS. Areas that had a higher potential were examined in a more intense fashion compared to those with less suitable habitat. Conducted protocol-level BNLL surveys in areas of potential suitable habitat for the species. Drafted the BNLL survey report.

HABITAT RESTORATION AND MONITORING

Basin Bank Remediation, Smee Homes, Inc – Porterville, Tulare County, CA. *Senior Associate Environmental Scientist (2022-Current)*

Drafted the Remediation Plan that was prepared as outlined in the Summit Estate Notice of Violation (NOV) package, which was approved under Operation of Law (Op Law) by CDFW. Projects within the Remediation Plan included bank stabilization, ordinary high water mark delineation, vegetation/trash removal, and planting and monitoring of riparian trees.

Solari Sand and Gravel Mine, Granite Construction Company – Kern County, CA. *Senior/Senior Associate/Associate Environmental Scientist (2019, 2023-Current).*

Conducted BNLL protocol level surveys on approximately 270-acres and construction monitoring for an approximate 2-acre parcel of land. Assisted with the exclusion of a WEBO and SJKF located within the Project area. Observed one adult WEBO and three active burrows within the vicinity of the Project site. Conducted den monitoring for five potential SJKF dens. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Conducting a three-year study for a required revegetation plot to determine the best methodology for reseeding at the termination of the quarry's lifespan. Conducted the data collection, analysis, and wrote the annual reports (Year 1 and 2).

Redwood Cluster Solar Project, S*Power Solar Projects – Bakersfield, Kern County, CA. *Associate Environmental Scientist (2018).*

Assisted with conducting revegetation surveys to determine plant composition and density. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

Beacon Solar, S*Power Solar Projects - Mojave, Kern County, CA. *Assistant/Associate Environmental Scientist (2016 to 2019).*

Assisted with conducting desert kit fox exclusion and three years of revegetation surveys to determine plant composition and density. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

AQUATIC RESOURCES DELINEATION REPORT (ARDR) GEOGRAPHIC INFORMATION SYSTEM (GIS)

McBean Park Drive Bridge Replacement Project – Quincy Engineering, Inc. – Placer County, CA. *Senior Associate Environmental Scientist (2022-Current).*

Created ARDR figures to represent the Project site and Impact area, aquatic resources study area (ARSA), ordinary high-water mark transect lines, and the bank. Figures were used in the Aquatic Resources Delineation Report submitted to the Army Corp of Engineers.

Environmental Assessment Phase 2 Project- Merced Biogas Pipeline, LLC – Merced County, CA. *Senior Associate Environmental Scientist (2022-Current)*

Created ARDR figures to represent the Project site and Impact area, aquatic resources study area (ARSA), ordinary high-water mark transect lines, and the bank. Figures were used in the Aquatic Resources Delineation Report submitted to the Army Corp of Engineers.

Camp Okihi Water Project – County of Kern – Kern County, CA. *Senior Associate Environmental Scientist (2022)*

Created ARDR figures to represent the Project site and Impact area, aquatic resources study area (ARSA),



ordinary high-water mark transect lines, and the bank. Figures were used in the Aquatic Resources Delineation Report submitted to the Army Corp of Engineers and County of Kern.

Backup Weir Project, City of Bakersfield Water Resources Department -Kern County, CA. Senior Associate/ Associate Environmental Scientist (2021-Current)

Created ARDR figures to represent the Project site and Impact area, aquatic resources study area (ARSA), ordinary high-water mark transect lines, and the bank. Figures were used in the Aquatic Resources Delineation Report submitted to the City of Bakersfield Water Resources Department and the Army Corp of Engineers.

Caltrans District 6: Maricopa Highway CAPM Project (TO#55) Kern County, CA. Associate Environmental Scientist (2021).

Created ARDR figures to represent the Project site and Impact area, aquatic resources study area (ARSA), culvert inlet/outlets, ordinary high-water mark transect lines, and the bank. Figures were used in the Aquatic Resources Delineation Report submitted to Caltrans.

Caltrans District 6: Blackwell's Corner CAPM (TO#1) – Kern County, CA. Associate Environmental Scientist (2020-2021).

Small mammal trapping (XL Sherman Traps) for 5 nights for GKR. No GKR captured during the small mammal trapping effort. Handled 1 Southern Grasshopper mouse, 7 SNKR, 19 California pocket mice, and 35 Heermann's kangaroo rats under the guidance of authorized biologists Curtis Uptain and Martina Pernicano. Created ARDR figures to represent the Project site and Impact area, aquatic resources study area (ARSA), culvert inlet/outlets, ordinary high-water mark transect lines, and the bank. Figures were used in the Aquatic Resources Delineation Report submitted to Caltrans.

TREE ANEMONE

Tree Anemone Reference Site, January 6, 2026, State Route 168 near Tollhouse, CA. Senior Environmental Scientist (2026).

Identified two specimens of tree anemone (*Carpenteria californica*) at a known reference location (37.0477150, -119.4315400) along SR 168 under guidance and direct supervision of Environmental scientists Curtis Uptain and Chaim Rabbass. One hour was spent identifying key characteristics of the plant during the non-blooming period and surveying for other individuals within 200 meters of the reference site. The bark, leaves, desiccated blooms from previous years, and an early bloom were examined. Similar looking plants with potential to be mistook for the species were also compared. Ten plus tree anemone individuals were identified during this effort.

TRICOLORED BLACKBIRD

Countryside Dairy Digester Project, Maas Energy Works – Kings County, CA. Senior Associate Environmental Scientist (2023).

Conducted pre-construction survey for the Countryside Dairy Digester Project as required by Kings County as part of Site Plan Review NO. 22-16, Standards and Requirement #25. Special-status species with the potential to occur include SJKF, TKR, WEBO, nesting birds, BNLL, NWPT, tricolored blackbird, and western spadefoot. No special-status species or their sign (i.e., tracks, dens, burrows, or nests) were observed during the survey. Drafted the pre-construction survey report and associated figures.

Sandrini Solar Park Project, EDP Renewables North America, LLC. – Kern County, CA. Associate Environmental Scientist (2020 to 2022).

Assisted with reconnaissance surveys for proposed 300-MW solar project, approximately 4,151.5-acres, in Kern County. Conducted multiple reconnaissance level surveys for BNLL, TKR, SJKF, SWHA, tricolored blackbird, least Bell's vireo, AMBA, Tulare grasshopper mouse, SJAS, WEBO, SNKR, loggerhead shrike, LeConte's thrasher, northern harrier, white-tailed kite, California glossy snake, San Joaquin coachwhip, western pond turtle, and nesting birds. Potential special-status plants include Horn's milk vetch, Bakersfield smallscale, Lost Hills crowscale, heartscale, akali mariposa lily, hispid salty bird's beak, recurved larkspur, Kern mallow, and Comanche Point layia. Observed four SWHA and four loggerhead shrikes on the Project site. Drafted the



Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures.

Merced Biogas Pipeline Project, Maas Energy Works – Merced County, CA. Associate Environmental Scientist (2020).

Conducted pre-construction survey for proposed pipeline as required by the adopted Mitigation Monitoring and Reporting Program. The pipeline will run along existing paved and dirt roads to collect biogas from several dairy digesters in the area. Special-status species with the potential to occur include SWHA, tricolored blackbird, nesting birds, SJKF and AMBA. No suitable tricolored blackbird foraging or nesting habitat was observed. Numerous potential stick nests were observed that SWHA or other nesting birds could occupy. No SJKF or AMBA or their sign was observed.

Lone Oak #1 and #2 Proposed Dairy Expansions, Maas Energy Works – Kings County, CA. Associate Environmental Scientist (2019).

Conducted two reconnaissance and two pre-construction surveys for a double lined, covered digester ponds and associated equipment at two existing dairies on approximately 20-acres. Potential special-status plant and wildlife species with the potential to occur in the vicinity include Earlimart orache, heartscale, lesser saltscale, mud nama, recurved larkspur, subtle orache, WEBO, SJKF, SWHA, tricolored blackbird, and nesting birds. No special-status plant or wildlife species observed. Drafted two pre-construction letter reports summarizing survey results.

Five Points Dairy Digester Cluster Project, Maas Energy Works – Fresno County, CA. Associate Environmental Scientist. (2019).

Conducted a reconnaissance level survey for the proposed development, construction, and operation of a series of biogas collection facilities (digesters) at five existing dairies, and one upgrading facility on the existing Open Sky Dairy, and gathering pipelines. Special-status wildlife species with the potential to occur in the vicinity include tricolored blackbird, WEBO, SWHA, loggerhead shrike, AMBA, and SJKF. Observed one loggerhead shrike and one SWHA during the reconnaissance survey. Observed minimal suitable habitat for tricolored blackbird but no direct observation. No other special-status species observed. Drafted the Biological Analysis Report and associated figures.

LOGGERHEAD SHRIKE

Carbon TerraVault Project, California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist (2022-Current).

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂) capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. The Project would inject the captured CO₂ into these well sites for sequestration into the ground for importunity as part of the goal to reduce CO₂ emissions for the State of California. Several special-status plant species have the potential to occur on site including heartscale, Lost Hills crownscale, California jewelflower, recurved larkspur, Kern mallow, Temblor buckwheat, Tejon poppy, showy golden madia, San Joaquin woollythreads, and oil neststraw. In addition, several special-status wildlife species have the potential to occur on site including Crotch's bumblebee, California glossy snake, BNLL, San Joaquin coachwhip, temblor legless lizard, coast horned lizard, WEBO, SWHA, prairie falcon, loggerhead shrike, LeConte's thrasher, SJAS, GKR, SNKR, Tulare grasshopper mouse, San Joaquin pocket mouse, AMBA, and SJKF. No special-status plant species were observed during the reconnaissance surveys. During the reconnaissance surveys Ms. Denney observed one adult BNLL, two potential WEBO burrows, one loggerhead shrike, two LeConte's thrashers, ten potential SJKF dens, 30 SJAS, potential GKR burrows with the appropriate size characteristics, potential kangaroo rat burrows with appropriate size characteristics for SNKR, and five stick nests that could be utilized by nesting birds. Assisted with the drafting of the Biological Analysis Report and associated figures.

After CRC received their approved EIR, Ms. Denney worked on several Biological Resources Mitigation Measures (MM) from the adopted Mitigation Measure and Report Program (MMRP). Ms. Denney conducted a reconnaissance survey to identify potential special-status plant and wildlife species or their suitable habitat and determined where focused/protocol surveys may be required. Ms. Denney conducted two botanical surveys, but



no special-status plant species were identified. Wrote a Fence Plan, per MM 4.4-12, that requires a wildlife fence to be installed 500-feet from each injection well. Conducted numerous Biological Pre-Activity Surveys for the project prior to construction beginning. Conducted ten days of protocol SJKF den monitoring for ten potential dens. No SJKF was identified. Observed one AMBA on a trail camera during SJKF den monitoring efforts. Observed 40 SJAS and their active burrows over the course of numerous surveys. Ms. Denney has approximately 300 hours monitoring construction activities.

Caltrans District 6: Reward CAPM (TO#60/TO#10) – Kern County, CA. *Senior Associate /Associate Environmental Scientist.* (2021-2022).

Approved for the following activities under Incidental Take Permit No. 2081-2020-044-04 and Streambed Alteration Agreement No. 1600-EPIMS-KER-128650-R4 for SJAS trapping, relocation, burrow excavation under a Designated Biologist, pre-activity surveys, migratory nesting bird surveys lead, botanical surveys, SJKF den/burrow monitoring under a Designated Biologist, and construction monitoring. Conducted protocol BNLL surveys, monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on State Route 58 between Post Mile (PM) 6.0 and 15.4 near McKittrick, California. Potential species to occur on site include SJKF, BNLL, WEBO, SJAS, AMBA, Kern mallow, Lemmon's jewelflower, and recurved larkspur. Observed 15 inactive and active stick nests occupied by American crows or ravens, 30 potential SJKF dens, and three active AMBA dens. Observed 15 SJAS and one loggerhead shrike within the Project boundary. No direct observation of a BNLL, SJKF, WEBO, AMBA, or special-status plant species. Drafted weekly summaries, pre-construction survey reports, and provided associated GIS figures for reports.

RB Inyokern Solar Project, Dimension RE LLC - Inyokern, CA. *Senior Associate Environmental Scientist* (2023 to 2025).

Conducted a pre-construction clearance survey in potential DETO, MGS, desert kit fox, and WEBO habitat. No protocol-level DETO surveys were conducted. Conducted biological monitoring, approximately 260 hours, during the construction of a 32-megawatt photovoltaic solar project on approximately 166.5 acres. Provided WEAT to new construction crew members. Monitoring was conducted under ITP No. 2081-2020-001-04 Condition of Approval (COA) measures. Wrote six Quarterly Compliance Reports, between 2023 and 2024, as required under ITP COA 5.4. Wrote two Annual Reports (2023 and 2024) as required under ITP COA 5.5. Wrote the Final Report (2025) as required under ITP COA 5.7. Monitor observed five WEBO, four desert kit foxes, and three loggerhead shrikes during construction monitoring activities.

Sandrini Solar Park Project, EDP Renewables North America, LLC. – Kern County, CA. *Associate Environmental Scientist* (2020 to 2022).

Assisted with reconnaissance surveys for proposed 300-MW solar project, approximately 4,151.5-acres, in Kern County. Conducted multiple reconnaissance level surveys for BNLL, TKR, SJKF, SWHA, tricolored blackbird, least Bell's vireo, AMBA, Tulare grasshopper mouse, SJAS, WEBO, SNKR, loggerhead shrike, LeConte's thrasher, northern harrier, white-tailed kite, California glossy snake, San Joaquin coachwhip, western pond turtle, and nesting birds. Potential special-status plants include Horn's milk vetch, Bakersfield smallscale, Lost Hills crowscale, heartscale, akali mariposa lily, hispid salty bird's beak, recurved larkspur, Kern mallow, and Comanche Point layia. Observed four SWHA and four loggerhead shrikes on the Project site. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures.

Five Points Dairy Digester Cluster Project, Maas Energy Works – Fresno County, CA. *Associate Environmental Scientist.* (2019).

Conducted a reconnaissance level survey for the proposed development, construction, and operation of a series of biogas collection facilities (digesters) at five existing dairies, and one upgrading facility on the existing Open Sky Dairy and gathering pipelines. Special-status wildlife species with the potential to occur in the vicinity include tricolored blackbird, WEBO, SWHA, loggerhead shrike, AMBA, and SJKF. Observed one loggerhead shrike and one SWHA during the reconnaissance survey. Observed minimal suitable habitat for tricolored blackbird but no direct observation. No other special-status species observed. Drafted the Biological Analysis Report and associated figures.

LECONTE'S THRASHER



Carbon TerraVault Project, California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist (2022-Current).

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂) capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. The Project would inject the captured CO₂ into these well sites for sequestration into the ground for importunity as part of the goal to reduce CO₂ emissions for the State of California. Several special-status plant species have the potential to occur on site including heartscale, Lost Hills crownscale, California jewelflower, recurved larkspur, Kern mallow, Temblor buckwheat, Tejon poppy, showy golden madia, San Joaquin woollythreads, and oil neststraw. In addition, several special-status wildlife species have the potential to occur on site including Crotch's bumblebee, California glossy snake, BNLL, San Joaquin coachwhip, temblor legless lizard, coast horned lizard, WEBO, SWHA, prairie falcon, loggerhead shrike, LeConte's thrasher, SJAS, GKR, SNKR, Tulare grasshopper mouse, San Joaquin pocket mouse, AMBA, and SJKF. No special-status plant species were observed during the reconnaissance surveys. During the reconnaissance surveys Ms. Denney observed one adult BNLL, two potential WEBO burrows, one loggerhead shrike, two LeConte's thrashers, ten potential SJKF dens, 30 SJAS, potential GKR burrows with the appropriate size characteristics, potential kangaroo rat burrows with appropriate size characteristics for SNKR, and five stick nests that could be utilized by nesting birds. Assisted with the drafting of the Biological Analysis Report and associated figures.

After CRC received their approved EIR, Ms. Denney worked on several Biological Resources Mitigation Measures (MM) from the adopted Mitigation Measure and Report Program (MMRP). Ms. Denney conducted a reconnaissance survey to identify potential special-status plant and wildlife species or their suitable habitat and determined where focused/protocol surveys may be required. Ms. Denney conducted two botanical surveys, but no special-status plant species were identified. Wrote a Fence Plan, per MM 4.4-12, that requires a wildlife fence to be installed 500-feet from each injection well. Conducted numerous Biological Pre-Activity Surveys for the project prior to construction beginning. Conducted ten days of protocol SJKF den monitoring for ten potential dens. No SJKF was identified. Observed one AMBA on a trail camera during SJKF den monitoring efforts. Observed 40 SJAS and their active burrows over the course of numerous surveys. Ms. Denney has approximately 300 hours monitoring construction activities.

Sandrini Solar Park Project, EDP Renewables North America, LLC. – Kern County, CA. Associate Environmental Scientist (2020 to 2022).

Assisted with reconnaissance surveys for proposed 300-MW solar project, approximately 4,151.5-acres, in Kern County. Conducted multiple reconnaissance level surveys for BNLL, TKR, SJKF, SWHA, tricolored blackbird, least Bell's vireo, AMBA, Tulare grasshopper mouse, SJAS, WEBO, SNKR, loggerhead shrike, LeConte's thrasher, northern harrier, white-tailed kite, California glossy snake, San Joaquin coachwhip, western pond turtle, and nesting birds. Potential special-status plants include Horn's milk vetch, Bakersfield smallscale, Lost Hills crownscale, heartscale, akali mariposa lily, hispid salty bird's beak, recurved larkspur, Kern mallow, and Comanche Point layia. Observed four SWHA and four loggerhead shrikes on the Project site. Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures.

KERN MALLOW

NLC Energy Project, California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist. (2024 - Current).

Conducted a reconnaissance survey on approximately 75-acres of partially disturbed saltbush scrub habitat. Several potential special-status plant and wildlife species including SJKF, SJAS, Crotch's bumblebee, BNLL, WEBO, GKR and SNKR, Tulare grasshopper mouse, AMBA, Kern mallow, California jewelflower, recurved larkspur, San Joaquin woollythreads, and oil neststraw. Ms. Denney observed one WEBO and a potential owl burrow, eight SJAS, and eight potential SJKF dens. Drafted the Biological Analysis Report and supporting graphics.

Caltrans District 6: Blackwell's Corner CAPM Project (TO#40/10), Caltrans – Kern County, CA. Senior/ Senior Associate Environmental Scientist. (2024 - Current).



Approved as a Designated Biologist for SJKF, BNLL, and SJAS under Incidental Take Permit #2081-2023-029-04. Approved for BNLL pre-construction surveys, monitoring, and burrow excavating. Approved for Kern mallow pre-construction survey and monitoring. Provided biological monitoring during ground disturbance under ITP #2081-2023-029-04, USFWS Permit #2022-0023965-S7-002, LSA #EPIMS-KER-37203-R4, USACE 404 Permit No. 0710-0003, and Regional Water Quality Control Board 401 WDID Permit #5C15CR00130. Monitoring was conducted in potential habitat for several special-status species including SJAS, SJKF, AMBA, BNLL, WEBO, GKR, SNKR, nesting birds, and Kern mallow. Worker Environmental Awareness Training was provided to new crew members. Observed one known population of approximately 150 Kern mallows within the project site. Observed 30+ SJAS during construction monitoring efforts.

I conducted 7 days of hand burrow excavations. Excavated 51 SJAS burrows and 81 BNLL burrows. Assisted in SJAS trap set up, baiting, checking traps, and processing animals. Handled 1 non-scrotal male SJAS. Assisted Sarah Yates, a USFWS Kern mallow Designated Biologist, in identifying approximately 75 sprouts during 1 hour of surveying for relocation.

Carbon TerraVault Project, California Resources Corporation (CRC) – Kern County, CA. Senior Associate Environmental Scientist (2022-Current).

Conducted a multi-day reconnaissance survey for the proposed project which includes the construction of a carbon dioxide (CO₂) capture and storage facility with associated pipelines, as well as necessary injection and monitoring wells. The Project would inject the captured CO₂ into these well sites for sequestration into the ground for importunity as part of the goal to reduce CO₂ emissions for the State of California. Several special-status plant species have the potential to occur on site including heartscale, Lost Hills crownscale, California jewelflower, recurved larkspur, Kern mallow, Temblor buckwheat, Tejon poppy, showy golden madia, San Joaquin woollythreads, and oil neststraw. In addition, several special-status wildlife species have the potential to occur on site including Crotch's bumblebee, California glossy snake, BNLL, San Joaquin coachwhip, temblor legless lizard, coast horned lizard, WEBO, SWHA, prairie falcon, loggerhead shrike, LeConte's thrasher, SJAS, GKR, SNKR, Tulare grasshopper mouse, San Joaquin pocket mouse, AMBA, and SJKF. No special-status plant species were observed during the reconnaissance surveys. During the reconnaissance surveys Ms. Denney observed one adult BNLL, two potential WEBO burrows, one loggerhead shrike, two LeConte's thrashers, ten potential SJKF dens, 30 SJAS, potential GKR burrows with the appropriate size characteristics, potential kangaroo rat burrows with appropriate size characteristics for SNKR, and five stick nests that could be utilized by nesting birds. Assisted with the drafting of the Biological Analysis Report and associated figures.

After CRC received their approved EIR, Ms. Denney worked on several Biological Resources Mitigation Measures (MM) from the adopted Mitigation Measure and Report Program (MMRP). Ms. Denney conducted a reconnaissance survey to identify potential special-status plant and wildlife species or their suitable habitat and determined where focused/protocol surveys may be required. Ms. Denney conducted two botanical surveys, but no special-status plant species were identified. Wrote a Fence Plan, per MM 4.4-12, that requires a wildlife fence to be installed 500-feet from each injection well. Conducted numerous Biological Pre-Activity Surveys for the project prior to construction beginning. Conducted ten days of protocol SJKF den monitoring for ten potential dens. No SJKF was identified. Observed one AMBA on a trail camera during SJKF den monitoring efforts. Observed 40 SJAS and their active burrows over the course of numerous surveys. Ms. Denney has approximately 300 hours monitoring construction activities.

Caltrans District 6: Reward CAPM (TO#60/TO#10) – Kern County. Senior Associate /Associate Environmental Scientist. (2021-2022).

Approved for the following activities under Incidental Take Permit No. 2081-2020-044-04 and Streambed Alteration Agreement No. 1600-EPIMS-KER-128650-R4 for SJAS trapping, relocation, burrow excavation under a Designated Biologist, pre-activity surveys, migratory nesting bird surveys lead, botanical surveys, SJKF den/burrow monitoring under a Designated Biologist, and construction monitoring. Conducted protocol BNLL surveys, monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on State Route 58 between Post Mile (PM) 6.0 and 15.4 near McKittrick, California. Potential species to occur on site include SJKF, BNLL, WEBO, SJAS, AMBA, Kern mallow, Lemmon's jewelflower, and recurved larkspur. Observed 15 inactive and active stick nests occupied by American crows or ravens, 30 potential SJKF dens, and three active AMBA dens. Observed 15 SJAS and one loggerhead shrike within the Project boundary.



No direct observation of a BNLL, SJKF, WEBO, AMBA, or special-status plant species. Drafted weekly summaries, pre-construction survey reports, and provided associated GIS figures for reports.

Gas Company Road Solar Project, Apex Energy Solutions, LLC – Kern County, CA. Senior Associate/ Associate Environmental Scientist. (2021-2022)

Conducted protocol BNLL and floristics surveys, and small mammal trapping for GKR on approximately 58 acres, in Taft, California. Special status plant species with the potential to occur include heartscale and Kern mallow. No direct observation of a BNLL or any special-status plant species. Observed approximately 15 SJAS during the field surveys. Small mammal trapping (XL Sherman Traps) for 2 nights for GKR. No GKR captured during the small mammal trapping effort. Handled 3 SJAS, 14 SNKR and 6 Heermann's kangaroo rats under the guidance of authorized biologist Curtis Uptain.

Sentinel Peak Hopkins Lease, Energy Project Solutions – Kern County, CA. Assistant/Associate Environmental Scientist. (2017 to 2018).

Conducted a reconnaissance survey on a 2,550-acre parcel of the Hopkins Lease to identify the presence or absence of special-status species or their habitat. Potential state and federally listed species in the vicinity included SJKF, BNLL, GKR, SJAS, and several rare plants species including Kern mallow, California jewelflower, and San Joaquin woollythreads. Conducted floristic surveys and BNLL protocol level surveys. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Observed two SJKF, one active SJKF natal den, tracks, and scat, 10 GKR complexes, and 15 SJAS. Drafted a memo report, reviewed historical annual reports, drafted the BNLL and floristics survey report, and used ArcMap to produce map figures for the client on the results of the findings.

Caltrans District 6: Cherry Avenue Road Widening (TO#37), Caltrans – Bakersfield, Kern County, CA. Assistant Environmental Scientist (2016).

Provided biological monitoring during ground disturbance in areas of known SJKF, SJAS, BNLL, GKR, WEBO, SNKR, Kern mallow, California jewelflower, and San Joaquin woollythreads habitat. Implemented Incidental Take Permit #2081-2014-082-04 mitigation measures, Biological Opinion #81420-2009-F-0143-R003-2 mitigation measures, and Lake and Streambed Alteration Agreement #1600-2014-0216-R4 during the construction phase of the Project. Attended daily safety meetings with the crew and provided WEAT (Worker Environmental Awareness Training) to all field employees involved during construction. Maintained a complete record of all construction related activities, T&E trained personal, species observed, and monitoring photos taken. Assisted with small mammal trapping for SNKR, SJAS, and GKR for a total of 3 nights. Handled a total of two Heermann's kangaroo rats under the guidance of authorized biologist Curtis Uptain. Observed one deceased adult SJKF and 33 SJAS.

WESTERN JOSHUA TREE

Windhub B, Balanced Rock – Kern County, CA. Senior Associate/ Associate Environmental Scientist (2023 to Current).

Conducted a Joshua tree (*Yucca brevifolia*) census survey on approximately 112-acres. Maintaining a complete record of all Joshua tree's surveyed and their corresponding data per the CDFW protocol. Assisted with ArcPro to produce maps for data collecting in the field and figures for identified biological resources. All data collected was compiled to draft an application for an Incidental Take Permit (ITP). Worked on several revisions of the ITP application package as legislature and protocol revisions were adopted.

Keyhole Wind Project, EDF Renewables – Kern County, CA. Senior Associate/ Associate Environmental Scientist (2021 to 2023).

Conducted reconnaissance level survey, protocol DETO, and botanical surveys for approximately 4,182-acres. Maintained all data collected on the site and used ArcMap to produce maps for data collecting in the field and figures for identified biological resources. Observed numerous potential DKF dens, three potential DT burrows, thousands of Joshua trees, and numerous nesting birds. Assisted with writing the Biological Analysis Report and created the figures that would be used in the Environmental Impact Report.



Rosamond South Solar Project, Clearway Energy Group, LLC. – Kern County, CA. *Associate Environmental Scientist* (2019 to Current).

Assisted with preparing and submitting three Conditional Use Permits and associated forms for proposed 100-MW solar project, approximately 1,292-acres, to the Kern County Planning Department for review. Conducted multiple reconnaissance level surveys, nesting bird surveys, Joshua tree census (*Yucca brevifolia*) and three seasons of rare-plant surveys. Observed three desert kit fox, one deceased desert kit fox pup, two adult SWHA, one adult WEBO, and a population of alkali mariposa lily (*Calochortus striatus*). Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report and prepare associated ArcMap figures. Assisted with drafting an initial Joshua Tree Incidental Take Permit (ITP) application package, and associated figures and calculations submitted to CDFW for approval. Following the initial ITP, Ms. Denney assisted with four amendments to the permit including additional census data collection, figures, and calculations submitted to CDFW for approval.

BigBeau Solar Project, EDF Renewables – Kern County, CA. *Senior/Senior Associate/Associate Environmental Scientist* (2020 to 2025).

Approved as a Designated Monitor for DETO, WEBO, SWHA, and nesting birds. Conducted den monitoring on 51 potential desert kit fox dens. Collapsed 35 of the 51 potential desert kit fox dens. Conducted Joshua tree (*Yucca brevifolia*) census surveys and drafted Joshua Tree Census 2084 Report. Assisted with eight DETO preconstruction clearance surveys under the guidance of an authorized DETO biologist Jeff Erway. Monitor for DETO, SWHA, desert kit fox, WEBO, golden eagle, and nesting birds and raptors or any of their sign (i.e. dens, burrows, scat, tracks, or nests) during the Joshua tree removal and construction phases. Observed 3 desert kit fox, 2 WEBO, and one active SWHA, mourning dove and red-tailed hawk nests. Conducting two years of annual revegetation surveys and drafted annual reports. Drafted 28 monthly monitoring reports during the construction phase as part of the EIR Mitigation Measure 4.4-4. Provided Worker Environmental Awareness Training to new crew members as part of the EIR Mitigation Measure 4.4-2. Monitored Arizona crossing construction installation following the Lake and Streambed Alteration Agreement Notification No. 600-2020-0086-R4. Conducted three years of revegetation monitoring, data analysis, and reporting for the road crossings and temporary staging yards. Wrote three annual reports on the revegetation monitoring efforts.

BI-STATE SAGE GROUSE

Caltrans District 9: Sonora Junction Shoulders (TO#38) - Mono County, CA. *Senior Associate Environmental Scientist* (2024-Current).

Provided biological monitoring during ground disturbance under Streambed Alteration Agreement (SAA) No. EPIMS-M00-37443-R6, US Army Corps of Engineers (USACE) Nationwide Permit #SPL-2023-00224-TS, and Lahontan Regional Water Quality Control Board (RWQCB) 401 Water Quality Certification WDID #6B262303001. Approved by CDFW, under SAA permit for channel inspection for aquatic species (MM #2.28) and fish relocation (MM #2.31). Project site is located within potential habitat for sage grouse, AMBA, Sierra Nevada Mountain beaver, Western white-tailed jackrabbit, nesting birds and raptors, and several rare plants. Ms. Denney observed several individuals of golden violets (*Viola purpurea ssp. aurea*), a CRPR 2B.2, within the Project area.

Bi-State Sage Grouse Training, Mono County, CA (May 23, 2021). *Associate Environmental Scientist.*

Attended a field training visit and presentation on the Bi-State Sage Grouse at an active lek led by the Bi-State Sage Grouse Data and Communication Coordinator. Observed multiple sage grouse on the lek.

SMALL MAMMAL TRAPPING (RESEARCH)

Cañada de los Osos Ecological Preserve – Gilroy, CA. *SJSU Student.* (2015).

Set and baited 200 Sherman Live Traps, taking GPS points with a Trimble unit and recording data on captured individuals. This small mammal trapping was done for a San Jose State University class called "Conservation Management and Techniques." Two species were captured, Western harvest mouse (*Reithrodontomys megalotis*) and North American deer mouse (*Peromyscus maniculatus*) Approximately 20+ individuals



captured and observed. Handled both species under the guidance of authorized biologist/professor Stephanie Trehwitt.

Tim Walker– Pinnacles National Park, San Jose State University (SJSU) Graduate Student – Pinnacles National Park, CA. (Permit: SC-12589) SJSU Volunteer. (2014 to 2015).

Set and baited 120 Sherman Live Traps, taking GPS points with a Trimble GeoXH unit and recording data on captured individuals. Approximately 10+ captured individuals including California pocket mouse, deer mouse, Heermann's kangaroo rat, and narrow-faced kangaroo rat. Assisted with 5 days of trapping, no species handled directly due to San Jose State University guidelines.



Denver-Rose M. Harmon

Associate Environmental Scientist

AREAS OF EXPERTISE

- Conservation Management of Threatened and Endangered Species
- Protocol-level Special-Status Species Plant and Wildlife Surveys
- Environmental Compliance Monitoring

EDUCATION

- BS, Wildlife, California Polytechnic State University, Humboldt, Arcata, 2018

Ms. Harmon is a Cal Poly Humboldt (CPH) graduate with a Bachelor of Science in Wildlife and has three years of professional experience in the Central Valley of California.

She has conducted protocol level surveys for State and federally listed wildlife species including San Joaquin kit fox (*Vulpes macrotis mutica*), San Joaquin antelope squirrel (*Ammospermophilus nelsoni*), and blunt-nosed leopard lizard (*Gambelia sila*). She is a level II blunt-nosed leopard lizard surveyor and has assisted in small mammal trapping for a variety of listed species.

Ms. Harmon has also worked as a biological monitor on active construction sites for protected, threatened, and endangered species such as: San Joaquin kit fox, San Joaquin antelope squirrel, blunt-nosed leopard lizard, burrowing owl (*Athene cunicularia*), and special-status rare plants.

PROFESSIONAL EMPLOYMENT

5/2022 – 2026	QK, Associate Environmental Scientist
4/2021 – 4/2024	McCormick Biological, Inc., Staff Biologist I

PROJECT EXPERIENCE

HERPETOFAUNA AND REPTILIA

SUMMARY OF HANDLING EXPERIENCE

Ms. Harmon has handled 10 California tiger salamanders (*Ambystoma californiense*) -- two adults, two young-of-the-year, and six larvae -- nine adult California red-legged frogs (*Rana draytonii*), two pond turtles (*Actinemys marmorata*), one juvenile and one adult western whiptail (*Aspidoscelis tigris*), two western side-blotched lizards (*Uta stansburiana elegans*), one Pacific giant salamander (*Dicamptodon tenebrosus*), six adult and 38 larval California tree frogs (*Pseudacris cadaverina*), one gartersnake (*Thamnophis elegans*), one captive Temblor legless lizard (*Anniella alexanderae*), one San Joaquin coachwhip (*Coluber flagellum ruddocki*), three captive Pacific rattlesnakes (*Crotalus oreganus*), one captive female desert tortoise (*Gopherus agassizii*), one wild and two captive Pacific gopher snakes (*Pituophis catenifer catenifer*), one captive northern blue-tongued skink (*Tiliqua scincoides intermedia*); owned by Ms. Harmon since 2012), one captive crested gecko (*Correlophus ciliates*), one captive leopard gecko (*Eublepharis macularius*), two captive corn snakes (*Pantherophis guttatus*), six captive ball pythons (*Python regius*), two captive Burmese pythons (*Python bivittatus*), three captive corn snakes (*Pantherophis guttatus*) and one captive eastern indigo snake (*Drymarchon couperi*).

REGISTRATIONS / CERTIFICATIONS

- California Department of Fish and Wildlife, Level II Blunt-nosed Leopard Lizard Surveyor
- American Red Cross Training Services, Adult First Aid/CPR/AED Certified, June 2024

PERMITS

- High Speed Rail - CESA ITP No. 2081-2015-024-04 General Biological Monitor (GBM): San Joaquin antelope squirrel (*Ammospermophilus nelsoni*)

PROFESSIONAL ORGANIZATIONS

- Member, The Wildlife Society (TWS), TWS Western Section, San Joaquin Valley and Central Coast Chapters

CONTINUING EDUCATION

- Rare Pond Species Survey Techniques Workshop, Laguna de Santa Rosa Foundation, March 7, 2026, Santa Rosa, Sonoma County, CA.
- California Tiger Salamander Terrestrial Ecology Workshop, Laguna de Santa Rosa Foundation, March 6, 2026, Santa Rosa, Sonoma County, CA.
- Annual Meeting, TWS Western Section, February 4-6, 2026, Monterey, CA.
- Annual Meeting, TWS Western Section, February 5-7, 2025, Visalia, CA.
- Desert Tortoise Introductory Course, Desert Tortoise Council, October 24, October 25, and November 1, 2024, Ridgecrest, Kern County, CA
- Natural Communities Conference, TWS San Joaquin Valley Chapter, March 21, 2024, Bakersfield, CA.
- Annual Meeting, TWS Western Section, February 5-9, 2024, Rohnert Park, CA.
- Rattlesnake Handling Certification, Dr. Emily Taylor, Central Coast Snake Services, August 11, 2023, Bakersfield, CA.
- Tracking Intensive Workshop presented by Jim Lowry and Mary Brooks, Earth Skills, April 2023, Wind Wolves Preserve, Bakersfield, CA.
- Botany and Vernal Pool Branchiopod workshop by Ashleigh Pryor, McCormick

BLUNT-NOSED LEOPARD LIZARD

Protocol blunt-nosed leopard lizard Surveys, McCormick Biological, Inc. – Kern and Fresno Counties, CA (April – September 2023). *Staff Biologist I.*

Conducted blunt-nosed leopard lizard surveys following protocol for an estimated 350 hours and observed five adult male and three unknown adult blunt-nosed leopard lizard. Incidentally observed 54 individual San Joaquin antelope squirrel, one San Joaquin coachwhip, four LeConte's thrasher, and one Swainson's hawk during the surveys.

Mitigation Site Monitoring, Confidential Client – Kern County, CA (June – November 2022). *Biological Technician.*

Deployed and maintained nine scent stations for San Joaquin kit fox with motion-sensing cameras on two sites. Observed one adult male blunt-nosed leopard lizard, one Swainson's hawk, and two burrowing owl. No San Joaquin kit fox were observed on camera.

Small Mammal Burrow Excavations, Confidential Client – Kern County, CA (September – November 2022). *Biological Technician.*

Excavated 45 burrows over 74 hours under supervision of Designated Biologists Leslie Rivas and Daniel Hall. Target species were San Joaquin antelope squirrel and blunt-nosed leopard lizard.

Oil Field Construction Monitoring, Pipeline Installation, Confidential Client – Kern County, CA (September – December 2022). *Staff Biologist I.*

Monitored initial installation, trenching, backfilling, pipe installation, and welding. Performed weekly check of exclusion fencing for blunt-nosed leopard lizard and San Joaquin antelope squirrel. One adult blunt-nosed leopard lizard was observed outside of work area and required a qualified biological monitor in all daylight hours so that work could be halted if it got within the work area buffer. Ms. Harmon monitored this individual for 28 hours total.

Protocol blunt-nosed leopard lizard Surveys, McCormick Biological, Inc. – Kern and Fresno Counties, CA (April – September 2022). *Biological Technician.*

Conducted blunt-nosed leopard lizard surveys following protocol for an estimated 294 hours and observed one adult female and five unknown adult blunt-nosed leopard lizard. Incidentally observed 41 individual San Joaquin antelope squirrel, one San Joaquin coachwhip, one red-tailed hawk nest with fledglings, one great-horned owl nest with chicks, one common raven nest, two mourning dove nests, and two lesser nighthawk nests.

Protocol blunt-nosed leopard lizard Surveys, McCormick Biological, Inc. – Kern and Fresno Counties, CA. (April – September 2022). *Biological Technician.*

Conducted blunt-nosed leopard lizard surveys following protocol for an estimated 334 hours and observed two adult female, one non-breeding adult, and four hatchling blunt-nosed leopard lizard. Incidentally observed 19 individual San Joaquin antelope

Biological, Inc. in-house continuing education, March 29, 2023, Carrizo Plain National Monument, Kern County, CA.

- Sparrow Identification Course, Cornell Bird Academy, March 2023, online.
- Natural Communities Conference, TWS San Joaquin Valley Chapter, March 30, 2023, Bakersfield, CA.
- Annual Meeting, TWS Western Section, February 7-10, 2023, Riverside, CA.
- Tricolored Blackbird Workshop presented by Dan Ariola, Dr. Ted Beedy, and Emilie Graces, TWS Western Section, May 7 and 8, 2022, Sacramento, CA.
- Botany for Wildlifers Workshop presented by Dr. Tara Schoenwetter, LynnDee Althouse, Randi McCormick, and Amy Patten, TWS Western Section, March 25-18, 2022, Fort Ord Natural Reserve, Monterey County, CA

PRESENTATIONS

- "Effects of weather on black phoebe (*Sayornis nigricans*) foraging behavior," Senior Thesis poster presentation, Cal Poly Humboldt, December 2018

UNDERGRAD RESEARCH WORK

- "Effects of weather on black phoebe (*Sayornis nigricans*) foraging behavior," Senior Thesis research project, Cal Poly Humboldt, Fall 2018
- Volunteer Field Technician for Graduate Student's Master's Thesis: The rattle call: a female-specific vocalization in Steller's jays by Kachina Rowland (2020), Cal Poly Humboldt, October 2016 – September 2018

squirrel, one San Joaquin coachwhip, one San Joaquin kit fox, and five pronghorns. Reached Level II blunt-nosed leopard lizard surveyor status.

CALIFORNIA TIGER SALAMANDER

Rare Pond Species Survey Techniques Workshop, Laguna de Santa Rosa Foundation, Santa Rosa, Sonoma County, CA. *Associate Environmental Scientist* (2026).

Attended and participated in practical training on aquatic survey techniques for California tiger salamander, California red-legged frog, and western pond turtle. The lecture session included a review of the biology and ecology of these species, identification of life stages, state and federal regulations, and approved survey protocols. The field portion included field training in aquatic survey techniques, including dip net sampling for California tiger salamander larvae (3 hours), and evening spotlighting for red-legged frogs (2.5 hours) under Permitted Biologists Dave Cook (TE-816187) and Jeff Alvarez (TE-27427). Ms. Harmon handled six and measured total length of 2 out of the 297 California tiger salamander larvae capture, handled, and released.

California Tiger Salamander Terrestrial Ecology Workshop, Laguna de Santa Rosa Foundation, Santa Rosa, Sonoma County, CA. *Associate Environmental Scientist* (2026).

Attended and participated in practical training and lecture discussion on a review of the biology, upland habitat use, and migration patterns of California tiger salamanders, the theory and design of roadway tunnels to facilitate safe passage of migrating salamanders, design pitfall trap arrays, USFWS and CDFW approved survey protocols, and implementing and monitoring land use management practices. This workshop's instructors were Permitted Biologists Dave Cook (TE-816187) and Jeff Alvarez (TE-27427).

Concord Naval Weapons Station Environmental Remediation, Contra Costa County - Concord, CA (January 2024). *Staff Biologist I.*

Conducted 307 pitfall trap checks at three sites undergoing environmental remediation on the retired Concord Naval Weapons Station. Salamanders were relocated from three sites on January 22, 2024. Individual adults were relocated into a nearby breeding pool and young were released into nearby burrows. Ms. Harmon relocated one adult male and one young-of-the-year. Ms. Harmon spent seven hours checking pitfall traps handled two adult and two young-of-the-year California tiger salamander (*Ambystoma californiense*), including relocation of one adult male and one young-of-the-year. The survey was lead by Sean Dexter under BO OSESMF00-2011-F-0313-R002 (revised January 2018); Condor Country Consulting's MOU, SCP, and 10(a)(1)(A).

CALIFORNIA RED-LEGGED FROG

Rare Pond Species Survey Techniques Workshop, Laguna de Santa Rosa Foundation, Santa Rosa, Sonoma County, CA. Associate Environmental Scientist (2026).

Attended and participated in practical training on aquatic survey techniques for California tiger salamander, California red-legged frog, and western pond turtle. The lecture session included a review of the biology and ecology of these species, identification of life stages, state and federal regulations, and approved survey protocols. The field portion included field training in aquatic survey techniques, including dip net sampling for California tiger salamander larvae (3 hours), and evening spotlighting for red-legged frogs (2.5 hours) under Permitted Biologists Dave Cook (TE-816187) and Jeff Alvarez (TE-27427). Ms. Harmon handled six and measured total length of 2 out of the 297 California tiger salamander larvae capture, handled, and released.

NORTHWESTERN/SOUTHWESTERN POND TURTLE

Rare Pond Species Survey Techniques Workshop, Laguna de Santa Rosa Foundation, Santa Rosa, Sonoma County, CA. Associate Environmental Scientist (2024).

Attended and participated in practical training on aquatic survey techniques for California tiger salamander, California red-legged frog, and northwestern pond turtle. The lecture session included a review of the biology and ecology of these species, identification of life stages, state and federal regulations, and approved survey protocols. The field portion included field training in aquatic survey techniques, including dip net sampling for California tiger salamander larvae, and evening spotlighting for frogs under Permitted Biologists Dave Cook (TE-816187) and Jeff Alvarez (TE-27427). Ms. Harmon handled two northwestern pond turtles, one male and one female.

DESERT TORTOISE

Desert Tortoise Introductory Course, Desert Tortoise Council – Ridgecrest, Kern County, CA (October 24, October 25, and November 1, 2024). Associate Environmental Scientist.

Two half-days of online lecture and one full day of learning in the field, including a mock protocol-level survey and observing the handling and processing of an adult. Observed four captive adult desert tortoises, two males and two females. Handled one captive female.

MAMMALS

SUMMARY OF HANDLING EXPERIENCE

Ms. Harmon has handled two adult San Joaquin antelope squirrels (*Ammospermophilus nelsoni*), one San Joaquin kit fox (*Vulpes macrotis mutica*), 13 short-nosed kangaroo rats (*Dipodomys nitratoide nitratoide*), five Heermann's kangaroo rats (*D. heermanni heermanni*), three western harvest mice (*Reithrodontomys megalotis*), one California deer mouse (*Peromyscus californicus*), one California vole (*Microtus californicus*), and two juvenile *Dipodomys sp.*

San Joaquin antelope squirrel

Kern 33 Culvert Rehab Project, California Department of Transportation – Kern County, CA (August 2025 – Ongoing). Associate Environmental Scientist.
Excavated 5 potential San Joaquin antelope squirrel burrows for a total of 4 hours.

Blackwell's Corner CAPM (EA 06-0Y130 / 06-1900-0010), California Department of Transportation – Kern County, CA (September 2024 – Ongoing). Associate Environmental Scientist.

Excavated 88 potential San Joaquin antelope squirrel burrows for a total of 18 hours in 2024. Excavated a further 150 San Joaquin antelope squirrel burrows and 165 blunt-nosed leopard lizard burrows over 14 days in 2025. Baited and checked 127 tomahawk traps. Handled one adult male and one adult female San Joaquin antelope squirrel. Handled two juvenile *Dipodomys* sp. and one San Joaquin coachwhip while relocating from excavation area. All work was conducted under the direct supervision of Designated Biologists approved under the Project ITP, Curtis Uptain, Sarah Yates Karissa Denney, and Donna Noce. 19 days of construction monitoring was also provided as of October 27, 2025. Ms. Harmon is a Designated Biologist on this Project for San Joaquin antelope squirrel, San Joaquin kit fox, blunt-nosed leopard lizard, and Kern mallow.

Maricopa Hwy CAPM (EA 06-0X3803), California Department of Transportation – Maricopa, Kern County, CA (July 2024 – Current). Associate Environmental Scientist.

Excavated 28 burrows for >12 hours under the supervision of Designated Biologists Maria Ortega Gowdy, Sarah Yates, and Karissa Denney. The target species was San Joaquin antelope squirrel. Observed three adult San Joaquin antelope squirrel while driving the project site. Set up camera and tracking medium on two burrows to determine occupation by San Joaquin antelope squirrel. Identified two adult San Joaquin antelope squirrel on a motion-detecting camera. Identified San Joaquin antelope squirrel tracks on tracking medium. Installed one-way doors at three San Joaquin antelope squirrel burrows under supervision of Designated Biologist Maria Ortega Gowdy. Independently conducted weekly surveys to confirm that the Project complied with environmental permits, including an Incidental Take Permit for San Joaquin antelope squirrel and gave two Environmental Awareness Trainings to contractors.

Small Mammal Burrow Excavations, Confidential Client – Kern County, CA (March 2024). Staff Biologist I.

Excavated seven burrows for six-and-a-half hours under supervision of Designated Biologist Daniel Hall. Target species were San Joaquin antelope squirrel and Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*). Observed two Heermann's kangaroo rat (*Dipodomys heermanni heermanni*).

Protocol San Joaquin antelope squirrel Surveys, McCormick Biological, Inc. – Kern County, CA (January 2023 – January 2024). Staff Biologist I.

Performed 66 protocol-level San Joaquin antelope squirrel

surveys prior to monitoring initial ground disturbance on three construction projects. Observed 14 San Joaquin antelope squirrel.

Oil Field Construction Monitoring, Confidential Client – Kern County, CA (January – December 2023). *Staff Biologist I.*

Monitored initial installation, trenching, backfilling, pipe installation, and welding. Performed weekly check of exclusion fencing for blunt-nosed leopard lizard and San Joaquin antelope squirrel. Incidentally observed two San Joaquin antelope squirrel.

Small Mammal Burrow Excavations, Confidential Client, McCormick Biological, Inc. – Kern County, CA (July 2023). *Staff Biologist I.*

Excavated nine burrows over seven-and-a-half hours under supervision of Designated Biologist Craig O'Neill. Target species were San Joaquin antelope squirrel and Tipton kangaroo rat. Observed one Heermann's kangaroo rat.

Small Mammal Burrow Excavations, Confidential Client – Kern County, CA (March 2023). *Biological Technician.*

Excavated one burrow over six hours under supervision of a Designated Biologist. Target species were San Joaquin antelope squirrel and Tipton kangaroo rat.

Protocol blunt-nosed leopard lizard Surveys and Incidental Observations, Confidential Clients. – Kern and Fresno Counties, CA April – September 2023). *Staff Biologist I.*

Conducted blunt-nosed leopard lizard surveys following protocol and observed San Joaquin antelope squirrel incidentally. Surveyed for an estimated 350 hours and observed 54 individual San Joaquin antelope squirrel, nine blunt-nosed leopard lizard, one San Joaquin coachwhip (*Coluber flagellum ruddocki*), four LeConte's thrashers (*Toxostoma lecontei*), and 1 Swainson's hawk (*Buteo swainsoni*).

Protocol San Joaquin antelope squirrel Surveys, Confidential Clients – Kern County, CA (October 2021 – December 2023). *Biological Technician.*

Performed three protocol-level San Joaquin antelope squirrel surveys prior to initial ground disturbance on two construction projects. Observed one San Joaquin antelope squirrel.

Ground Disturbance Monitoring, Pipeline Maintenance, Confidential Client – Kern County, CA (September – November 2022). *Biological Technician.*

Flagged all viable burrows for avoidance on a project in potential blunt-nosed leopard lizard habitat. Monitored ground disturbance with hand tools to prevent take. Gave three threatened and endangered species trainings to construction crew. Incidentally observed one San Joaquin antelope squirrel. Monitored three potential San Joaquin kit fox dens with tracking medium and blocked them per USFWS guidelines.

Small Mammal Burrow Excavations, Confidential Client – Kern County, CA (September – November 2022). *Biological Technician.*

Excavated 45 burrows for 74 hours under supervision of Designated Biologists Leslie Rivas and Daniel Hall. Target

species were San Joaquin antelope squirrel and blunt-nosed leopard lizard. One adult blunt-nosed leopard lizard was observed outside of work area and required a qualified biological monitor in all daylight hours so that work could be halted if it got within the work area buffer. Ms. Harmon monitored this individual for 28 hours total.

Rare Plant Surveys, Confidential Client – Kern County, CA (July 2022). *Biological Technician.*

Conducted two rare plant surveys for one project. Possible rare species were Kern mallow (*Eremalche parryi* ssp. *kernensis*), CA Rare Plant Rank 1B.2, and cottony buckwheat (*Eriogonum gossypinum*) CA Rare Plant Rank 4. No listed plant species observed. One incidental San Joaquin antelope squirrel observation.

Protocol blunt-nosed leopard lizard Surveys and Incidental Observations, McCormick Biological, Inc. – Kern and Fresno Counties, CA (April – September 2022). *Biological Technician.*

Conducted blunt-nosed leopard lizard surveys following protocol and observed San Joaquin antelope squirrel incidentally. Surveyed for an estimated 294 hours and observed 41 individual San Joaquin antelope squirrel, six blunt-nosed leopard lizard, one San Joaquin coachwhip, one red-tailed hawk (*Buteo jamaicensis*) nest with fledglings, one great-horned owl (*Bubo virginianus*) nest with two chicks, one common raven (*Corvus corax*) nest, two mourning dove (*Zenaidura macroura*) nests, and two lesser nighthawk (*Chordeiles acutipennis*) nests.

Small Mammal Burrow Excavations, Confidential Client – Kern County, CA (December 2021). *Biological Technician.*

Excavated eight burrows over six hours under supervision of Designated Biologist Christine Van Horn Job. Target species were San Joaquin antelope squirrel and Tipton kangaroo rat. Incidentally observed two San Joaquin antelope squirrel outside of work area.

Small Mammal Trapping, Confidential Client – Kern County, CA (October – December 2021). *Biological Technician.*

Conducted small mammal trapping (Sherman traps) for Tipton kangaroo rat in western Kern County, CA. Assisted with opening, baiting, checking traps, and recording morphometric data. Handled 13 short-nosed kangaroo rats (*Dipodomys nitratoideus brevinasus*) and four Heermann's kangaroo rat under the guidance of authorized biologist Bill Vanherweg. Observed the handling of 73 short-nosed kangaroo rat, 12 Heermann's kangaroo rat, one southern grasshopper mouse (*Onychomys torridus*), and one San Joaquin antelope squirrel while scribing for data collection. No Tipton kangaroo rat captured.

Small Mammal Burrow Excavations, Confidential Clients – San Benito County, CA. (October 2021) *Biological Technician.*

Excavated 12 burrows over 27 hours under supervision of Designated Biologist Randi McCormick. Potential special status burrowing species were San Joaquin antelope squirrel and giant kangaroo rat (*Dipodomys ingens*) Incidentally observed five San Joaquin antelope squirrel outside of work area.

Protocol blunt-nosed leopard lizard Surveys and Incidental

Observations, McCormick Biological, Inc. – Kern and Fresno Counties, CA (April – September 2021). *Biological Technician*.

Conducted blunt-nosed leopard lizard surveys following protocol and observed San Joaquin antelope squirrel incidentally. Surveyed for an estimated 334 hours and observed 19 individual San Joaquin antelope squirrel, five blunt-nosed leopard lizard, one San Joaquin coachwhip, one San Joaquin kit fox and five pronghorns (*Antilocapra americana*). Reached Level II blunt-nosed leopard lizard surveyor status.

GIANT KANGAROO RAT

In House Continuing Education, McCormick Biological, Inc. – Carrizo Plain National Monument, Kern County, CA (March 29, 2023). *Biological Technician*.

Educational trip to Carrizo Plain National Monument. Sampled pools 153 and 148 for vernal pool branchiopods under guidance of permitted biologist Ashleigh Pryor. Observed versatile fairy shrimp (*Branchinecta lindahli*) and vernal pool fairy shrimp (*Branchinecta lynchi*). Observed San Joaquin woollythreads (*Monolopia congondii*) and California jewelflower (*Caulanthus californicus*), both of which are federally endangered and CA Rare Plant Rank 1B.1. Observed one unoccupied San Joaquin kit fox natal den. Identified active giant kangaroo rat precincts based on sign.

giant kangaroo rat Burrow Excavations, Confidential Client – Panoche Valley Preserve, San Benito County, CA (April 2022). *Biological Technician*.

Excavated five giant kangaroo rat precincts and one unoccupied San Joaquin kit fox den under supervision of Designated Biologist Randi McCormick prior to construction. The target species was giant kangaroo rat. The San Joaquin kit fox den was excavated due to its potential for giant kangaroo rat to shelter in it and prevent take during construction.

Small Mammal Burrow Excavations, Confidential Clients – San Benito County, CA (October 2021). *Biological Technician*.

Excavated 12 burrows over 27 hours under supervision of Designated Biologist Randi McCormick. Potential special status burrowing species were San Joaquin antelope squirrel and giant kangaroo rat. Incidentally observed five San Joaquin antelope squirrel outside of work area.

Tipton kangaroo rat

Tipton kangaroo rat Trapping, Confidential Client – Delano, CA (January 2024). *Staff Biologist I*.

Conducted small mammal trapping (Sherman traps) for Tipton kangaroo rat near Delano, CA. Assisted with opening, baiting, checking traps, and recording morphometric data. Handled three western harvest mice (*Reithrodontomys megalotis*) and one Heermann's kangaroo rat under the guidance of authorized biologist Christine Van Horn Job. No Tipton kangaroo rat captured.

Small Mammal Burrow Excavations, Confidential Client – Kern County, CA (March 2024). *Staff Biologist I*.

Excavated seven burrows over six-and-a-half hours under supervision of Designated Biologist Daniel Hall. Target species were San Joaquin antelope squirrel and Tipton kangaroo rat. Observed two Heermann's kangaroo rat.

Small Mammal Burrow Excavations, Confidential Client, McCormick Biological, Inc. – Kern County, CA (July 2023). *Staff Biologist I.*

Excavated nine burrows over seven-and-a-half hours under supervision of Designated Biologist Craig O'Neill. Target species were San Joaquin antelope squirrel and Tipton kangaroo rat. Observed one Heermann's kangaroo rat.

Small Mammal Burrow Excavations, Confidential Client – Kern County, CA (March 2023). *Biological Technician.*

Excavated one burrow over six hours under supervision of a Designated Biologist. Target species were San Joaquin antelope squirrel and Tipton kangaroo rat.

Small Mammal Burrow Excavations, Confidential Client – Kern County, CA (December 2021). *Biological Technician.*

Excavated eight burrows over six hours under supervision of Designated Biologist Christine Van Horn Job. Target species were San Joaquin antelope squirrel and Tipton kangaroo rat. Incidentally observed two San Joaquin antelope squirrel outside of work area.

Small Mammal Trapping, Confidential Client – Kern County, CA (October – December 2021). *Biological Technician.*

Conducted small mammal trapping (Sherman traps) for Tipton kangaroo rat in western Kern County, CA. Assisted with opening, baiting, checking traps, and recording morphometric data. Handled 13 short-nosed kangaroo rat and four Heermann's kangaroo rat under the guidance of authorized biologist Bill Vanherweg. Observed the handling of 73 short-nosed kangaroo rat, 12 Heermann's kangaroo rat, one southern grasshopper mouse and one San Joaquin antelope squirrel while scribing for data collection. No Tipton kangaroo rat were captured.

San Joaquin kit fox

Pre-construction Surveys, City of Bakersfield Water Resources Department – Bakersfield, CA (Current). *Associate Environmental Scientist.*

Perform clearance surveys for maintenance of weirs, sumps, and basins. Document all special-status species and resources. Set up buffers for potential San Joaquin kit fox dens. Observed and recorded 21 potential dens. Recorded one Swainson's hawk nest and one mourning dove nest. Performed weekly check on Swainson's hawk nest until nestling was no longer dependent. Observed 3 loggerhead shrike and 3 Swainson's hawk.

Pipe Demolition Monitoring, Confidential Client – Bakersfield, CA (January 2023 – April 2024). *Staff Biologist I.*

Performed weekly pre-activity surveys and avoidance buffer tasks in projected work areas. Monitored pipe demolition near Bakersfield cactus (*Opuntia basilaris* var. *treleasei*). Observed 23

Bakersfield cactus and flagged for avoidance. Monitored and blocked 35 potential San Joaquin kit fox dens per USFWS protocol.

Initial Ground Disturbance Monitoring, Pipeline Replacement, Confidential Client – Kern County, CA (October 2023 – January 2024). *Staff Biologist I.*

Monitored initial ground disturbance in the form of hand grubbing and equipment grubbing. Conducted 55 protocol-level San Joaquin antelope squirrel surveys prior to construction. Observed 10 individual San Joaquin antelope squirrel. Monitored and blocked one potential San Joaquin kit fox den per CDFW protocol.

San Joaquin Kit Fox Spotlighting, Wind Wolves Preserve – Bakersfield, CA (August 2021 – September 2023). *Staff Biologist I.*

Three spotlighting surveys targeting San Joaquin kit fox. Located two San Joaquin kit fox, 3 coyotes (*Canis latrans*), 13 burrowing owl, and five barn owls (*Tyto alba*).

Wildlife Passage Study, Confidential Client – Alameda County, CA (September 2023). *Staff Biologist I.*

Photo review from a scent station project. Target species were San Joaquin kit fox and American badger (*Taxidea taxus*). No San Joaquin kit fox or American badger were captured on cameras.

San Joaquin Kit Fox Survey, Confidential Client – Kern County, CA (May 2023). *Staff Biologist I.*

Surveyed site for sign of San Joaquin kit fox and located five potential dens.

San Joaquin Kit Fox Den Monitoring, Confidential Client – Fresno County, CA (January – December 2023). *Staff Biologist I.*

Performed den monitoring activities using motion sensing cameras for various projects in oil fields. Observed two natal dens, one adult San Joaquin kit fox, two pups, and one Swainson's hawk.

In House Continuing Education, McCormick Biological, Inc. – Carrizo Plain National Monument, Kern County, CA (March 29, 2023). *Biological Technician.*

National trip to Carrizo Plain National Monument. Sampled pools 153 and 148 for vernal pool branchiopods under guidance of permitted biologist Ashleigh Pryor. Observed versatile fairy shrimp and vernal pool fairy shrimp. Observed San Joaquin woollythreads and California jewelflower, both of which are federally endangered and CA Rare Plant Rank 1B.1. Observed one unoccupied San Joaquin kit fox natal den. Identified active giant kangaroo rat precincts by observing sign.

Potential San Joaquin Kit Fox Den Excavation, Confidential Client – Bakersfield, CA (September 2022). *Biological Technician.*

Excavated 6 potential earthen San Joaquin kit fox dens.

San Joaquin kit fox Demographic Study, Endangered Species Recovery Program – Bakersfield, CA (August and October 2022 and July and November 2021). *Biological Technician.*

Assisted and observed Endangered Species Recovery Program

(ESRP) staff with San Joaquin kit fox trapping by baiting and setting up traps, transcribing data, and storing sample vials. Observed the handling of one female pup, one female young of the year, and one adult. 46 traps total were checked over four sessions.

San Joaquin Kit Fox Survey, Confidential Client – Kern County, CA (July 2022). *Biological Technician.*

Performed San Joaquin kit fox focused driving surveys on solar farm and set up five motion-sensing cameras. Observed 5 potential earthen dens. No San Joaquin kit fox observed on camera.

Ground Disturbance Monitoring, Pipeline Maintenance, Confidential Client – Kern County, CA (September – November 2022). *Biological Technician.*

Flagged all burrows on project for avoidance. To prevent take, monitored the crews that were conducting ground disturbance using hand tools. Gave three threatened and endangered species trainings to construction crew. Incidentally observed one San Joaquin antelope squirrel. Monitored three potential San Joaquin kit fox dens with tracking medium and blocked them per CDFW guidelines.

Mitigation Site Monitoring, Confidential Client – Kern County, CA (June – November 2022). *Biological Technician.*

Deployed and maintained nine scent stations for San Joaquin kit fox with motion-sensing cameras on two sites. Observed one adult male blunt-nosed leopard lizard, one Swainson's hawk, and two burrowing owl. No San Joaquin kit fox or sign observed.

giant kangaroo rat Burrow Excavations, Confidential Client – Panoche Valley Preserve, San Benito County, CA (April 2022). *Biological Technician.*

Excavated five giant kangaroo rat precincts and one unoccupied San Joaquin kit fox den under supervision of Designated Biologist Randi McCormick prior to construction. The target species was giant kangaroo rat. Excavated the San Joaquin kit fox den due to its potential for giant kangaroo rat to shelter in it and prevent take during construction.

San Joaquin Kit Fox Telemetry, Endangered Species Recovery Program – Fresno County, CA (January 2022 and November 2021). *Biological Technician.*

Picked up one deceased San Joaquin kit fox for donation to ESRP. Performed telemetry for collared San Joaquin kit fox, tracked two individuals to dens, completed six data downloads, and heard signals for two other individuals.

Potential San Joaquin kit fox Den Excavations, Confidential Client – Kern County, CA (December 2021). *Biological Technician.*

Excavated eight unoccupied potential San Joaquin kit fox dens over seven hours under supervision of a Designated Biologist.

Protocol blunt-nosed leopard lizard Surveys and Incidental Observations, McCormick Biological, Inc. – Kern and Fresno Counties, CA (April – September 2021). *Biological Technician.*

Conducted blunt-nosed leopard lizard surveys following protocol and observed San Joaquin kit fox incidentally. Surveyed for an

estimated 334 hours and observed 19 individual San Joaquin antelope squirrel, five blunt-nosed leopard lizard, one San Joaquin coachwhip, one San Joaquin kit fox and five pronghorns (*Antilocapra americana*). Reached Level II blunt-nosed leopard lizard surveyor status.

DESERT KIT FOX

Rosamond South Solar Project, Clearway Energy Group, LLC – near Rosamond, Kern County, CA (June 2024).

Incidentally observed 2 desert kit fox (*Vulpes macrotis macrotis*).

BIRDS

SUMMARY OF HANDLING EXPERIENCE

Ms. Harmon has handled one chestnut-backed chickadee (*Poecile rufescens*), one Steller's jay (*Cyanocitta stelleri*), one wood duck (*Aix sponsa*), two mallards (*Anas platyrhynchos*), one Canada goose (*Branta canadensis*) and three house finches (*Haemorrhous mexicanus*).

BURROWING OWL

Clearance Survey, Tachi Yokut Tribe – Lemoore, CA (July 2024). Associate Environmental Biologist.

Performed clearance survey of borrow area for Santa Rosa Rancheria Housing Development. Observed five burrowing owl and one Swainson's hawk.

San Joaquin Kit Fox Spotlighting, Wind Wolves Preserve – Bakersfield, CA (August 2021 – September 2023). Staff Biologist I.

Three spotlighting surveys targeting San Joaquin kit fox. Observed two San Joaquin kit fox, three coyotes, 13 burrowing owl, and five barn owl.

Mitigation Site Monitoring, Confidential Client – Kern County, CA (June – November 2022). Biological Technician.

Deployed and maintained nine scent stations for San Joaquin kit fox with motion-sensing cameras on two sites. Observed one adult male blunt-nosed leopard lizard, one Swainson's hawk, and two burrowing owl.

Biological Reconnaissance, Confidential Client – Kern County, CA (January – April 2022). Biological Technician.

Performed biological reconnaissance surveys for the installation of a fiber optic line. Target special status species were burrowing owl, American badger, golden eagle, southwestern willow-flycatcher, yellow-billed cuckoo, desert tortoise, and nesting birds. No target species or nesting behavior observed over six surveys.

SWAINSON'S HAWK

Pre-construction Surveys, City of Bakersfield Water Resources Department – Bakersfield, CA (Current). *Associate Environmental Scientist.*

Perform clearance surveys for maintenance of weirs, sumps, and basins. Document all special-status species and resources. Set up buffers for potential San Joaquin kit fox dens. Observed and recorded 21 potential dens. Recorded one Swainson's hawk nest and one mourning dove nest. Performed weekly check on Swainson's hawk nest until nestling was no longer dependent. Observed 3 loggerhead shrike and 3 Swainson's hawk.

Sewer Improvements, Stantec Consulting Services, Inc. – Woodlake, CA. (Current). *Associate Environmental Scientist.*
Weekly clearance survey and check-in with crew. Observed 1 osprey nest with adult incubating, 1 American avocet nest with 3 eggs, and 1 individual Swainson's hawk.

Clearance Survey, Tachi Yokut Tribe – Lemoore, CA (July 2024). *Associate Environmental Biologist.*
Performed clearance survey of borrow area for Santa Rosa Rancheria Housing Development. Observed five burrowing owl and one Swainson's hawk.

Non-Protocol Swainson's Hawk Survey, Conservation Easement Monitoring, McCormick Biological, Inc. – Los Banos, CA 9April 2024). *Staff Biologist I.*
Conducted non-protocol Swainson's hawk survey for proposed conservation easement. Observed two nesting pairs and one individual. Both pairs were seen copulating and carrying nesting material.

San Joaquin Kit Fox Den Monitoring, Confidential Client – Fresno County, CA (January – December 2023). *Staff Biologist I.*
Performed den monitoring activities using motion sensing cameras for various projects in oil fields. Observed two natal dens, one adult San Joaquin kit fox, two pups, and one Swainson's hawk.

Protocol blunt-nosed leopard lizard Surveys and Incidental Observations, Confidential Clients. – Kern and Fresno Counties, CA (April – September 2023). *Staff Biologist I.*
Conducted blunt-nosed leopard lizard surveys following protocol.. Surveyed for an estimated 350 hours and observed 54 individual San Joaquin antelope squirrel, nine blunt-nosed leopard lizard, one San Joaquin coachwhip, four LeConte's thrasher, and one Swainson's hawk.

Nesting Bird Surveys, Confidential Client – Fresno County, CA (May 2023). *Biological Technician.*
Performed three pre-construction nesting bird surveys for three projects prior to well maintenance. Observed one active great-horned owl nest and two active common raven nests. Incidentally observed one Swainson's hawk.

Mitigation Site Monitoring, Confidential Client – Kern County, CA (June – November 2022). *Biological Technician.*

Deployed and maintained nine scent stations for San Joaquin kit fox with motion-sensing cameras on two sites. Observed one adult male blunt-nosed leopard lizard, one Swainson's hawk, and two burrowing owl. No San Joaquin kit fox observed on camera.

TRICOLORED BLACKBIRD

Tricolored Blackbird Workshop presented by Dan Ariola, Dr. Ted Beedy, and Emilie Graces, TWS Western Section – Sacramento, CA (May 7 and 8, 2022).

Attended two-day workshop about TRBL (tricolored blackbird, *Agelaius tricolor*). 8 hours of lecture and 8 hours of field work. Observed female colony and mixed colony. Observed >1,000 individuals.

NESTING BIRDS

Pre-construction Surveys, City of Bakersfield Water Resources Department – Bakersfield, CA (June 2024 – Ongoing). *Associate Environmental Scientist*.

Performed clearance surveys for maintenance of weirs, sumps, and basins. Documented all special-status species and resources. Set up buffers for potential San Joaquin kit fox dens. Observed and recorded 21 potential dens. Recorded one Swainson's hawk nest and one mourning dove nest. Performed weekly check on Swainson's hawk nest until nestling was no longer dependent. Observed 3 loggerhead shrike and 3 Swainson's hawk.

Sewer Improvements, Stantec Consulting Services, Inc. – Woodlake, CA. (Current). *Associate Environmental Scientist*.

Weekly clearance survey and check-in with crew. Observed 1 osprey nest with adult incubating, 1 American avocet nest with 3 eggs, and 1 individual Swainson's hawk.

Bird Surveys, Confidential Client – Caliente, CA (February 2024). *Staff Biologist I*.

Performed pre-construction nesting bird surveys prior for invasive tamarisk removal project in a riparian area in eastern Kern County. Observed eight golden eagles (*Aquila chrysaetos*) over two survey days. No nests or nesting behavior were observed.

Nesting Bird Surveys, Confidential Client – Fresno County, CA (May 2023). *Biological Technician*.

Performed three pre-construction nesting bird surveys for three projects prior to well maintenance. Observed one active great-horned owl nest and two active common raven nests. Incidentally observed one Swainson's hawk.

Protocol blunt-nosed leopard lizard Surveys, McCormick Biological, Inc. – Kern and Fresno Counties, CA (April – September 2022). *Biological Technician*.

Conducted blunt-nosed leopard lizard surveys following protocol and observed San Joaquin antelope squirrel incidentally. Surveyed for an estimated 294 hours and observed one adult

female and five unknown adult blunt-nosed leopard lizard. Incidentally observed 41 individual San Joaquin antelope squirrel, one San Joaquin coachwhip, one red-tailed hawk nest with fledglings, one great-horned owl nest with chicks, one common raven nest, two mourning dove nests, and two lesser nighthawk nests.

Nesting Bird Survey, Confidential Client – Kern County, CA (June 2022). *Biological Technician.*

Conducted one hour survey for abandoned bird nest with one remaining egg that contractors found on equipment in a work area. Nest suspected to be from mourning doves (*Zenaida macroura*, mourning dove). No nesting birds were observed, so no avoidance buffer was established and work was continued.

Biological Reconnaissance, Confidential Client – Kern County, CA (January – April 2022). *Biological Technician.*

Performed biological reconnaissance surveys for the installation of a fiber optic line. Target special status species were burrowing owl, American badger, golden eagle, southwestern willow flycatcher (*Empidonax trailii extimus*), yellow-billed cuckoo (*Coccyzus antoniae*), desert tortoise (*Gopherus agassizii*), and nesting birds. No target species or nesting behavior was observed over 6 surveys.

Protocol Woodpecker Survey, Confidential Client – Kern County, CA (February 2022). *Biological Technician.*

Conducted three pre-construction nesting bird surveys for telephone pole maintenance. Woodpecker sign (cavities) was present on one survey, but no nesting activity or special status species were observed.

RARE PLANTS

KERN MALLOW

Pre-Activity Survey, Confidential Client

– Kern County, CA (October 2023). *Staff Biologist I.*

Surveyed project site for sensitive natural resources pre-construction. Observed and flagged two Kern mallow (CA Rare Plant Rank 1B.2) for avoidance.

RARE PLANTS

Revegetation Monitoring, Solari Sand and Gravel Expansion Project – Arvin, CA (May-June 2024). *Associate Environmental Scientist.*

Assisted with revegetation surveys to determine plant composition and density. Maintained complete record of all species observed.

The Wildlands Conservancy: Wind Wolves Preserve – Kern County, CA (December 6, 2023). *Bakersfield Cactus Volunteer.*

Assisted with translocating Bakersfield cactus pads on the preserve. Independently planted two plots and assisted with two other plots. Seven Bakersfield cactus pads planted in each plot.

Pre-Activity Survey, Confidential Client – Kern County, CA (October 2023). *Staff Biologist I.*

Surveyed project site for sensitive natural resources pre-construction. Observed and flagged two Kern mallow (CA Rare Plant Rank 1B.2) for avoidance.

In House Continuing Education, McCormick Biological, Inc. – Carrizo Plain National Monument, Kern County, CA (March 29, 2023). *Biological Technician.*

Educational trip to Carrizo Plain National Monument. Sampled pools 153 and 148 for vernal pool branchiopods under guidance of permitted biologist Ashleigh Pryor. Observed versatile fairy shrimp and vernal pool fairy shrimp. Observed San Joaquin woollythreads and California jewelflower, both of which are federally endangered and CA Rare Plant Rank 1B.1. Observed one unoccupied San Joaquin kit fox natal den. Identified active giant kangaroo rat precincts by observing sign.

The Wildlands Conservancy: Wind Wolves Preserve – Kern County, CA (December 8, 2022). *Bakersfield Cactus Volunteer.*

Assisted with Bakersfield cactus translocation and invasive plant removal on the preserve. Independently collected a total of 66 Bakersfield cactus pads for transplant. One hour of removal of invasive white horehound (*Marrubium vulgare*) with hand tools.

Rare Plant Surveys, Confidential Client – Kern County, CA (July 2022). *Biological Technician.*

Conducted two rare plant surveys for one project. Possible rare species were Kern mallow, CA Rare Plant rank 1B.2, and cottony buckwheat, CA Rare Plant Rank 4.2. No listed plant species observed. One incidental San Joaquin antelope squirrel observation.

INVERTEBRATES

Vernal Pool Branchiopods

In House Continuing Education, McCormick Biological, Inc. – Carrizo Plain National Monument, Kern County, CA (March 20, 2023). *Biological Technician.*

Educational trip to Carrizo Plain National Monument. Sampled pools 153 and 148 for vernal pool branchiopods under guidance of permitted biologist Ashleigh Pryor. Observed versatile fairy shrimp and vernal pool fairy shrimp. Observed San Joaquin woollythreads and California jewelflower, both of which are federally endangered and CA Rare Plant Rank 1B.1. Observed one unoccupied San Joaquin kit fox natal den. Identified active giant kangaroo rat precincts by observing sign.

CONSTRUCTION MONITORING

Maricopa Hwy CAPM (EA 06-0X3803), California Department of Transportation – Maricopa, Kern County, CA (July 2024 – Current). *Associate Environmental Scientist.*

Excavated 23 burrows for 9 hours under supervision of Designated Biologists Maria Ortega Gowdy, Sarah Yates, and Karissa Denney. Target species was San Joaquin antelope squirrel. Incidentally observed two adult San Joaquin antelope

squirrel while driving project site. Set up camera and tracking medium on two burrows to determine occupation by San Joaquin antelope squirrel. Identified two adult San Joaquin antelope squirrel on motion-detecting camera. Gave two Environmental Awareness Trainings to contractors.

Pre-construction Surveys, City of Bakersfield Water Resources Department – Bakersfield, CA (June 2024 - Current). *Associate Environmental Scientist.*

Perform clearance surveys for maintenance of weirs, sumps, and basins. Document all special-status species and resources. Set up buffers for potential San Joaquin kit fox dens. Observed and recorded 21 potential dens. Recorded one Swainson's hawk nest and one mourning dove nest. Performed weekly check on Swainson's hawk nest until nestling was no longer dependent. Observed 3 loggerhead shrike and 3 Swainson's hawk.

Sewer Improvements, Stantec Consulting Services, Inc. – Woodlake, CA. (May 2024 - Current). *Associate Environmental Scientist.*

Weekly clearance survey and check-in with crew. Observed 1 osprey nest with adult incubating, 1 American avocet nest with 3 eggs, and 1 individual Swainson's hawk.

Pipe Demolition Monitoring, Confidential Client – Bakersfield, CA (January 2023 – April 2024). *Staff Biologist I.*

Performed weekly pre-activity surveys and avoidance buffer tasks, such as identifying, flagging, and staking natural resources for avoidance, in projected work areas. Monitored pipe demolition near Bakersfield cactus. Located 23 Bakersfield cactus (*Opuntia basilaris* var. *treleasei*, Bakersfield cactus) and flagged for avoidance. Monitored and blocked 35 potential San Joaquin kit fox dens per CDFW protocol.

Initial Ground Disturbance Monitoring, Pipeline Replacement, Confidential Client – Kern County, CA (October 2023 – January 2024). *Staff Biologist I.*

Monitored initial ground disturbance in the form of hand grubbing and equipment grubbing. Conducted 55 protocol-level San Joaquin antelope squirrel surveys prior to construction. Observed 10 individual San Joaquin antelope squirrel. Monitored and blocked one potential San Joaquin kit fox den per CDFW protocol.

Oil Field Construction Monitoring, Pipeline Installation, Confidential Client – Kern County, CA (January – December 2023). *Staff Biologist I.*

Monitored initial pipeline installation, which included trenching, backfilling, pipe installation, and welding. Performed weekly check of exclusion fencing for blunt-nosed leopard lizard and San Joaquin antelope squirrel. Incidentally observed 2 San Joaquin antelope squirrel.

Oil Field Construction Monitoring, Confidential Client – Kern County, CA (January – December 2023). *Staff Biologist I.*

Performed checks on open pits during construction and monitored spill release, auguring, and backfilling.

Oil Field Construction Monitoring, Pipeline Installation, Confidential Client – Kern County, CA (September – December 2022). *Biological Technician.*

Monitored initial pipeline installation, trenching, backfilling, pipe installation, and welding. Performed weekly check of exclusion fencing for blunt-nosed leopard lizard and San Joaquin antelope squirrel. One adult blunt-nosed leopard lizard was observed outside of work area and required a qualified biological monitor in all daylight hours so that work could be halted if it got within the work area buffer. Ms. Harmon monitored this individual for 28 hours total.

Ground Disturbance Monitoring, Pipeline Maintenance, Confidential Client – Kern County, CA (September 2022 – November 2022). *Biological Technician.*

Flagged all burrows on project for avoidance. Monitored ground disturbance using hand tools to prevent take. Gave three threatened and endangered species trainings to construction crews. Incidentally observed one San Joaquin antelope squirrel. Monitored three potential San Joaquin kit fox dens with tracking medium and blocked them per CDFW guidelines.

Stream Remediation Monitor, Confidential Client – Kern County, CA (October 2022). *Biological Technician.*

Checked long-term exclusion fencing at stream remediation project responding to a fluid release. Fencing was meant to exclude all animals from becoming entrapped in fluid. No sensitive species or entrapped wildlife observed.

Fiber Optic Line Installation, Confidential Client – Kern County, CA (January 2022). *Biological Technician.*

Flagged small mammal burrows for avoidance and monitored installation of fiber optic line.

Initial Ground Disturbance Monitoring, Confidential Client – Kern County, CA (November 2022 – January 2023). *Biological Technician.*

Monitored initial ground disturbance with heavy equipment for three oil field projects.

HABITAT RESTORATION AND MONITORING

The Wildlands Conservancy: Wind Wolves Preserve – Kern County, CA (December 6, 2023). *Bakersfield Cactus Volunteer.*

Assisted with translocating Bakersfield cactus pads on the preserve. Independently planted two plots and assisted with two other plots. Seven Bakersfield cactus pads planted in each plot.

The Wildlands Conservancy: Wind Wolves Preserve – Kern County, CA (December 8, 2022). *Bakersfield Cactus Volunteer.*

Assisted with Bakersfield cactus translocation and invasive plant removal on the preserve. Independently collected a total of 66 Bakersfield cactus pads for transplant. One hour of removal of invasive white horehound (*Marrubium vulgare*) using hand tools.

Mitigation Site Monitoring, Confidential Client – Kern County, CA (June – November 2022). *Biological Technician.*

Deployed and maintained nine scent stations for San Joaquin kit

fox with motion-sensing cameras on two sites. Observed one adult male blunt-nosed leopard lizard, one Swainson's hawk, and two burrowing owl.

RESEARCH WORK

San Joaquin kit fox Demographic Study, Endangered Species Recovery Program – Bakersfield, CA (August and October 2022 and July and November 2021). *Biological Technician.*

Assisted and observed ESRP staff with San Joaquin kit fox trapping by baiting and setting up traps, transcribing data, and storing sample vials. Observed one female pup, one female young of the year, and one adult. 46 traps total were checked over four sessions.

The Wildlands Conservancy: Wind Wolves Preserve – Kern County, CA (December 6, 2023). *Bakersfield Cactus Volunteer.*

Assisted with translocating Bakersfield cactus pads on the preserve. Independently planted two plots and assisted with two other plots. Planted seven Bakersfield cactus pads in each plot.

The Wildlands Conservancy: Wind Wolves Preserve – Kern County, CA (December 8, 2022). *Bakersfield Cactus Volunteer.*

Assisted with Bakersfield cactus translocation and invasive plant removal on the preserve. Independently collected a total of 66 Bakersfield cactus pads for transplant. One hour of removal of invasive white horehound (*Marrubium vulgare*) with hand tools.

AQUATIC RESOURCES DELINEATION

Delineation Survey, Merced Pipeline – Merced, CA (July 2024).

Associate Environmental Scientist.

Delineated the bank of three water jurisdictional waters.



Dylan Burkey

Associate Environmental Scientist

EDUCATION

- BS, Biology, University of California, Santa Barbara, Santa Barbara, CA, 2022

AREAS OF EXPERTISE

- Blunt Nosed Leopard Lizard
- Permit Compliance

REGISTRATIONS / CERTIFICATIONS

- California Department of Fish and Wildlife, Level I Blunt-nosed Leopard Lizard Surveyor
- Plant Voucher Collecting Permit

As an Associate Environmental Scientist, Dylan supports environmental compliance and ecological review for development projects. He earned his degree in Biological Sciences from UC Santa Barbara, where an internship at the Vertebrate Ecology Museum and participation in AI-assisted camera trap studies sparked his passion for ecology. His early fieldwork included research trips in the Mojave Desert and Tehachapi Hills, where he gained hands-on experience in ecological monitoring and data collection. Prior to joining QK, Dylan worked as an Environmental Scientist with the California Department of Fish and Wildlife (CDFW), focusing on sustainable project development and wildlife protection.

During his time with the CDFW, he wrote Lake and Streambed Alteration Agreements (LSAA) and Incidental Take Permits (ITP) that include Protective Measures for State and federally listed wildlife species such as California tiger salamander (*Ambystoma californiense*, CTS), blunt-nosed leopard lizard (*Gambelia sila*, BNLL), California condor (*Gymnogyps californianus*, CACO), least Bell's vireo (*Vireo huttoni unitti*), San Joaquin antelope squirrel (*Ammospermophilus nelsoni*, SJAS), giant kangaroo rat (*Dipodomys ingens*, GKR), Tipton kangaroo rat (*Dipodomys nitratoideus nitratoideus*, TKR), and San Joaquin kit fox (*Vulpes macrotis mutica*, SJKF). Mr. Burkey is a Level 1 surveyor for BNLL.

Mr. Burkey was trained in the field by CDFW personnel on how to conduct protocol-level surveys for Crotch's bumble bee (*Bombus crotchii*, CBB) and BNLL, as well as surveys for Temblor legless lizard (*Anniella alexanderae*, TLL) and western burrowing owl (*Athene cunicularia*, BUOW).

PROFESSIONAL EMPLOYMENT

9/2025 – Present	QK, Associate Environmental Scientist
10/2023 – 9/2025	CDFW, Environmental Scientist

PROJECT EXPERIENCE

MAMMALS

Participated in SJAS trapping, handled and relocated 1 adult male SJAS, and shadowed during SJAS burrow excavations. Observed 1 lactating female SJAS and 4 SJAS juveniles during trapping efforts. Drafted Avoidance and Minimization Measures as well as reviewed preconstruction survey submittals for SJAS, GKR, TKR, SJKF, short-nosed kangaroo rat (*Dipodomys nitratoideus brevinasus*, SNKR), American badger (*Taxidea taxus*, AMBA), Salinas pocket mouse (*Perognathus inornatus psammophilus*), Monterey dusky-footed woodrat (*Neotoma macrotis luciana*), fisher (*Pekania pennanti*), ringtail (*Bassariscus astutus*), and special status bats. Additionally, reviewed Bat Avoidance and Exclusion Plans.



PROFESSIONAL ORGANIZATIONS

- Member, The Wildlife Society (TWS), San Joaquin Valley Chapter
- Member, Xerces Society

CONTINUING EDUCATION

- CDFW Conservation Lecture Series
 - Giant Gartersnake, October 2023
 - California Tiger Salamander, October 2023
 - Desert Tortoise, October 2023
 - Mohave Ground Squirrel, October 2023
 - Tricolored Blackbird, November 2023
 - San Joaquin Kit Fox, November 2023
- Wildlife Crossing Online Lecture, November 9, 2023
- Artificial Lighting Online Lecture, November 30, 2023
- Burrowing Owl Online Training, July 17, 2024
- Blunt-nosed Leopard Lizard Field Training, CDFW, July 28, 2024
- Permit Academy Online Lectures
 - California Environmental Quality Act October 2023
 - Fluvial Geomorphology October 2023
 - Lake and Streambed Alteration Agreements October 2023
 - CESA 101 October 2024
 - CESA 102 October 2024
- Survey123, Field Maps, and ArcGIS Training November 2024
- Burrowing Owl Field Training January 28, 2025 (observed 1 BUOW and 1 active burrow)
- Temblor Legless Lizard Field Training, CDFW, February 26, 2025
- Bumble Bee Training, Bumble Bee Atlas, March 12, 2025
- Natural Communities Conference, TWS San Joaquin Valley Chapter, March 20, 2025, Bakersfield, CA.
- Bumble Bee Field Training, CDFW, April 25, 2025
- Blunt-nosed Leopard Lizard Field Training, CDFW, May 5, 2025
- San Joaquin Antelope Squirrel Trapping Training, QK, June 17, 2025

Cheadle Center for Biodiversity and Ecological Restoration UCSB (September 2021 to March 2022). *Museum Curator.*

Museum curator in charge of looking over the specimens to verify integrity and check for pest damage. Oversaw maintaining species specimens including SJKF, gray fox (*Urocyon littoralis*), red fox (*Vulpes vulpes*), American badger (*Taxidea taxus*), adult coyote (*Canis latrans*), Fresno kangaroo rat (*Dipodomys nitratoides*), Heerman's kangaroo rat (*Dipodomys heermanni*), SJAS, Mohave ground squirrel (*Xerospermophilus mohavensis*), brush rabbit (*Sylvilagus bachmani*), and ringtail (*Bassariscus astutus*). As a museum curator, participated in a research project to train an AI program to identify species from camera trap images. Manipulated specimens of yellow blotched salamander (*Ensatina eschscholtzii croceata*) and side-blotched lizard (*Uta stansburiana*) to develop a dataset to teach the AI how to identify these species in camera trap images.

SAN JOAQUIN ANTELOPE SQUIRREL

Blackwell's Corner CAPM (EA 06-0Y130), California Department of Transportation, QK – Kern County, CA (October 2025 – Present). *Associate Environmental Scientist.*

Monitored construction activities and conducted pre-construction surveys as a Designated Monitor for San Joaquin antelope squirrel (*Ammospermophilus nelsoni*), and blunt-nosed leopard lizard (*Gambelia sila*) with oversight from Designated Biologists Sarah Yates, Eric Madueno, Katie Brown, and Karissa Denney.

Kern 33 Culvert Rehab (EA 06-0X240), California Department of Transportation, QK – Kern County, CA (September 2025 – Present). *Associate Environmental Scientist.*

Shadowed burrow excavations completed by Designated Biologist Paul Rosebush and his team of Designated Monitors for approximately 3.5 hours on 9/11/25. A total of 52 SJAS burrows and 22 BNLL burrows were excavated as part of take minimization requirements for Kern 33 Culvert Rehab ITP. Mapped burrows using GPS and conducted small mammal trapping. Handled and relocated 1 adult male SJAS outside of the work area under the supervision of DB Curtis Uptain. During trapping efforts on 4/08/2026, observed 1 lactating female SJAS and 4 juveniles alongside DB Curtis Uptain and Sarah Yates. Installed soft and hard release sites for use during trapping efforts. Conducted >10 days of biological monitoring and pre-construction surveys during construction as a Designated Monitor under the supervision of a Designated Biologist.

CEQA Support – NLC Energy Project, California Resource Corporation, QK – Kern County, CA (September 9, 2025). *Associate Environmental Scientist.*

Shadowed a biologist monitoring for SJAS, SJKF, and kangaroo rats while trenching was occurring for approximately 8 hours. Incidentally observed numerous small mammal burrows and 1 loggerhead shrike (*Lanius ludovicianus*) outside of the work area.

San Joaquin Antelope Squirrel Trapping Training, QK, CDFW – Kern County, CA (June 17, 2025). *Environmental Scientist.*

- Burrowing Owl Field Training, CDFW, July 1, 2025
- Burrowing Owl Online Training, July 9-10, 2025
- The Western Section of The Wildlife Society Annual Conference, February 2026, Monterey, CA

Trained by Curtis Uptain on how to conduct small mammal trapping for SJAS and assisted in setting and checking traps for approximately 4 hours as part of survey requirements for Blackwell's Corner ITP.

Route 269 Huron Highway Planting Project, California Department of Transportation, CDFW – Fresno County, CA (May 6, 2025). *Environmental Scientist.*

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-FRE-53614-R4 which included Avoidance and Minimization Measures for CBB, TLL, BNLL, coast horned lizard (*Phrynosoma blainvillii*, CHL), Swainson's hawk (*Buteo swainsoni*, SWHA), BUOW, SJAS, GKR, SNKR, TKR, AMBA, and special status bats.

GIANT KANGAROO RAT

Route 269 Huron Highway Planting Project, California Department of Transportation, CDFW – Fresno County, CA (May 6, 2025). *Environmental Scientist.*

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-FRE-53614-R4 which included Avoidance and Minimization Measures for CBB, TLL, BNLL, CHL, SWHA, BUOW, SJAS, GKR, SNKR, TKR, AMBA, and special status bats.

TIPTON KANGAROO RAT

Route 269 Huron Highway Planting Project, California Department of Transportation, CDFW – Fresno County, CA (May 6, 2025). *Environmental Scientist.*

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-FRE-53614-R4 which included Avoidance and Minimization Measures for CBB, TLL, BNLL, CHL, SWHA, BUOW, SJAS, GKR, SNKR, TKR, AMBA, and special status bats.

SAN JOAQUIN KIT FOX

Incidental observation – Kern County, CA (January 30, 2026). *Associate Environmental Scientist.*

Observed 1 SJKF individual in a parking lot at night in Bakersfield, CA.

Blackwell's Corner CAPM (EA 06-0Y130), California Department of Transportation, QK – Kern County, CA (October 2025 – Present). *Associate Environmental Scientist.*

Is a designated monitor for SJAS, SJKF, and BNLL, and provided biological monitoring during ground disturbance, in-stream work, and concrete pours. Performed site clearance surveys prior to contractors beginning their daily activities. Created daily monitoring forms and weekly summary reports for the project.

Truxton Lakes Site Bio Survey, City of Bakersfield, QK – Kern County, CA (September 10, 2025). *Associate Environmental Scientist.*

Performed field survey with a focus on SJKF and northwestern pond turtle (*Actinemys marmorata*, WPT). Observed 3 potential SJKF dens and SJKF scat.

Vista HS Continuation Project, Kern High School District, QK – Kern County, CA (September 11, 2025). *Associate Environmental Scientist.*

Performed field survey for a Biological Resource Assessment with a focus on SJKF and BUOW for 3 hours. Observed 1 known historical SJKF natal den and SJKF scat.

Kern Bridge Repair Project, California Department of Transportation, CDFW – Kern County, CA (July 19, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-25457-R4 which included Avoidance and Minimization Measures for western spadefoot (*Spea hammondi*, WESP), WPT, Bakersfield legless lizard (*Anniella grinnelli*), SWHA, white-tailed kite (*Elanus leucurus*, WTKI), BUOW, SJKF, and special status bats.

King City CAPM Project, California Department of Transportation, CDFW – Monterey County, CA (February 10, 2025). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-MON-44564-R4 which included Avoidance and Minimization Measures for CBB, WESP, California red-legged frog (*Rana draytonii*, CRLF), WPT, CHL, NCLL, San Joaquin coachwhip (*Masticophis flagellum ruddocki*, SJCW), GOEA, bank swallow (*Riparia riparia*, BANS), Salinas pocket mouse (*Perognathus inornatus psammophilus*), Monterey dusky-footed woodrat (*Neotoma macrotis luciana*, MDFW), SJKF, AMBA, and special status bats.

Pumpkin Center Rehabilitation Project, California Department of Transportation, CDFW – Kern County, CA (January 10, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-44385-R4 which included Avoidance and Minimization Measures for Bakersfield legless lizard, SJCW, SWHA, WTKI, BUOW, swallows, SJKF, and AMBA.

BIRDS

Drafted Avoidance and Minimization Measures as well as reviewed preconstruction survey submittals for SWHA, BUOW, tricolored blackbird (*Agelaius tricolor*, TRBL), golden eagle (*Aquila chrysaetos*, GOEA), bald eagle (*Haliaeetus leucocephalus*,

BAEA), CACO, swallows, and nesting birds. Additionally, reviewed Swallow Avoidance and Exclusion Plans.

GOLDEN EAGLE

Grapevine Rehabilitation Project, California Department of Transportation, CDFW – Kern County, CA (April 18, 2025).

Environmental Scientist.

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-53604-R4 which included Avoidance and Minimization Measures for CBB, Tehachapi slender salamander (*Batrachoseps stebbinsi*, TSS), yellow-blotched salamander (*Ensatina eschscholtzii croceator*, YBS), WPT, CHL, NCLL, CACO, GOEA, purple martin (*Progne subis*, PUMA), AMBA, and special status plants.

King City CAPM Project, California Department of Transportation, CDFW – Monterey County, CA (February 10, 2025). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-MON-44564-R4 which included Avoidance and Minimization Measures for CBB, WESP, CRLF, WPT, CHL, NCLL, SJCW, GOEA, BANS, SPM, MDFW, SJKF, AMBA, and special status bats.

Santa Margarita SR 58 CAPM Project, California Department of Transportation, CDFW – San Luis Obispo County, CA (June 19, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-SLO-47299-R4 which included Avoidance and Minimization Measures for CBB, WESP, CRLF, WPT, GOEA, WTKI, BAEA, and AMBA.

SWAINSON'S HAWK.

Madera 41 South Expressway, California Department of Transportation, CDFW – Madera County, CA (May 30, 2025)

Environmental Scientist

Reviewed Environmental Impact Report, performed aquatic resource delineation, and identified potentially impacted special status species during ITP Application and LSAA Notification review. Drafted LSAA No. EPIMS-MAD-53585-R4 which included Avoidance and Minimization Measures for vernal pool fairy shrimp (*Branchinecta lynchi*, VPFS), CBB, CTS, WESP, Northern California legless lizard (*Anniella pulchra*, NCLL), SWHA, BUOW, TRBL, AMBA, San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*, SJVOG), hairy Orcutt grass (*Orcuttia pilosa*), and other rare plants.

Route 269 Huron Highway Planting Project, California Department of Transportation, CDFW – Fresno County, CA (May 6, 2025). *Environmental Scientist.*

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-FRE-53614-R4 which included Avoidance and Minimization Measures for CBB, TLL, BNLL, CHL, SWHA, BUOW, SJAS, GKR, SNKR, TKR, AMBA, and special status bats.

Kern Bridge Repair Project, California Department of Transportation, CDFW – Kern County, CA (July 19, 2024).
Environmental Scientist.

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-25457-R4 which included Avoidance and Minimization Measures for WESP, WPT, Bakersfield legless lizard, SWHA, WTKI, BUOW, SJKF, and special status bats.

Pumpkin Center Rehabilitation Project, California Department of Transportation, CDFW – Kern County, CA (January 10, 2024).
Environmental Scientist.

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-44385-R4 which included Avoidance and Minimization Measures for Bakersfield legless lizard, SJCW, SWHA, WTKI, BUOW, swallows, SJKF, and AMBA.

BURROWING OWL

Vista HS Continuation Project, Kern High School District, QK – Kern County, CA (September 11, 2025). *Associate Environmental Scientist.*

Performed field survey for a Biological Resource Assessment with a focus on SJKF and BUOW for 3 hours. Observed 1 known historical SJKF natal den and SJKF scat.

Kern Bridge Repair Project, California Department of Transportation, CDFW – Kern County, CA (July 19, 2024).
Environmental Scientist.

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-25457-R4 which included Avoidance and Minimization Measures for WESP, WPT, Bakersfield legless lizard, SWHA, WTKI, BUOW, SJKF, and special status bats.

Route 269 Huron Highway Planting Project, California Department of Transportation, CDFW – Fresno County, CA (May 6, 2025). *Environmental Scientist.*

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-FRE-53614-R4 which included Avoidance and Minimization Measures for CBB, TLL, BNLL, CHL, SWHA, BUOW, SJAS, GKR, SNKR, TKR, AMBA, and special status bats.

Madera 41 South Expressway, California Department of Transportation, CDFW – Madera County, CA (May 30, 2025)
Environmental Scientist

Reviewed Environmental Impact Report, performed aquatic resource delineation, and identified potentially impacted special status species during ITP Application and LSAA Notification review. Drafted LSAA No. EPIMS-MAD-53585-R4 which included Avoidance and Minimization Measures for VPFS, CBB, CTS, WESP, NCLL, SWHA, BUOW, TRBL, AMBA, SJVOG, hairy Orcutt grass, and other rare plants.

SLO County Asset Management Project, California Department of Transportation, CDFW – San Luis Obispo County, CA (June 24, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-SLO-42964-R4 which included Avoidance and Minimization Measures for CBB, CRLF, WPT, CHL, NCLL, two-striped gartersnake (*Thamnophis hammondi*, TSGS), WTKI, BUOW, yellow warbler (*Setophaga petechia*), MDFW, AMBA, and special status bats.

Pumpkin Center Rehabilitation Project, California Department of Transportation, CDFW – Kern County, CA (January 10, 2024).
Environmental Scientist.

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-44385-R4 which included Avoidance and Minimization Measures for Bakersfield legless lizard, SJCW, SWHA, WTKI, BUOW, swallows, SJKF, and AMBA.

Burrowing Owl Field Training, CDFW – Kern County, CA (January 28, 2025). *Environmental Scientist.*

Trained by CDFW Staff on how to recognize signs of an active BUOW burrow and recognize BUOW habitat. Observed 1 BUOW burrow with whitewash, pellets, feathers, and bones.

Burrowing Owl Field Training, CDFW – Kern County, CA (July 1, 2025). *Environmental Scientist.*

Trained by CDFW Lands Staff on how to conduct surveys for BUOW, recognize signs of an active BUOW burrow, and recognize BUOW habitat. Observed 1 BUOW fleeing from burrow and listened to its calls.

HERPETOFAUNA AND REPTILIA

Handled two Temblor legless lizards (*Anniella alexanderae*), two blunt-nosed Leopard lizards (*Gambelia sila*), three California newts (*Taricha torosa*), two Western Side-blotched lizards (*Uta*

stansburiana elegans), two Gilbert's Skinks (*Plestiodon gilberti*), two Desert Collared lizards (*Crotaphytus bicinctores*), three Chuckwallas (*Sauromalus ater*), one Mojave Shovelnose snake (*Sonora occipitalis*), and one Great Basin Gophersnake (*Pituophis catenifer deserticola*). Handled one captive western tiger salamander (*Ambystoma mavortium*) over the course of 10 years. Drafted Avoidance and Minimization Measures as well as reviewed preconstruction survey submittals for CTS, TSS, WESP, WPT, BNLL, CHL, TLL, NCLL, San Joaquin Coachwhip (*Masticophis flagellum ruddocki*), Giant Gartersnake (*Thamnophis gigas*, GGS), and Two-striped Gartersnake (*Thamnophis hammondi*, TSGS).

Cheadle Center for Biodiversity and Ecological Restoration UCSB – Santa Barbara CA (September 2021 to March 2022). *Museum Curator.*

Museum curator in charge of looking over the specimens to verify integrity and check for pest damage. Oversaw maintaining species specimens including CTS, Western spadefoot, Tehachapi slender salamander, and yellow blotched salamander. As a museum curator, participated in a research project to train an AI program to identify species from camera trap images. Manipulated specimens of yellow blotched salamander and side-blotched lizard to develop a dataset to teach the AI how to identify these species in camera trap images.

CALIFORNIA TIGER SALAMANDER

Madera 41 South Expressway, California Department of Transportation, CDFW – Madera County, CA (May 30, 2025). *Environmental Scientist.*

Reviewed Environmental Impact Report, performed aquatic resource delineation, and identified potentially impacted special status species during ITP Application and LSAA Notification review. Drafted LSAA No. EPIMS-MAD-53585-R4 which included Avoidance and Minimization Measures for VPFS, CBB, CTS, WESP, NCLL, SWHA, BUOW, TRBL, AMBA, SJVOG, hairy Orcutt grass, and other rare plants. Also drafted ITP No. 2081-2024-068-04 for CTS and SJVOG. Performed multiple site visits prior to issuing LSAA and ITP to perform aquatic resource delineation and identify CTS, WESP, and SJVOG habitat.

TEHACHAPI SLENDER SALAMANDER

Grapevine Rehabilitation Project, California Department of Transportation, CDFW – Kern County, CA (April 18, 2025). *Environmental Scientist.*

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-53604-R4 which included Avoidance and Minimization Measures for CBB, TSS, YBS, WPT, CHL, NCLL, CACO, GOEA, PUMA, AMBA, and special status plants.

WESTERN SPADEFOOT

Madera 41 South Expressway, California Department of Transportation, CDFW – Madera County, CA (May 30, 2025). *Environmental Scientist.*

Reviewed Environmental Impact Report, performed aquatic resource delineation, and identified potentially impacted special status species during ITP Application and LSAA Notification review. Drafted LSAA No. EPIMS-MAD-53585-R4 which included Avoidance and Minimization Measures for VPFS, CBB, CTS, WESP, NCLL, SWHA, BUOW, TRBL, AMBA, SJVOG, hairy Orcutt grass, and other rare plants. Performed multiple site visits prior to issuing LSAA and ITP to perform aquatic resource delineation and identify CTS, WESP, and SJVOG habitat. Observed numerous WESP tadpoles on nearby property.

King City CAPM Project, California Department of Transportation, CDFW – Monterey County, CA (February 10, 2025). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-MON-44564-R4 which included Avoidance and Minimization Measures for CBB, WESP, CRLF, WPT, CHL, NCLL, SJCW, GOEA, BANS, SPM, MDFW, SJKF, AMBA, and special status bats.

Kern Bridge Repair Project, California Department of Transportation, CDFW – Kern County, CA (July 19, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-25457-R4 which included Avoidance and Minimization Measures for WESP, WPT, Bakersfield legless lizard, SWHA, WTKI, BUOW, SJKF, and special status bats.

Santa Margarita SR 58 CAPM Project, California Department of Transportation, CDFW – San Luis Obispo County, CA (June 19, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-SLO-47299-R4 which included Avoidance and Minimization Measures for CBB, WESP, CRLF, WPT, GOEA, WTKI, BAEA, and AMBA.

YELLOW-LEGGED FROGS

South Fork Merced River Bridge Project, California Department of Transportation, CDFW – Mariposa County, CA (June 6, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-MAR-44758-R4 which included Avoidance and Minimization Measures for foothill yellow-legged frog (*Rana boylei*), Sierra Nevada yellow-legged frog (*Rana sierrae*), hardhead (*Mylopharodon*

conocephalus), fisher (*Pekania pennanti*), ringtail (*Bassariscus astutus*), and special status bats.

CALIFORNIA RED-LEGGED FROG

King City CAPM Project, California Department of Transportation, CDFW – Monterey County, CA (February 10, 2025). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-MON-44564-R4 which included Avoidance and Minimization Measures for CBB, WESP, CRLF, WPT, CHL, NCLL, SJCW, GOEA, BANS, SPM, MDFW, SJKF, AMBA, and special status bats.

SLO County Asset Management Project, California Department of Transportation, CDFW – San Luis Obispo County, CA (June 24, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-SLO-42964-R4 which included Avoidance and Minimization Measures for CBB, CRLF, WPT, CHL, NCLL, TSGS, WTKI, BUOW, yellow warbler, MDFW, AMBA, and special status bats.

Santa Margarita SR 58 CAPM Project, California Department of Transportation, CDFW – San Luis Obispo County, CA (June 19, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-SLO-47299-R4 which included Avoidance and Minimization Measures for CBB, WESP, CRLF, WPT, GOEA, WTKI, BAEA, and AMBA.

WESTERN POND TURTLE

Grapevine Rehabilitation Project, California Department of Transportation, CDFW – Kern County, CA (April 18, 2025). *Environmental Scientist.*

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-53604-R4 which included Avoidance and Minimization Measures for CBB, TSS, YBS, WPT, CHL, NCLL, CACO, GOEA, PUMA, AMBA, and special status plants.

King City CAPM Project, California Department of Transportation, CDFW – Monterey County, CA (February 10, 2025). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-MON-44564-R4 which included Avoidance and Minimization Measures for CBB,

WESP, CRLF, WPT, CHL, NCLL, SJCW, GOEA, BANS, SPM, MDFW, SJKF, AMBA, and special status bats.

Kern Bridge Repair Project, California Department of Transportation, CDFW – Kern County, CA (July 19, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-25457-R4 which included Avoidance and Minimization Measures for WESP, WPT, Bakersfield legless lizard, SWHA, WTKI, BUOW, SJKF, and special status bats.

SLO County Asset Management Project, California Department of Transportation, CDFW – San Luis Obispo County, CA (June 24, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-SLO-42964-R4 which included Avoidance and Minimization Measures for CBB, CRLF, WPT, CHL, NCLL, TSGS, WTKI, BUOW, yellow warbler, MDFW, AMBA, and special status bats.

Santa Margarita SR 58 CAPM Project, California Department of Transportation, CDFW – San Luis Obispo County, CA (June 19, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-SLO-47299-R4 which included Avoidance and Minimization Measures for CBB, WESP, CRLF, WPT, GOEA, WTKI, BAEA, and AMBA.

BLUNT-NOSED LEOPARD LIZARD

Blackwell's Corner CAPM (EA 06-0Y130), California Department of Transportation, QK – Kern County, CA (October 2025 – Present). *Associate Environmental Scientist.*

Is a designated monitor for SJAS, SJKF, and BNLL, and provided biological monitoring during ground disturbance, in-stream work, and concrete pours. Performed site clearance surveys prior to contractors beginning their daily activities. Created daily monitoring forms and weekly summary reports for the project.

Kern 33 Culvert Rehab (EA 06-0X240), California Department of Transportation, QK – Kern County, CA (September 11, 2025). *Associate Environmental Scientist.*

Shadowed burrow excavations completed by Designated Biologist Paul Rosebush and his team of Designated Monitors for approximately 3.5 hours. A total of 51 SJAS burrows and 22 BNLL burrows were excavated as part of take minimization requirements for Kern 33 Culvert Rehab ITP.

Protocol BNLL Survey Training, CDFW. – Kern County, CA (July 28, 2024). *Environmental Scientist.*

Conducted BNLL surveys following protocol for an estimated 8 hours and observed three adult male BNLL. Noosed and handled

two adult male BNLL. Incidentally observed 2 SJAS and 5 western side-blotched lizards.

Protocol BNLL Survey Training, CDFW. – Kern County, CA (May 22, 2025). *Environmental Scientist.*

Trained to conduct Protocol-level BNLL surveys for an estimated 8 hours and observed one adult male BNLL. Incidentally observed 1 SJAS.

Route 269 Huron Highway Planting Project, California Department of Transportation, CDFW – Fresno County, CA (May 6, 2025). *Environmental Scientist.*

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-FRE-53614-R4 which included Avoidance and Minimization Measures for CBB, TLL, BNLL, CHL, SWHA, BUOW, SJAS, GKR, SNKR, TKR, AMBA, and special status bats.

LEGLESS LIZARDS

Temblor Legless Lizard Training, CDFW – Kern County, CA (February 26, 2025) *Environmental Scientist.*

Trained in tile checking and raking for legless lizards by Theodore Papenfuss and Erin Tennant for 11 hours total. Handled two TLL.

Natural Communities Conference, TWS San Joaquin Valley Chapter – Bakersfield, CA (March 20, 2025) *Environmental Scientist.*

Attended the Natural Communities Conference and handled one captive TLL.

Route 269 Huron Highway Planting Project, California Department of Transportation, CDFW – Fresno County, CA (May 6, 2025). *Environmental Scientist.*

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-FRE-53614-R4 which included Avoidance and Minimization Measures for CBB, TLL, BNLL, CHL, SWHA, BUOW, SJAS, GKR, SNKR, TKR, AMBA, and special status bats.

Madera 41 South Expressway, California Department of Transportation, CDFW – Madera County, CA (May 30, 2025) *Environmental Scientist*

Reviewed Environmental Impact Report, performed aquatic resource delineation, and identified potentially impacted special status species during ITP Application and LSAA Notification review. Drafted LSAA No. EPIMS-MAD-53585-R4 which included Avoidance and Minimization Measures for VPFS, CBB, CTS, WESP, NCLL, SWHA, BUOW, TRBL, AMBA, SJVOG, hairy Orcutt grass, and other rare plants.

Grapevine Rehabilitation Project, California Department of Transportation, CDFW – Kern County, CA (April 18, 2025). *Environmental Scientist.*

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No.

EPIMS-KER-53604-R4 which included Avoidance and Minimization Measures for CBB, TSS, YBS, WPT, CHL, NCLL, CACO, GOEA, PUMA, AMBA, and special status plants.

King City CAPM Project, California Department of Transportation, CDFW – Monterey County, CA (February 10, 2025). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-MON-44564-R4 which included Avoidance and Minimization Measures for CBB, WESP, CRLF, WPT, CHL, NCLL, SJCW, GOEA, BANS, SPM, MDFW, SJKF, AMBA, and special status bats.

Kern Bridge Repair Project, California Department of Transportation, CDFW – Kern County, CA (July 19, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-25457-R4 which included Avoidance and Minimization Measures for WESP, WPT, Bakersfield legless lizard, SWHA, WTKI, BUOW, SJKF, and special status bats.

SLO County Asset Management Project, California Department of Transportation, CDFW – San Luis Obispo County, CA (June 24, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-SLO-42964-R4 which included Avoidance and Minimization Measures for CBB, CRLF, WPT, CHL, NCLL, TSGS, WTKI, BUOW, yellow warbler, MDFW, AMBA, and special status bats.

Pumpkin Center Rehabilitation Project, California Department of Transportation, CDFW – Kern County, CA (January 10, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-44385-R4 which included Avoidance and Minimization Measures for Bakersfield legless lizard, SJCW, SWHA, WTKI, BUOW, swallows, SJKF, and AMBA.

SNAKES

King City CAPM Project, California Department of Transportation, CDFW – Monterey County, CA (February 10, 2025). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-MON-44564-R4 which included Avoidance and Minimization Measures for CBB,

WESP, CRLF, WPT, CHL, NCLL, SJCW, GOEA, BANS, SPM, MDFW, SJKF, AMBA, and special status bats.

SLO County Asset Management Project, California Department of Transportation, CDFW – San Luis Obispo County, CA (June 24, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-SLO-42964-R4 which included Avoidance and Minimization Measures for CBB, CRLF, WPT, CHL, NCLL, TSGS, WTKI, BUOW, yellow warbler, MDFW, AMBA, and special status bats.

Pumpkin Center Rehabilitation Project, California Department of Transportation, CDFW – Kern County, CA (January 10, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-44385-R4 which included Avoidance and Minimization Measures for Bakersfield legless lizard, SJCW, SWHA, WTKI, BUOW, swallows, SJKF, and AMBA.

BUMBLE BEES

Madera 41 South Expressway, California Department of Transportation, CDFW – Madera County, CA (May 30, 2025) *Environmental Scientist.*

Reviewed Environmental Impact Report, performed aquatic resource delineation, and identified potentially impacted special status species during ITP Application and LSAA Notification review. Drafted LSAA No. EPIMS-MAD-53585-R4 which included Avoidance and Minimization Measures for VPFS, CBB, CTS, WESP, NCLL, SWHA, BUOW, TRBL, AMBA, SJVOG, hairy Orcutt grass, and other rare plants.

Route 269 Huron Highway Planting Project, California Department of Transportation, CDFW – Fresno County, CA (May 6, 2025). *Environmental Scientist.*

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-FRE-53614-R4 which included Avoidance and Minimization Measures for CBB, TLL, BNLL, CHL, SWHA, BUOW, SJAS, GKR, SNKR, TKR, AMBA, and special status bats.

Grapevine Rehabilitation Project, California Department of Transportation, CDFW – Kern County, CA (April 18, 2025). *Environmental Scientist.*

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-53604-R4 which included Avoidance and Minimization Measures for CBB, TSS, YBS, WPT, CHL, NCLL, CACO, GOEA, PUMA, AMBA, and special status plants.

King City CAPM Project, California Department of Transportation, CDFW – Monterey County, CA (February 10, 2025). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-MON-44564-R4 which included Avoidance and Minimization Measures for CBB, WESP, CRLF, WPT, CHL, NCLL, SJCW, GOEA, BANS, SPM, MDFW, SJKF, AMBA, and special status bats.

SLO County Asset Management Project, California Department of Transportation, CDFW – San Luis Obispo County, CA (June 24, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-SLO-42964-R4 which included Avoidance and Minimization Measures for CBB, CRLF, WPT, CHL, NCLL, TSGS, WTKI, BUOW, yellow warbler, MDFW, AMBA, and special status bats.

Santa Margarita SR 58 CAPM Project, California Department of Transportation, CDFW – San Luis Obispo County, CA (June 19, 2024). *Environmental Scientist.*

Reviewed Initial Study with Mitigated Negative Declaration, performed aquatic resource delineation, and identified potentially impacted special status species during LSAA Notification review. Drafted LSAA No. EPIMS-SLO-47299-R4 which included Avoidance and Minimization Measures for CBB, WESP, CRLF, WPT, GOEA, WTKI, BAEA, and AMBA.

Bumble Bee Field Training, CDFW – San Luis Obispo County, CA (April 25, 2024). *Environmental Scientist.*

Conducted protocol-level bumble bee surveys along with CDFW staff for 3 hours. Practiced identifying bumble bees and taking photos for identification.

RARE PLANTS

Madera 41 South Expressway, California Department of Transportation, CDFW – Madera County, CA (May 30, 2025) *Environmental Scientist.*

Reviewed Environmental Impact Report, performed aquatic resource delineation, and identified potentially impacted special status species during ITP Application and LSAA Notification review. Drafted LSAA No. EPIMS-MAD-53585-R4 which included Avoidance and Minimization Measures for VPFS, CBB, CTS, WESP, NCLL, SWHA, BUOW, TRBL, AMBA, SJVOG, hairy Orcutt grass, and other rare plants. Also drafted ITP No. 2081-2024-068-04 for CTS and SJVOG. Performed multiple site visits prior to issuing LSAA and ITP to perform aquatic resource delineation and identify CTS, WESP, and SJVOG habitat.

Grapevine Rehabilitation Project, California Department of Transportation, CDFW – Kern County, CA (April 18, 2025). *Environmental Scientist.*

Reviewed Notice of Exemption, performed aquatic resource delineation, and identified potentially impacted special status



species during LSAA Notification review. Drafted LSAA No. EPIMS-KER-53604-R4 which included Avoidance and Minimization Measures for CBB, TSS, YBS, WPT, CHL, NCLL, CACO, GOEA, PUMA, AMBA, and special status plants.



Kelli Ann Baldwin

Associate Environmental Scientist

AREAS OF EXPERTISE

- Field Mapping
- Habitat Assessments
- Wildlife and Botanical Surveying
- Threatened and endangered species (SWHA, BNLL, WEBO, SJKF, WJT)
- Safety Meeting Facilitation
- WEAP Training Facilitation

EDUCATION

- BS, Environmental Science, Environmental Planning Certificate, California State University, Fresno, May 2025

REGISTRATIONS/CERTIFICATIONS

- California Department of Fish and Wildlife, Level II Blunt-nosed Leopard Lizard Surveyor

PERMITS

- California Endangered Species Act and Native Plant Protection Act Plant Voucher Collecting Permit (2081(a)-25-223-V

AWARDS / RECOGNITION

- Employee of the Year 2024, Kaweah Health Hospital
- Employee of the Month 2022, Kaweah Health Hospital

CONTINUING EDUCATION

- Wildlife Biologist Construction Awareness Training (WILD C.A.T) – The Western Section of the Wildlife Society, February 4, 2025, Visalia, CA
- California Tiger Salamander Terrestrial Ecology Workshop – Laguna De Santa Rosa Foundation, March 7, 2025, Santa Rosa, CA
- Natural Communities Conference – The Western Section of the Wildlife Society, San Joaquin Valley Chapter, March 19, 2026, Bakersfield, CA

Ms. Baldwin is California State University, Fresno graduate with a Bachelor of Science in Environmental Science and a certificate in Environmental Planning. She has 2.5 years professional experience in California.

She has conducted protocol level surveys for state and federally listed species including Desert Tortoise (*Gopherus agassizii*, DETO), Burrowing Owl (*Athene cunicularia*, WEBO), and Blunt-nosed leopard lizard (*Gambelia sila*, BNLL), and is a Level II BNLL surveyor.

Ms. Baldwin has also worked as a biological monitor on active construction sites for protected species such DETO, Western Joshua Tree (*Yucca brevifolia*, WJT), and Mohave ground squirrel (*Xerospermophilus mohavensis*, MGS).

PROFESSIONAL EMPLOYMENT

10/2025 – Present	QK, Associate Environmental Scientist
2024 – 2025	Bancroft Construction Services, Biology Technician II
2023 – 2025	Dudek Environmental Planning Firm, Environmental Field Technician I/Field Lead
2020 – 2025	Kaweah Health Clinical Laboratory, Laboratory Technician (Chemistry, Hematology, Blood Bank)

PROJECT EXPERIENCE

MAMMALS

Observed and identified 50 San Joaquin antelope squirrels (*Ammospermophilus nelsoni*), nine San Joaquin kit fox (*Vulpes macrotis mutica*), and seven desert kit fox (*Vulpes macrotis*). Handled one desert cottontail rabbit (*Sylvilagus audubonii*) kit. Handled five deer mouse (*Peromyscus maniculatus*).

SAN JOAQUIN ANTELOPE SQUIRREL

California High Speed Rail Project Fresno to Bakersfield: Construction Package 2-3, California High-Speed Rail Authority – Fresno – Bakersfield, CA. (August 2025 – September 2025) Biology Technician II.

Conducted approx. 80 hours of nesting bird sweeps and documented any nests, species, and sign. Ensured construction activities were in compliance with the project's permits. Handled one desert cottontail rabbit kit (*Sylvilagus audubonii*). Observed one active mourning dove (*Zenaida macroura*) nest with two eggs. Conducted approximately 20 hours of pre-construction surveys for SJAS, WEBO, SWHA, CTS, and nesting birds.

Lokern Sensitive Species Training, Bancroft CS – Lokern, CA. (March 2025) *Biology Technician II.*

Attended a sensitive species training to help identify SJAS habitat, physical characteristics, behaviors, and factors contributing to their endangered status. Conducted three-hour car survey and identified approx. 30 SJAS individuals, 50 potential burrows, and 20 active burrows.

Lokern Sensitive Species Training, Bancroft CS – Lokern, CA. (December 2024) *Biology Technician II.*

Attended a sensitive species training to help identify SJAS habitat, physical characteristics, behaviors, and factors contributing to their endangered status. Conducted three-hour car survey and identified approx. 20 SJAS individuals, 40 potential burrows, and 10 active burrows.

Solstice Solar, Confidential Client – Mendota, CA. (May 2024 - September 2024) *Environmental Field Technician I/Field Lead.*

Incidentally observed six SJAS while conducting protocol-level linear transect survey for BNLL. SJAS observations were reported and recorded.

SAN JOAQUIN KIT FOX

SJKF training at California State University Bakersfield, Bancroft CS – Bakersfield, CA. (March 2025) *Biology Technician II.*

Attended in-person training led by Bret Laurendine to learn how to identify SJKF and suitable habitat. Conducted a four-hour survey on the CSUB campus and used spotlights to locate individuals. Identified SJKF scat, tracks, habitat, and dens. Observed three SJKF, and six potential kit fox dens (PKFD).

SJKF training at California State University Bakersfield, Bancroft CS – Bakersfield, CA. (December 2024) *Biology Technician II.*

Attended an in-person training led by Bret Laurendine and Whisper-Lynn Null to learn how to identify SJKF and suitable habitat. Conducted four-hour survey on the CSUB campus and used spotlights to locate individuals. Identified SJKF scat, pray remains, tracks, habitat, and dens. Observed five SJKF, five potential kit fox dens, and one known kit fox den.

Pelican's Jaw Hybrid Solar Project, Confidential Client – Lost Hills, CA. (May 2023- September 2023) *Environmental Field Technician I.*

Incidentally observed one SJKF while conducting protocol-level linear transect surveys for BNLL. Identified one active atypical den.

MOHAVE GROUND SQUIRREL

Springbok Solar 1 & 2, Confidential Client – Cantil, CA. (April 2025) *Environmental Field Technician I.*

Monitored vegetation trimming activities beneath solar panels for MGS and DETO, ensuring compliance with the project's permits: Springbok 1 Solar ITP - 2081-2015-007-04 and Springbok 2 Solar ITP - 2081-2015-026-04. Completed Approx. 20 hours of monitoring.

DESERT KIT FOX

Grace Solar Project, Confidential Client – Blythe, CA. (September 2025 - October 2025) *Environmental Field Technician I.*

Incidentally observed one desert kit fox (DKF) while conducting protocol-level clearance surveys for DETO. Identified an active DKF den complex via camera trapping. Observed six more DKF via camera trap. Monitored irrigation hole filling activities for DETO and DKF. Completed 16 hours of monitoring for DKF and DETO.

BIRDS

Observed seven SWHA (4 dark morph, 3 light morph) and seven WEBO. Conducted pre-construction, linear transect, and burrowing mapping surveys for WEBO and established buffers for known WEBO burrows. Also conducted general nesting bird surveys for species protected by the Migratory Bird Treaty Act (MBTA).

SWAINSON'S HAWK

Community Master Planning Services, Santa Rosa Rancheria – Santa Rosa Rancheria, CA. (December 2025 - ongoing) *Associate Environmental Scientist.*

Conducted approx. 32 hours of nesting bird surveys and documented any nests, species, and sign. Conducted approximately 32 hours of wetland delineations. Completed approximately 16 hours of burrowing mapping surveys. Observed two light morph SWHA.

California High Speed Rail Project Fresno to Bakersfield: Construction Package 2-3, California High-Speed Rail Authority – Fresno – Bakersfield, CA. (August 2025 – September 2025) *Biology Technician II.*

Conducted approx. 80 hours of nesting bird sweeps and documented any nests, species, and sign. Ensured construction activities were in compliance with the project's permits. Handled one desert cottontail rabbit kit (*Sylvilagus audubonii*). Observed one active Mourning Dove nest with two eggs. Conducted approx. 20 hours of pre-construction surveys for SJAS, WEBO, SWHA, CTS, and nesting birds.

Vegetation Management, Southern California Edison – Tehachapi, CA. (May 2025 - August 2025) *Biology Technician II.*

Conducted approx. 80 days of a variety of pre-construction surveys for SWHA, nesting birds, WEBO, WJT, acorn woodpecker (ACWO), and rare plants. Assessed habitat conditions and suitability and reported wildlife observations and sign. Observed one red-tailed hawk (RTHA) nest and one active ACWO cavity. Observed one adult light-morph SWHA flying.

Sonrisa Solar, Confidential Client – Mendota, CA. (March 2025) *Environmental Field Technician I.*

Incidentally observed three dark morph SWHA while conducting linear transect surveys for WEBO and burrow mapping. Identified and established buffers for two active mourning dove nest nests and two active WEBO burrows.



Solstice Solar, Confidential Client – Mendota, CA. (February 2025) *Environmental Field Technician I.*
Incidentally observed one dark morph SWHA while conducting linear transect surveys for WEBO.

WESTERN BURROWING OWL

Jasmine Solar Project, CCI– Kern County, CA. (November 2025 - ongoing) *Associate Environmental Scientist.*

Conducted approximately 40 days of construction monitoring and 5 days of preconstruction surveys. Established environmentally sensitive area (ESA) buffer for great-horned owl (*Bubo virginianus*) nest. Handled three deer mice (*Peromyscus maniculatus*) and relocated off site. Observed two mating WEBO using an atypical burrow.

California High Speed Rail Project Fresno to Bakersfield: Construction Package 2-3, California High-Speed Rail Authority – Fresno – Bakerfield, CA. (August 2025 – September 2025) *Biology Technician II.*

Conducted approx. 80 hours of nesting bird sweeps and documented any nests, species, and sign. Ensured construction activities were in compliance with the project's permits. Handled one desert cottontail rabbit kit (*Sylvilagus audubonii*). Observed one active Mourning Dove nest with two eggs. Conducted approx. 20 hours of pre-construction surveys for SJAS, WEBO, SWHA, CTS, and nesting birds.

Pixley National Wildlife Refuge Civilian Survey, Bancroft CS – Pixley, CA. (August 2025) *Biology Technician II.*

Observed two WEBO and two active WEBO burrows while conducting car surveys for BNLL.

Vegetation Management, Southern California Edison – Tehachapi, CA. (May 2025 - August 2025) *Biology Technician II.*

Conducted approx. 80 days of a variety of pre-construction surveys for SWHA, nesting birds, WEBO, WJT, acorn woodpecker (ACWO), and rare plants. Assessed habitat suitability for WEBO and documented species or sign present.

Sonrisa Solar – Mendota, CA. (March 2025) *Environmental Field Technician I.*

Conducted pre-clearance linear transect surveys for WEBO and documented any species or sign present. Identified two active WEBO burrows and established buffers around each

Solstice Solar, Confidential Client – Mendota, CA. (February 2024) *Environmental Field Technician I.*

Conducted linear transect surveys for WEBO and documented any species or sign present. Observed three WEBO and identified three active WEBO burrows.

NESTING BIRDS

California High Speed Rail Project Fresno to Bakersfield: Construction Package 2-3, California High-Speed Rail Authority – Fresno, Hanford, Corcoran, CA. (August 2025 – September 2025) *Biology Technician II.*

Conducted approx. 80 hours of nesting bird sweeps and documented any nests, species, and sign. Ensured construction activities were in compliance with the project's permits. Handled one desert cottontail rabbit kit (*Sylvilagus audubonii*). Observed one active Mourning Dove nest with two eggs. Conducted approx. 20 hours of pre-construction surveys for SJAS, WEBO, SWHA, CTS, and nesting birds.

Vegetation Management, Southern California Edison – Tehachapi, Antelope Valley, CA. (May 2025 - August 2025)
Biology Technician II.

Conducted approx. 40 days of nesting bird pre-con surveys and documented nests, species, and sign. Assessed habitat conditions and suitability. Observed one red-tailed hawk (RTHA) nest and one active ACWO cavity. Observed one SWHA.

CALIFORNIA CONDOR

Pinnacles National Park Civilian Survey – Pinnacles National Park, CA. *Biology Technician II.*

Observed two California Condor (*Gymnogyps californianus*) while recreating. Noted their physical characteristics, behaviors, and habitat. Compared to turkey vulture, a sympatric species, in the same airspace.

HERPETOFAUNA

Observed one BNLL in its natural habitat, six preserved BNLL specimens, two preserved CTS specimens, and six coast horned lizard (*Phrynosoma blainvillii*). Handled one Temblor legless lizard (*Anniella alexanderae*), one Bakersfield legless lizard (*Anniella grinnelli*), one Northern California Legless Lizard (*Anniella pulchra*), one desert horned lizard (*Phrynosoma platyrhinos*), one Pacific gopher snake (*Pituophis catenifer*), one California newt (*Taricha torosa*) and one Rough-skinned newt (*Taricha granulosa*). Conducted 53 protocol survey days for BNLL and is a Level II surveyor for the species.

BLUNT-NOSED LEOPARD LIZARD

Pixley National Wildlife Refuge Civilian Survey, Bancroft CS – Pixley, CA. (August 2025) *Biology Technician II.*

Conducted car surveys for BNLL. Observed one BNLL with another Level I BNLL Surveyor. Noted physical characteristics, behavior, and habitat and submitted an observation form to the California Natural Diversity Database.

CSUB BNLL Specimen Observation, Bancroft CS – Bakersfield, CA. (April 2025) *Biology Technician II.*

Conducted morphological assessment of six adult preserved BNLL specimens (two females, four males). Measured body size and recorded characteristics including body shape, coloration, and dorsal markings. Sex was determined by identifying the presence of enlarged post-anal scales in males. Documented variation in physical traits across individuals. This work was supervised by a Level II BNLL Surveyor.

Vegetation Management, Southern California Edison – Tehachapi, Antelope Valley, CA. (May 2025 - August 2025)
Biology Technician II.

Conducted 16 hours of pre-construction surveys for BNLL. Assessed habitat conditions and suitability.

Solstice Solar, Confidential Client – Mendota, CA. (May 2024 - August 2025)
Environmental Field Technician I/Field Lead.

Performed sample linear transect surveys for BNLL. Assessed habitat conditions and suitability. Conducted the morning safety tailgate meeting and presented a Worker Environmental Awareness Program (WEAP) to environmental survey technicians.

Pelican's Jaw Hybrid Solar Project, Confidential Client – Lost Hills, CA. (May 2023- September 2023)
Environmental Field Technician I.

Performed protocol-level linear transect surveys for BNLL. Assessed habitat conditions and suitability.

CALIFORNIA TIGER SALAMANDER

California High Speed Rail Project Fresno to Bakersfield: Construction Package 2-3, California High-Speed Rail Authority – Fresno – Bakerfield, CA. (August 2025 – September 2025)
Biology Technician II.

Conducted approx. 80 hours of nesting bird sweeps and documented any nests, species, and sign. Ensured construction activities were in compliance with the project's permits. Handled one desert cottontail rabbit kit (*Sylvilagus audubonii*). Observed one active Mourning Dove nest with two eggs. Conducted approx. 20 hours of pre-construction surveys for SJAS, WEBO, SWHA, CTS, and nesting birds.

California Tiger Salamander Terrestrial Ecology Workshop, Laguna De Santa Rosa Foundation – Santa Rosa, CA. (March 2025).

Attended an eight-hour professional training workshop focused on terrestrial ecology, land use management, and regulatory protocols for the California Tiger Salamander (*Ambystoma californiense*, CTS). Gained knowledge of CTS biology, migration patterns, and upland habitat use, as well as the design and implementation of CTS roadway tunnels. Constructed a pitfall trap and fence array and visited existing CTS tunnel systems. Observed two preserved CTS specimens.

COAST HORNED LIZARD

Vegetation Management, Southern California Edison – Tehachapi, Antelope Valley, CA. (May 2025 - August 2025)
Biology Technician II.

Conducted approx. 25 hours of pre-con surveys for coast horned lizard. Observed six coast horned lizards (one juvenile, five adults). Determined habitat suitability for coast horned lizard.

DESERT TORTOISE

Grace Solar Project, Confidential Client – Blythe, CA. (September 2025 - October 2025) *Environmental Field Technician I.*

Conducted 15 days of protocol-level clearance surveys for DETO. Excavated nine potential DETO burrows. Observed desert kit fox, desert iguana (*Dipsosaurus dorsalis*), and side winder (*Crotalus cerastes*). Handled one Pacific gopher snake, one desert horned lizard, and one desert tarantula (*Aphonopelma chalcodes*). Monitored irrigation hole filling activities for DETO and DKF. Completed 16 hours of monitoring.

Springbok Solar 1 & 2, Confidential Client – Cantil, CA. (April 2025) *Environmental Field Technician I.*

Monitored vegetation trimming activities beneath solar panels for MGS and DETO, ensuring compliance with the project's permits: Springbok 1 Solar ITP - 2081-2015-007-04 and Springbok 2 Solar ITP - 2081-2015-026-04. Completed Approx. 20 hours of monitoring.

SNAKES

Grace Solar Project, Confidential Client – Blythe, CA. (September 2025 - October 2025) *Environmental Field Technician I.*

Conducted 15 days of protocol-level clearance surveys for DETO. Excavated nine potential DETO burrows. Observed desert kit fox, desert iguana (*Dipsosaurus dorsalis*), and side winder (*Crotalus cerastes*). Handled one Pacific gopher snake, one desert horned lizard, and one desert tarantula (*Aphonopelma chalcodes*). Monitored irrigation hole filling activities for DETO and DKF. Completed 16 hours of monitoring.

Vegetation Management, Southern California Edison – Tehachapi, Antelope Valley, CA. (May 2025 - August 2025) *Biology Technician II.*

Conducted eight hours of pre-con surveys for two-striped garter snake (*Thamnophis hammondi*) and southern rubber boa (*Charina umbratica*). Assessed habitat suitability for both species.

INVERTEBRATES

CROTCH'S BUMBLE BEE

Bumble Bee Atlas Training, Bumble Bee Atlas – Online Training. (Dec 2025).

Completed professional webinar trainings in bumble bee ecology and conservation, California Bumble Bee Atlas survey protocols, and species identification for female and male bumble bees in Western North America, with emphasis on conservation-priority species including Crotch's bumble bee (*Bombus crotchii*).

RARE PLANTS

Conducted 50+ hours of rare plant surveys for special-status species, including Western Joshua tree, Bakersfield cactus (*Opuntia basilaris*), Kern mallow (*Eremalche parryi* ssp. *kernensis*), Camissonia spp., Tehachapi monardella (*Monardella linoides* ssp. *oblonga*), and Mt. Pinos onion (*Allium howellii* var.

clokeyi); observed Western Joshua tree, Bakersfield cactus, and Kern mallow.

TO10 Blackwell's Corner CAPM, Caltrans – Kern County, CA. (November 2025 - ongoing) *Associate Environmental Scientist.*

Conducted approximately 10 days of construction monitoring for road grading and erosion control. Handled one deer mouse and relocated out of project site. Observed 50+ Kern Mallow (*Eremalche kernensis*) in various stages of growth.

Vegetation Management, Southern California Edison – Tehachapi, Antelope Valley, CA. (May 2025 - August 2025) *Biology Technician II.*

50+ hours conducting rare plant surveys for species including WJT, Bakersfield Cactus (*Opuntia basilaris*), Kern mallow (*Eremalche parryi* ssp. *kernensis*), and various *Camissonia*. Observed and documented 100+ WJT and seven Bakersfield Cactus.

Tree anemone (*Carpenteria californiicus*) Reference Site Visit QK/AWE – Fresno County, CA. (January 2026) *Associate Environmental Scientist.*

Identified two specimens of tree anemone (*Carpenteria californica*) at a known reference location (37.0477150, -119.4315400) along SR 168 under guidance and direct supervision of Environmental scientists Curtis Uptain and Chaim Rabbass. One hour was spent identifying key characteristics of the plant during the non-blooming period and surveying for other individuals within 200 meters of the reference site. The bark, leaves, desiccated blooms from previous years, and early bloom were examined. Similar looking plants with potential to be mistook for the species were also compared. Ten plus tree anemone individuals were identified during this effort.

CONSTRUCTION MONITORING

Jasmine Solar Project, CCI– Kern County, CA. (November 2025 - ongoing) *Associate Environmental Scientist.*

Conducted approximately 40 days of construction monitoring and 5 days of preconstruction surveys. Established environmentally sensitive area (ESA) buffer for great-horned owl (*Bubo virginianus*) nest. Handled three deer mice (*Peromyscus maniculatus*) and relocated off site. Observed two mating WEBO using an atypical burrow.

TO10 Blackwell's Corner CAPM, Caltrans – Kern County, CA. (November 2025 - ongoing) *Associate Environmental Scientist.*

Conducted approximately 10 days of construction monitoring for road grading and erosion control. Handled one deer mouse and relocated out of project site. Observed 50+ Kern Mallow (*Eremalche kernensis*) in various stages of growth.

Grace Solar Project, Confidential Client – Blythe, CA. (September 2025 - October 2025) *Environmental Field Technician I.*

Conducted 15 days of protocol-level clearance surveys for DETO. Excavated nine potential DETO burrows. Observed desert kit fox, desert iguana (*Dipsosaurus dorsalis*), and side winder (*Crotalus cerastes*). Handled one Pacific gopher snake, one desert horned lizard, and one desert tarantula (*Aphonopelma*



chalcodes). Monitored irrigation hole filling activities for DETO and DKF. Completed 16 hours of monitoring.

Transmission Distribution (deteriorated pole replacement), Southern California Edison – Antelope Valley, CA. (May 2025 - August 2025) *Biology Technician II.*

Conducted 40 hours of construction monitoring for WJT. Presented WEAPs to construction crew and established buffers for WJT.

Springbok Solar 1 & 2, Confidential Client – Cantil, CA. (April 2025) *Environmental Field Technician I.*

Monitored vegetation trimming activities beneath solar panels for MGS and DETO, ensuring compliance with the project's permits: Springbok 1 Solar ITP - 2081-2015-007-04 and Springbok 2 Solar ITP - 2081-2015-026-04. Completed Approx. 20 hours of monitoring.

OTHER EXPERIENCE

Volunteer Work at Dry Creek Native Plant Nursery, Sequoia Riverlands Trust – Woodlake, CA. (January 2025 – May 2025). *Volunteer.*

Assisted with propagation and planting of native San Joaquin Valley species, including identifying, repotting, and transplanting local flora. Worked with species such as yarrow (*Achillea millefolium*), hummingbird sage (*Salvia spathacea*), white sage (*Salvia apiana*), Cleveland sage (*Salvia clevelandii*), and coffeeberry (*Frangula californica*). Supported regional habitat restoration by cultivating native Central Valley plants.

Botanical Garden and Greenhouse Keeper, College of the Sequoias – Visalia, CA. (Jan 2023 – May 2023).

Supported propagation and cultivation of native San Joaquin Valley flora through plant identification, repotting, and transplanting in the college greenhouse and botanical garden. Assisted Biology faculty and student with controlled greenhouse plant experiments.



Danielle L. Temple

Senior Biologist

AREAS OF EXPERTISE

- Protocol Level Plant and Wildlife Surveys
- CEQA Biological Assessments
- Bat Identification, Protection, and Exclusion from Structures
- Nesting Bird Surveys
- Landscape Ecology and Management
- Habitat Management
- Conservation Planning

EDUCATION

- MS, Wildlife Biology, Louisiana State University, Baton Rouge, LA, 2007
- BS, Environmental Science, The Evergreen State College, Olympia, WA, 2001

REGISTRATIONS / CERTIFICATIONS

- California Department of Fish and Wildlife Volunteer, Bishop, CA. This includes conducting >3 sage grouse lek counts with CDFW biologists.
- Approved by California Department of Fish and Wildlife as a biological monitor on multiple Caltrans Projects in District 9

PERMITS: U.
U.S. Fish and Wildlife Service Section 10(a)(1)(A)
Recovery Permit for California Vernal Pool
Branchiopods Permit No. ESPE2380360

PROFESSIONAL ORGANIZATIONS

- Member, The Wildlife Society, National Chapter
- Member, The Wildlife Society, Western Section

AWARDS / RECOGNITION

- Travel Grant from the National Park Service to attend All Hazard Resource Advisor Training for Federal Agencies, Point Reyes National Park, 2009
- Graduate Research Assistantship. Louisiana State University 2004-2007

Ms. Temple has 22 years of experience as a fish and wildlife biologist, including fourteen years as a biologist in the Sierra Nevada foothills and mountains in California. This experience ranges from conducting protocol level field surveys for a variety of sensitive and common species to writing scientific and technical reports. Ms. Temple has experience independently conducting protocol level surveys for sensitive species including nesting migratory birds and raptors protected under the Migratory Bird Treaty Act (MBTA), and vernal pool branchiopods. For the fourteen years that Ms. Temple has worked in California she has largely focused on permit compliance during construction activities on roadway and bridge construction projects. This includes six years working as a contractor on Caltrans projects in Inyo and Mono counties.

Ms. Temple has acted as the technical expert for sensitive species and natural resources to state and federal agencies and presented information on natural resource management at several venues including trade meetings and public hearings.

PROFESSIONAL EMPLOYMENT

2022 – Present	QK, Senior Biologist
2015 – 2022	QK, Senior Associate Biologist
2010 – 2014	Quad Knopf, Inc., Associate Biologist
2009	Herrera Environmental Consultants, Natural Resource Specialist
2008 – 2009	Washington Department of Fish and Wildlife, Area Habitat Biologist
2004 – 2007	Louisiana State University, Graduate Research Assistant

PROJECT EXPERIENCE

MONO COUNTY

CalTrout By-Day Forest Health Project, By-Day Ecological Reserve, Bridgeport, Mono County CA (September 2023) *Senior Environmental Scientist*

Conducted preconstruction surveys to identify special-status species with potential to occur within the Project Area with a focus on species that were identified in the By-Day Creek Ecological Reserve Forest Management Plan. Plant species included but were not limited to Great Basin onion, Lavin's milk vetch, Bodie Hills cusickella, masonic rock cress, scalloped moonwort, western valley sedge, American manna grass, Blandow's bog moss, seep kobresia, whitebark pine, and golden violet. Wildlife species included pallid bat, golden eagle and other nesting birds/bats Sierra Nevada mountain beaver, California wolverine, Sierra Nevada snowshoe hare, western white-tailed jackrabbit, Sierra martin, American badger, and Sierra Nevada



- Research Expense Award, J.W. Jones Ecological Research Center, 2004-2007
- Travel Grant to present at the Wildlife Society Conference, Louisiana State University, 2006 and 2007

CONTINUING EDUCATION

- Vernal pool branchiopods field workshop, 2024
- Fairy Shrimp Identification Course, San Diego, 2011 and 2022
- Mohave Ground Squirrel Workshop, Ridgecrest, California, 2021
- Desert Tortoise Council Field Workshop in Ridgecrest, California, 2021
- BasicPlus CPR, AED, and First Aid for Adults, MEDIC First Aid, taught by Jennifer Childress, 2021
- Rattlesnake Safety and Handling Workshop, Central Coast Snake Services, taught by Emily Taylor, 2021
- Desert Tortoise Field Training, Internal QK Training at a Known Population of Desert Tortoises Near Olancho, CA Provided by Curtis Uptain, Olancho, CA, 2021
- Advanced Acoustic Monitoring of Bats Workshop with a focus on time-expansion analysis of bat calls using Sonobat, 2020
- Introduction to Desert Tortoises and Field Techniques Course, Desert Tortoise Council, 2020.
- Water Sampling using Imhoff Cones, QK, Inc. 2018
- Non-Invasive Acoustic Monitoring of Bats workshop with a focus in time-expansion analysis and species identification using Sonobat, Dye Creek Nature Preserve, 2013
- Introduction to Botany Workshop, Quad Knopf, 2013
- Introduction to CEQA Workshop, Quad Knopf, 2013
- FRED Training, Southern California Edison, 2013
- All Hazard Resource Advisor Training for Federal Agencies, Point Reyes National Park, 2009
- Stream Crossing Training for Forest and Fish Biologists, WA Dept. of Fish and Wildlife, 2008

red fox. Scats from hare species, black bear, bobcat, and coyote were identified as well as inactive dens and small mammal burrows within the project area. Assisted in preparation of a plant and wildlife observed inventory, as well as preparation of GIS figures using ESRI ArcGIS Pro, and assisted with preparation of the Preconstruction report for forest fuels reduction work to begin.

Conway Ranch Shoulders Project, Near Lee Vining, Mono County CA – Caltrans (June 2023 to Present) *Senior Environmental Scientist.*

Caltrans conducted the first year of a two-year road improvement project on SR 395, north of Lee Vining, California. Ms. Temple conducted a preconstruction survey to identify special-status species with potential to occur within the Project area including American badger, Alkali tansy-sage, American manna grass, Brewer's sparrow, golden eagle, and all nesting birds and other wildlife species and prepared a preconstruction survey report. Prepared and provided Worker's Environmental Awareness Program training to all new personnel working on the Project. The training covered locations of CDFW jurisdictional areas, environmentally sensitive areas, wetlands, Waters of the State and the US, the requirements of the USACE 404 and RWQCB 401 permits, and biology and general behavior of protected species with potential to occur within the Project footprint. Conducted full-time biological construction monitoring during ESA fence installation and removal and during work in Permitted areas. Prepared an annual construction compliance report.

Little Walker River Shoulder Widening Project – Sonora Junction, CA. *Senior Associate Environmental Scientist (2019-2020)*

Caltrans conducted a two-year improvement project on a 2.3 section of section of Highway 395, adjacent to the Walker River. Construction activities included demolishing and re-paving sections of the roadway, widening the shoulders, constructing two retaining walls, removing fill from two cut slopes, installing guard rails, and replacing drop inlets. Ms. Temple conducted biological monitoring for the Bi-State sage grouse, American badger, burrowing owl, Sierra Nevada mountain beaver, nesting birds, and white-tailed jack rabbit throughout the project to assure project activities remained in compliance with the environmental permits.

Aspen Fales Shoulder Widening Project – Bridgeport, CA. *Senior Associate Environmental Scientist (2019-2020)*

Caltrans conducted a two-year improvement project on a 3.13 section of section of Highway 395, adjacent Aspen Fails. Construction activities included removing and replacing eight culverts, including one culvert that required a diversion of an activity flowing waterway. Ms. Temple conducted biological monitoring for special status species including the Bi-State sage grouse, American badger, burrowing owl, Sierra Nevada mountain beaver, nesting birds and white-tailed jack rabbit throughout the project to assure project activities remained in compliance with the environmental permits.

- Stream Crossing Training, WA Department of Fish and Wildlife, 2008
- Unstable Slope Identification Training, WA Department of Natural Resources, 2008
- Channel Migration Zone Identification Training, WA Department of Natural Resources, 2008
- Introduction to Mixed Models, Newton, GA, J. W. Jones Ecological Research Center, 2006
- ArcMap 9.1 and Geographic Positioning Systems, Newton, GA, J. W. Jones Ecological Research Center, 2005, 2006

PUBLICATIONS / INSTRUCTION

- Temple, Danielle L., Michael J. Chamberlain, L. Mike Conner. 2010. Spatial Ecology, Survival and Cause-Specific Mortality of Gray Foxes (*Urocyon cinereoargenteus*) in a Longleaf Pine Ecosystem. *American Midland Naturalist*.
- Gerhold, R.W., A.B. Allison, D.L. Temple, M.J. Chamberlain, K. Strait, and M.K. Keel. 2007. Infectious canine hepatitis in a gray fox (*Urocyon cinereoargenteus*). *Journal of Wildlife Disease* 43(4): 734-736.

PRESENTATIONS

- Temple, D., C. Uptain, and M. Pernicano. Case studies of bat mitigation measures due to construction activities at seven bridges within the Central Valley. Presented at the Natural Communities Conference, Bakersfield, CA, March 17, 2016.
- Temple, D.L., M. Pernicano, and C. Uptain. Bat exclusions during the demolition of the San Joaquin River Bridge, Highway 99, Fresno and Madera Counties, CA. Presented at the Natural Communities Conference, Bakersfield, CA, March 27, 2014.
- Temple, D.L., L.M. Conner, M.J. Chamberlain, and M.W. Perkins. 2007. Gray fox spatial ecology in southwestern Georgia. Presented at the 14th annual meeting of the Wildlife Society, Tucson, AZ, September 22-27, 2007.
- Temple, D.L., L.M. Conner, and M.J. Chamberlain. 2007. Gray fox spatial ecology in southwestern, Georgia. Presented at the Joseph W. Jones

Little Walker Little Wall Project – Sonora Junction, CA. *Senior Associate Environmental Scientist (2018)*

Caltrans installed a retaining wall using a guard rail placed below the road grade on Highway 395 adjacent to the Little Walker River. Ms. Temple conducted preconstruction surveys for and biological monitoring with a focus on jurisdictional areas and sensitive species including the Bi-State sage grouse, American badger, burrowing owl, Sierra Nevada mountain beaver, and white-tailed jack rabbit the project to assure project activities remained in compliance with the environmental permits.

Sheep Ranch Shoulder-Widening Project – Bridgeport, CA. *Senior Associate Environmental Scientist (2018)*

Caltrans conducted an improvement project on a four-mile section of Highway 395 north of Bridgeport, CA. Construction activities include demolishing and re-paving the roadway, widening the shoulders, constructing two retaining walls, installing cable net protection systems on four slopes, installing one new culvert, and improving four existing culverts. Ms. Temple conducted biological monitoring to assure project activities remained in compliance with the environmental permits. Construction monitoring also included surveying the project site for the presence of special status species including white-tailed jack rabbit, bank swallow, Swainson's hawk, bald eagle, golden eagle, nursery colonies of bats, and golden violet.

Whitebark Institute-Inyo National Forest (September 2022 – Present). *Senior Environmental Scientist*.

Ms. Temple is providing biological technical advisory work in support of the Whitebark wildlife biologist for the Eastern Sierra Climate & Communities Resilience Project (ESCCRP).

ADDITIONAL NESTING BIRD EXPERIENCE

Winton Water & Sanitary District 1, 2, 3-TCP Mitigation Project, Winton – Merced County, CA (October 2022 – May 2023) *Senior Environmental Scientist*.

Ms. Temple supervised field staff that conducted preconstruction surveys to identify special-status species that have potential to occur within the Project area including San Joaquin kit fox (*Vulpes macrotis mutica*), burrowing owl (*Athene cunicularia*), and Swainson's hawk (*Buteo swainsoni*) and other sensitive biological resources including nesting birds in Merced County, California for phase2, the boring of seven bore locations beneath canal laterals along a three mile pipeline route, and phase 3, the construction of a three-mile water pipeline. Supervised a biologist in conducting biological monitoring of active bird nests and ongoing nesting bird surveys when Project activities occurred during nesting bird season. Reviewed and submitted California Natural Diversity Database forms and letter reports of the findings.

Caltrans District 6: State Route 99 Union Avenue to White Lane 2R Project (TO#04), Caltrans – Kern County, CA. *Senior Environmental Scientist*. (2021 – Current)

Ms. Temple coordinated and supervised the field crew in conducting Swainson's hawk and red-tailed hawk nest

Ecological Research Center, Newton, GA, May 10, 2007.

- Temple, D.L., L.M. Conner, and M.J. Chamberlain. 2006. Survival and cause specific mortality of gray foxes in southwestern Georgia. Poster presented at the 13th annual meeting of the Wildlife Society, Anchorage, AK, September 22-26.
- Temple, D.L., L.M. Conner, and M.J. Chamberlain. 2005. Gray fox ecology in southwestern Georgia. Poster presented at the annual meeting of the Scientific Advisory Committee of Joseph W. Jones Ecological Research Center, Newton, GA.
- Temple, D.L., A.C. Miles, D.A. Miller, L.M. Conner, and S.B. Castleberry. 2004. Evening Bat (*Nycticeius humeralis*) Use of Fork-topped Trees: A Potential Tool for Conserving Bat Roosting Habitat in Managed Pine Plantations of the Southeast. Poster presented at the Bats and Forest Symposium 2, Hot Springs, AR, March 9-12, 2004.
- Temple, D.L., A.C. Miles, D.A. Miller, L.M. Conner, and S.B. Castleberry. 2003. Evening Bat (*Nycticeius humeralis*) Use of Fork-topped Trees: A Potential Tool for Conserving Bat Roosting Habitat in Managed Pine Plantations of the Southeast. Poster presented at the North American Symposium on Bat Research 33, Lincoln, NE, October 8-11, 2003.

INVITED PRESENTATIONS

- Temple, D.L. 2014. Bats of Dry Creek Preserve. Invited outreach presentation for Sequoia Riverlands Trust, Woodlake, CA.
- Temple, D.L. 2007. Bats of the southeastern United States. Invited outreach presentation for Bird Song Nature Center, Tallahassee, FL.
- Temple, D.L. 2007. Invited presentation and field guide for the bats in caves field trip as part of Tall Timbers Research Stations annual Bird Festival, Tallahassee, FL.
- Temple, D.L. 2006. Invited presentation and field guide for the bats in caves field trip as part of Tall Timbers Research Stations annual Bird Festival, Tallahassee, FL.

monitoring during active construction activities and daily night sweeps to monitor for San Joaquin kit fox sign or activity.

Humboldt Avenue Road Improvements Project – Chowchilla, CA. Senior Associate Environmental Scientist. (2022).

The City of Chowchilla conducted improvements along Humboldt Avenue. Ms. Temple was the lead biologist on the Project and coordinated pre-construction surveys and avoidance measures for Swainson's hawk (*Buteo swainsoni*) and other nesting birds and raptors, San Joaquin kit fox (*Vulpes macrotis mutica*), western burrowing owl (*Athene cunicularia*), roosting bats, and spadefoot toad (*Spea hammondi*). Ms. Temple coordinated with California Department of Fish and Wildlife to establish a method to survey for Swainson's hawk outside of the protocol period, developed a Worker's Environmental Awareness Training, and wrote multiple reports discussing survey findings and avoidance requirements for special status resources.

Lost Hills Rubber Rehabilitation Project, Construction Compliance Monitoring, Caltrans – Kern and Kings Counties, CA. (November 2020 – Present) Senior Associate Environmental Scientist.

Caltrans conducted a roadway improvement Project on a 5-mile linear roadway. Ms. Temple coordinated and supervised preconstruction surveys and weekly construction monitoring, weekly site visits, and Worker Environmental Awareness Training (WEAT). Biological monitoring and surveys were needed at two overpasses and along the roadway for special-status species including San Joaquin kit fox (*Vulpes macrotis mutica*), and American badger (*Taxidea taxus*), and nesting birds or raptors. One Swainson's hawk nest was located and monitored. Ms. Temple provided the technical review to weekly reports summarizing survey findings.

Tagus 6-Lane Project – Tulare County, CA. (May 2021 – Present) Senior Associate Environmental Scientist.

Caltrans conducted road construction and improvements to a section of Highway 99. Ms. Temple installed bat exclusion devices based on the Project bat exclusion plan. She oversaw preconstruction surveys and biological compliance monitoring during construction for Project permits (401, 404, and LSAA). Special-status species that had the potential to occur within the Project area included the Swainson's hawk, San Joaquin kit fox (*Vulpes macrotis mutica*), American badger (*Taxidea taxus*), burrowing owl (*Athene cunicularia*), roosting bats, and nesting birds. One Swainson's hawk nest with chicks was monitored during construction activities.

Humboldt Avenue Road Improvements Project – Chowchilla, CA. Senior Associate Environmental Scientist. (2022).

The City of Chowchilla conducted improvements along Humboldt Avenue. Ms. Temple was the lead biologist on the Project and coordinated pre-construction surveys and avoidance measures for Swainson's hawk (*Buteo swainsoni*) and other nesting birds and raptors, San Joaquin kit fox (*Vulpes*

macrotis mutica), western burrowing owl (*Athene cunicularia*), roosting bats, and spadefoot toad (*Spea hammondi*). Ms. Temple coordinated with California Department of Fish and Wildlife to establish a method to survey for Swainson's hawk outside of the protocol period, developed a Worker's Environmental Awareness Training, and wrote multiple reports discussing survey findings and avoidance requirements for special status resources.

Shohsone Drainage Project – Shoshone, CA. Senior Associate Environmental Scientist (2019)

Caltrans replaced two culvert systems along the Amargosa River near Shoshone, CA. This Project included diverting water, installing concrete slope protection, and replacing the original metal culverts with concrete cast box culverts. Services that were provided included: Pre-construction surveys, Construction monitoring throughout Project activities to ensure permit compliance, which included monitoring during water diversion activities, in compliance with the 1600 SAA and the U.S. Fish and Wildlife Service's Notice of Concurrence for No Impact to Least Bell's vireo and southwestern willow flycatcher • Weekly status reports and a Final Annual Monitoring Report as required per 1600 SAA. Ms. Temple coordinated Project activities and wrote all necessary reports required by Caltrans.

Cartago State Wildlife Area Natural Resource Surveys – Cartago CA. Senior Associate Environmental Scientist (2019)

Caltrans proposed to protect, enhance, create and enlarge wetland and riparian habitat at the Cartago Wildlife Area (CWA), owned and managed by the California Department of Fish and Wildlife (CDFW). To determine presence of sensitive wildlife and plant species and the need for avoidance, minimization or mitigation measures as well as the type of permits that will be required for the proposed actions, Ms. Temple conducted protocol level surveys for nesting upland and marshland birds. Temple also wrote reports discussing the findings of these surveys.

Lairds Corner Road Expansion – Tulare, CA. Senior Associate Environmental Scientist (2017)

Caltrans expanded a two-lane road near Tulare, CA. Ms. Temple conducted a preconstruction survey of the project site to identify locations of migratory bird and raptor nests and reported these findings and suggested protection measures of these nests in a report. (Field hours: 8)

Woodlake Sidewalk Expansion – Visalia, CA. Senior Associate Environmental Scientist (2017)

The City of Woodlake expanded a sidewalk network. Ms. Temple conducted preconstruction surveys nesting birds, including general raptor surveys and surveys of known roost sites for wintering bald eagles. Ms. Temple wrote a report discussing the findings of these surveys and suggested protection measures to protect sensitive avian species.

San Joaquin River Overflow Bridge at Hwy 41 Seismic Retrofit – Fresno, CA. Senior Associate Environmental Scientist (2017)

The San Joaquin River Overflow Bridge was being retrofit to sustain seismic events. Ms. Temple monitored the construction site to verify that all construction activities were in compliance with a Streambed Alteration Agreement, 401 permit, and 404 permit and that no nesting raptors and MBTA protected nesting birds were present on the site. Ms. Temple wrote a report outlining the findings of this work.

Visalia Median Barrier Widening Project – Visalia, CA. *Senior Associate Environmental Scientist (2017)*

The City of Visalia widened a five-mile section of the median along State Route 198. Ms. Temple conducted surveys for nesting raptors and other birds protected by the MBTA. She reported her findings and suggested protection measures for nesting birds during construction activities. Ms. Temple conducted protocol level Swainson's hawk surveys for all periods of the protocol.

Jaye Street Bridge Extension – Porterville, CA. *Senior Associate Environmental Scientist. (2016 to 2017)*

The City of Porterville extended the Jaye Street Bridge from two lanes to four. Ms. Temple conducted preconstruction surveys for nesting raptors and cliff swallows. Once construction commenced, she monitored the construction site to verify that all activities were in compliance with the applicable permits and that no MBTA protected nesting birds were located within the Project site.

Woodlake Community Center – Woodlake, CA. *Senior Associate Biologist (2016).*

The City of Woodlake built a community center on a vacant parcel within City limits. Ms. Temple conducted a reconnaissance level survey of the Project site and a 500-foot vicinity of the Project site for MBTA protected species and their habitat. Ms. Temple reported the findings and suggested measures to protect birds protected by the MBTA during Project activities.

High Speed Train State Route 99 Realignment – Madera to Fresno Counties, CA. *Senior Associate Biologist. (2015 to 2016)*

Caltrans rerouted sections of State Route 99 in preparation for the installation of the high-speed rail line. Ms. Temple conducted protocol level nesting bird surveys and continuously monitored active work sites for the presence of nesting birds. When bird nests were located Ms. Temple established work buffers surrounding the nest and kept daily logs on nesting activity.

Plano Bridge Extension – Porterville, CA. *Senior Associate Biologist. (2015 to 2016)*

The City of Porterville extended the Plano Street Bridge from two lanes to four. Ms. Temple conducted protocol surveys for nesting Swainson's hawks during all phases of the protocol. Once construction commenced, Ms. Temple monitored the construction site to verify that all construction activities were in compliance with the applicable permits and that no nesting raptors and/or MBTA protected nesting birds were present on the site.

City of Visalia San Joaquin Kit Fox and Nesting Bird Training – Visalia, CA. Senior Associate Biologist. (2015).

Ms. Temple prepared and presented a power point presentation to fulfill worker environmental training requirements. The presentation was focused on San Joaquin kit fox and nesting bird protection measures that were required by Project mitigation measures. She also conducted a pre-construction survey for nesting birds that were protected by the MBTA.

Angiola Water District – Tulare County, CA. Senior Associate Biologist (2015)

Ms. Temple conducted reconnaissance level surveys for nesting migratory birds and raptors, and their habitat. Ms. Temple wrote a report describing the findings from this survey.

Nesting Bird Surveys and San Joaquin Kit Fox Worker Environmental Awareness Program Training for Two Bike Path Installation Projects – City of Visalia, CA. Senior Associate Biologist (2015)

The City of Visalia installed new bike paths. Ms. Temple conducted pre-construction nesting bird surveys and prepared and presented a power point presentation prior to the start of construction to train personnel on nesting bird protection measures required by Project permits.

Photovoltaic Solar Facility Pre-Construction Survey – Kern County, CA. Senior Associate Biologist. (2015)

Ms. Temple led a team of biologists in conducting pre-construction surveys of a photovoltaic solar facility and the related infrastructure. Ms. Temple conducted surveys to identifying nesting birds that are protected by the Migratory Bird Treaty Act and wrote a report discussing her findings and suggested protection measures for nesting birds during Project activities.

Maricopa Sun Solar Complex Project, Maricopa Sun, LLC – Kern County, CA. Senior Associate Biologist. (2014-2015)

Maricopa Sun, LLC proposed to create a number of solar farms within Kern County. Ms. Temple drafted a bird mortality survey plan as part of the requirements for obtaining a Special Purpose Utility permit.

Kings River Bridge Replacement Project, Caltrans – Minkler, CA. Associate Biologist (2014)

Caltrans proposed to replace a bridge in Minkler, CA. The bridge was a known swallow nesting location. Ms. Temple removed existing swallow nests. Due to delays in the project swallows returned to the bridge before it was demolished, so she removed swallow nests as they were being constructed, and before they became active. Ms. Temple wrote a final report discussing the findings of the work and suggesting protection plans for the swallows during future Project activities.

Jaye Street and Plano Street Bridge Widening Projects – City of Porterville, CA. Associate Biologist. (2011 to 2012)

The City of Porterville widened two bridges within the city limits. Ms. Temple conducted protocol level surveys for nesting raptors, cliff swallows, and other nesting birds protected by the MBTA. She also prepared the technical reports describing the

findings of the field surveys and suggesting protection measures.

Taylor Hall II Project, Bat and Nesting Bird Survey, California State University, Chico – Chico, CA. Associate Biologist. (2011)

California State University, Chico demolished a building and expanded a parking lot into a covered parking garage. Ms. Temple updated a previously written biological report to CEQA level. Based on these updates, she conducted a survey for nesting birds within the footprint of a proposed parking structure at Chico State University. She then summarized the findings in a CEQA level report.

On-Call Biological Services, Private Utility Company –Tulare and Kern Counties, CA. Associate Biologist (2010-2011)

Quad Knopf provided on-call biological services for power pole replacement projects occurring throughout the San Joaquin Valley and surrounding foothills. Ms. Temple conducted reconnaissance and protocol level surveys for nesting migratory birds and raptors, reporting results both orally and in writing, and made recommendations for protection of sensitive resources. When it was determined that protected bird species might be impacted by project activities, she conducted training of construction crews in the protection of these resources and conducted biological monitoring during construction activities. (Field Hours: 96)

Photovoltaic Solar Facilities – Kern, Tulare, and Fresno Counties, CA. Associate Biologist. (2010)

Multiple photovoltaic solar companies were in the process of acquiring agricultural land in the San Joaquin Valley that was suitable to house solar facilities. Ms. Temple conducted reconnaissance level biological surveys to identify any biological issues that might interfere with the proposed projects and prepared the technical reports describing the findings of the field surveys. These projects had the potential to impact nesting raptors and other bird species protected by the MBTA. The reports included recommendations for future biological surveys, suggested mitigation measures, and suggested documentation or consultation (e.g. CEQA) that might have been required by State and federal agencies.

Cross Valley Loop, Public Utility Company – Eastern Tulare County, CA. Associate Biologist (2010-2014).

Quad Knopf provided biological services to a local utility company for the new construction of a 23-mile transmission line. Ms. Temple conducted protocol-level surveys for Swainson's hawks during all surveys phases for two years. Between 2010 and 2013 Ms. Temple acted as the back-up lead monitor for a team of approximately 30 biological monitors, and construction monitor for land survey and geotechnical boring crews and construction activities. The project required construction of 23-miles of new power lines and associated infrastructure and removal of existing towers and line. As a back-up lead monitor Ms. Temple supervised up to 10 biologists that were monitoring nesting migratory birds and raptors at construction sites and a 250-foot buffer around the construction



site. Throughout the four-year duration of this project Ms. Temple monitored 64 raptor nests.



Jeffrey Allen Erway

Senior Environmental Scientist

AREAS OF EXPERTISE

- Field Research
- Wildlife Surveys
- Mitigation Surveys
- Biological Monitoring
- Wetland Delineations
- Data Collection & Analysis
- Project Management
- Client Relationships

EDUCATION

- MS, Environmental Science & Management, University of California, Davis
- BS, Biology, California State University, Chico
- AS, Biology, Feather River College, Quincy, CA

PROFESSIONAL ORGANIZATIONS

- Member, The Wildlife Society, National Chapter and Western Section
- Member, Scientific Advisory Board for Cetacean Society
- Member, Desert Tortoise Council

CONTINUING EDUCATION

- Introduction to Desert Tortoise – 2017 (Desert Tortoise Council)
- Desert Tortoise Assessment and Handling Workshop – 2017, 2019, 2022 (Dr. Paul Delaney)

PRESENTATIONS

- California Mountain College-Desert Tortoise Natural History – Annually between 2017 and 2022

Mr. Erway is an analytical, detail-oriented field biologist with comprehensive experience conducting field surveys in agriculture, wildlife monitoring, and land use. His experience includes comprehensive training in field biology data collection methodologies and equipment. He possesses a keen attention to detail and ability to collaborate with diverse stakeholder groups.

Mr. Erway specializes in surveys for/monitoring of desert tortoise, burrowing owl, desert kit fox, San Joaquin fox, blunt nose leopard lizard. He is experienced with conducting protocol surveys for desert tortoise, Mohave ground squirrel, burrowing owl, and blunt-nosed leopard lizard. He has also conducted surveys for American badger, shore birds, amphibians and nesting birds.

Mr. Erway's geographical areas of expertise, Mojave Desert including Kern County, San Bernardino County, and San Joaquin Valley.

PROFESSIONAL EMPLOYMENT

2022 – 2023	QK, Senior Environmental Scientist
2010– 2022	Sea to Sand Biological, Supervisory Biologist
2010 – 2022	Circle Mountain Biological, Supervisory Biologist
2010 – 2022	Jacobs Engineering, Supervisory Biologist

PROJECT EXPERIENCE

Organic Waste to Renewable Energy Facility – Mojave, CA. *Senior Environmental Scientist.*

Alta Wind Battery Energy Storage System (BESS) Biological Clearance Survey Support – Kern County, CA. *Senior Environmental Scientist.*

Alpine Solar Wind Battery Energy Storage System (BESS) Biological Clearance Survey Support – Kern County, CA. *Senior Environmental Scientist.*

Keyhole Wind Project – Mojave, CA. *Senior Environmental Scientist. (2022 - Present).*

Lead a team of biologists to conduct reconnaissance surveys and protocol level desert tortoise and rare plant surveys for a new wind energy project in the foothills of the western Mojave Desert. Species of concern include desert tortoise, Swainson's hawk, and various bats.

BigBeau Solar Project, EDF Renewables – Kern County, CA. *Senior Environmental Scientist (2021).*

Lead clearance surveys and conducting monitoring for potential desert tortoise or their sign (i.e., potential dens, tracks, or scat) during the Joshua tree removal phase. No desert tortoise or their sign was observed.

L-300 In-Line Inspection I-165/I-167, PG&E – San Bernadino, Kern, Inyokern, Riverside, Los Angeles, and Tulare counties, CA. *Biologist and Supervisory Biologist (1999– 2020).*

Conducted pre-activity surveys for desert tortoise and Mohave ground squirrel and other sensitive desert species. Worked within the Central Valley San Joaquin kit fox, American badger, burrowing owl. Surveyed for sensitive plant species occurring within the work area and documented occurrences of desert tortoise sign/use. Performed biological monitoring during construction to ensure compliance with project measures. Species targeted included desert tortoise, Mohave ground squirrel, kit fox, American badger, burrowing owl, nesting birds, and sensitive desert plant species. (52 days of clearance surveys. 86 desert tortoise located. 9 desert tortoise handled during project)

PG&E In-Line Inspection I-602 Pigging and Repair – Mojave Desert, CA. *Biologist and Supervisory Biologist (2015-present).*

Conducted pre-activity surveys for desert tortoise and other sensitive desert species (desert kit fox, American badger, burrowing owl). Performed biological monitoring during the cleaning pig run and pipeline repairs to ensure compliance with project measures. Species targeted included desert tortoise, Mohave ground squirrel, kit fox, American badger, burrowing owl, nesting birds, and sensitive desert plant species.

PG&E L-300 Strength Test (T-1222, T-1223, T-1224, T-1225, T-1226, T-1227, T-1228, T-1229) – Mojave Desert, CA. *Biologist and Supervisory Biologist (2010-2020).*

Conducted pre-activity surveys for desert tortoise and other sensitive desert species (kit fox, American badger, burrowing owl). Surveyed for sensitive plant species occurring within the work area and documented occurrences of desert tortoise sign/use. Performed biological monitoring during construction to ensure compliance with project measures. Species targeted included desert tortoise, Mohave ground squirrel, kit fox, American badger, burrowing owl, nesting birds, and sensitive desert plant species.

PG&E L-300 Strength Test I-125/I-126 – Mojave Desert, CA. *Biologist and Supervisory Biologist (2012-2021).*

Conducted pre-activity surveys for desert tortoise and other sensitive desert species (kit fox, American badger, burrowing owl). Surveyed for sensitive plant species occurring within the work area and documented occurrences of desert tortoise sign/use. Performed biological monitoring during construction to ensure compliance with project measures. Species targeted included desert tortoise, Mohave ground squirrel, kit fox, American badger, burrowing owl, nesting birds, and sensitive desert plant species.

Mojave Holdings LLC. Kramer Hills/Fort Irwin Mitigation Sites – Mojave Desert, CA. *Biologist and Supervisory Biologist (2010 - present).*

Conducted Mohave ground squirrel surveys of several mitigation sites, including bait stations and camera monitoring as part of ongoing documentation of Mohave ground squirrel populations. Incidental wildlife was also noted during the surveys, including desert tortoise, American badger, kit fox, burrowing owl, and



desert plant species. (25 days of clearance survey. 7 desert tortoise located.)

Copper Mountain College Desert Tortoise Habitat Survey – Joshua Tree, CA. *Volunteer Biologist (2017-2022).*

Volunteer position to conduct protocol surveys for desert tortoise as part of an annual monitoring program. Conducted walking surveys and burrow surveys. (3 days of clearance survey, 15 desert tortoise located. 15 desert tortoise handled on project.)



Brittany Gummo

Associate Environmental Scientist

AREAS OF EXPERTISE

- ESRI ArcGIS Pro, ArcMap, and Field Maps
- Data Collection, Interpretation & Reporting
- Central Valley Species Protocol Field Surveys
- Biological Monitoring
- Construction Monitoring and Compliance
- Habitat Mitigation & Restoration
- Raptor/Nesting Bird Surveys
- Botanical Surveys.

EDUCATION

- BS, Biology, Southern Utah University
- AA, Psychology, Lake Tahoe Community College

Brittany Gummo received her B.S. in biology with a zoological focus. and has 13 years of experience in the natural resources field. She has provided biological support for several projects, such as installation of gas lines, transmission lines, solar development, wind farms, groundwater remediation and the high-speed rail. Mrs. Gummo has participated in field work consisting of construction mitigation/monitoring, fence installation, agency protocol level surveys, conducting WEAP trainings, migratory and nesting bird monitoring/surveys, restoration monitoring, California sensitive plants monitoring and restoration, pest management programs, camera trapping with and without scent stations. Mrs. Gummo has been directly involved with a variety of reports such as CEQA/NEPA, pre-construction, biological evaluations, habitat analysis, and environmental impact statements.

Mrs. Gummo attended the Xerces Society Bumble Bee Atlas Workshop where she conducted a foraging bumble bee survey. Mrs. Gummo also attended a San Joaquin kit fox workshop presented by Bancroft Construction Services where she conducted 5 hours of spotlighting and set up camera and scent stations. Mrs. Gummo attended the Ecology of California Tiger Salamander workshop presented by Elkhorn Slough Coastal Training Program where she was able to handle 8 California tiger salamander (*Ambystoma californiense*) larvae. She has also assisted with a California tiger salamander relocation and burrow excavation under the supervision of a Designated Biologist. 63 larval California tiger salamanders were relocated.

PROFESSIONAL EMPLOYMENT

03/2024 – 12/2025	QK, Associate Environmental Scientist
12/2022 – 2/2024	Harris and Associates, Environmental Oversight Biologist
08/2020 – 12/2022	Environmental Resource Management, Wildlife Biologist
05/2020 – 08/2020	Bargas Environmental Consulting, Wildlife Biologist
05/2014 – 01/2020	Transcon Environmental, Desert Tortoise Biologist, Wildlife Biologist
04/2012 – 05/2014	Garcia and Associates (GANDA), Desert Tortoise Biologist
07/2011 – 03/2012	SNEI, Desert Tortoise Trainee

PROJECT EXPERIENCE

BLUNT-NOSED LEOPARD LIZARD (*Gambelia sila*)

Brittany Gummo is a level 1 BNLL surveyor and can confidently determine the difference between BNLL and other lizards. She has spent 10 plus years working in the Mojave desert with



REGISTRATIONS / CERTIFICATIONS

- CPR, AED, and First Aid Training
- OSHA 10 hour
- Rattlesnake Handling Certification

PROFESSIONAL ORGANIZATIONS

- Member, The Wildlife Society (TWS)

CONTINUING EDUCATION

- 2023 Xerces Society Bumble Bee Atlas Workshop
- 2023 Bancroft San Joaquin Kit Fox Workshop
- 2021 Ecology of California Tiger Salamander Workshop, Elkhorn Slough Training Center
- 2020 Wetland Delineation Class, The Wetlands Institute
- 2017 NWETC CEQA Class
- 2012 and 2014 Desert Tortoise Council's Tortoise Handling Workshop
- 2011 SNEI Training for desert tortoise nest relocation

different lizard species. She has handled long nosed leopard lizards (*Gambelia wislizenii*), zebra tailed lizards, desert iguanas, skinks, western fence lizards. She can also handle and move snakes such as side winders, Mojave green, pacific rattlesnake, speckled rattlesnake, gopher snake and the red racer. All these species were handled to be moved from harms way.

Biologist Brittany Gummo attended a San Joaquin kit fox training hosted by Bancroft within the Lokern Ecological Reserve. Brittany Gummo observed an adult blunt nosed leopard lizard.

Blackwells corner CAPM– Kern County, CA (September 2024 to Present)

Associate Environmental Scientist.

Approved Designated Monitor for target species San Joaquin antelope squirrel and blunt-nosed leopard lizard under Incidental Take Permit #2081-2023-029-04, USFWS Permit #2022-0023965-S7-002, LSA #EPIMS-KER-37203-R4, USACE 404 Permit No. 0710-0003, and Regional Water Quality Control Board 401 WDID Permit #5C15CR00130. Excavated 105 blunt-nosed leopard lizard burrows and 164 San Joaquin antelope squirrel burrow for 15 days under supervision of Designated Biologist Curtis Uptain, Sarah Yates and Donna Noce. Three blunt-nosed leopard lizards were identified on the project. Burrow mapped over 10 miles of potential San Joaquin antelope squirrel and other small mammal burrows. Assisted with trap set up, checks and clean up. Three SJAS were captured, processed and relocated on 4/7/2025 during this time Brittany Gummo handled one female San Joaquin antelope squirrel while assisting the designated biologist, Donna Noce. Conducted approximately 6 days of construction monitoring.

TO #33 - SR 46 Gap Closure Segment 4C - ID: 06-2000-0053-3 (EA 06-442563/06A2671) - Kern County, CA (June 2024 - Present).

Assistant Environmental Scientist.

The role for this project is to conduct construction monitoring and worker environmental awareness training for the San Joaquin kit fox (*Vulpes macrotis mutica*), Tipton kangaroo rat (*Dipodomys nitroides nitroides*), blunt-nosed leopard lizard (*Gambelia silus*), San Joaquin woolly-threads (*Monolopia congdonii*), giant kangaroo rat (*Dipodomys ingens*), California jewelflower (*Caulanthus californicus*), and migratory birds. Conducted weekly compliance sweeps of the Project area. Monitored San Joaquin kit fox dens, small mammal burrows, and common raven nests.

SAN JOAQUIN ANTELOPE SQUIRREL (*Ammospermophilus nelsoni*) and MOJAVE GROUND SQUIRREL (*Xerospermophilus mohavensis*)

Blackwells corner CAPM– Kern County, CA (September 2024 to Present)

Associate Environmental Scientist.

Approved Designated Monitor for target species San Joaquin antelope squirrel and blunt-nosed leopard lizard under Incidental Take Permit #2081-2023-029-04, USFWS Permit #2022-0023965-S7-002, LSA #EPIMS-KER-37203-R4, USACE 404

Permit No. 0710-0003, and Regional Water Quality Control Board 401 WDID Permit #5C15CR00130. Excavated 105 blunt-nosed leopard lizard burrows and 164 San Joaquin antelope squirrel burrow for 15 days under supervision of Designated Biologist Curtis Uptain, Sarah Yates and Donna Noce. Three blunt-nosed leopard lizards were identified on the project. Burrow mapped over 10 miles of potential San Joaquin antelope squirrel and other small mammal burrows. Assisted with trap set up, checks and clean up. Three SJAS were captured, processed and relocated on 4/7/2025 during this time Brittany Gummo handled one female San Joaquin antelope squirrel while assisting the designated biologist, Donna Noce. Conducted approximately 6 days of construction monitoring.

Hinkley Ground Water Remediation – San Bernadino County, CA (May 2014 – January 2020). *Wildlife Biologist.*

Conducted mitigation monitoring, SWPPP monitoring, habitat assessments, pest management control programs, worker education classes, and protocol level surveys for desert tortoise & desert kit fox. Target Species were desert tortoise, desert kit fox, Mojave ground squirrel, nesting birds, vernal pool fairy shrimp, burrowing owl, American badger, Mojave fringe toe lizard loggerhead shrike, Barstow wooly sunflower, Lane Mountain milkvetch, Clokey's *cyptantha*, desert *cymopterus*, Mojave spine flower, Mojave monkey flower. Sensitive species found were 4 adult, and 1 juvenile desert tortoise, 1 burrowing owl, 1 American badger, nesting birds. 800 hours of nest monitoring for various avian species protected by the Migratory Bird Treaty Act. Great horned owl nest found while incubation. Monitored nest throughout the activities of feeding and fledging. 3 chicks present. Red tailed hawks nest found while building, monitored during incubation, feeding and fledging. 2 chicks present.

SAN JOAQUIN KIT FOX (*Vulpes macrotis mutica*)

Tachi Yokuts Tribe expansion – Kings County, CA. (July 2024-ongoing) *Associate Environmental Scientist.*

Conducted preconstruction surveys for a residential housing project, slough restoration and Saltgrass field burns. Target species are the Tipton kangaroo rat. No Tipton kangaroo rats were located; however, a colony of burrowing owls was observed. Created and presented a WEAT to the tribal members and contractors on site.

TO #33 - SR 46 Gap Closure Segment 4C - ID: 06-2000-0053-3 (EA 06-442563/06A2671) - Kern County, CA (June 2024 - Present). *Assistant Environmental Scientist.*

The role for this project is to conduct construction monitoring and worker environmental awareness training for the San Joaquin kit fox (*Vulpes macrotis mutica*), Tipton kangaroo rat (*Dipodomys nitroides nitroides*), blunt-nosed leopard lizard (*Gambelia silus*), San Joaquin woolly-threads (*Monolopia congdonii*), giant kangaroo rat (*Dipodomys ingens*), California jewelflower (*Caulanthus californicus*), and migratory birds. Conducted weekly compliance sweeps of the Project area. Monitored San Joaquin kit fox dens, small mammal burrows, and common raven nests.

Nextera Energy Solar Farm and Substation - Kings County, CA (August 2021). *Wildlife Biologist.*

Conducted a refresh survey for a solar farm installation in August 2012. Target species included San Joaquin kit fox, burrowing owl, American badger and Swainson's hawk. No special-status species were present although suitable habitat for all species were present. Conducted protocol level camera trapping and excavation of 5 potential San Joaquin kit fox dens.

Deer Creek Pipeline, Homer LLC – Tulare County, CA (November 2020). *Wildlife Biologist.*

Conducted a pre-construction survey for a pipeline installation in November 2020. Target species included San Joaquin kit fox, burrowing owl, tri-colored blackbird. The sensitive species located were 3 burrowing owls.

Wagner Recharge Basin Project – Fresno County, CA (November 2020). *Wildlife Biologist.*

Conducted a pre-construction survey for a recharge basin installation in November 2020. Target species were San Joaquin kit fox, Swainson's hawk and burrowing owl. Also conducted Phase II presence/absence burrowing owl survey, a worker education class and a habitat assessment. No special-status species were present although suitable habitat for all species were present.

Pixley Water Supply and Distribution Project, Pixley Public Utility District – Fresno County, CA (October 2020). *Wildlife Biologist.*

Conducted a pre-construction survey for the district to abandon old wells, modify existing wells and installation of new drinking water wells. Target species include San Joaquin kit fox, burrowing owl, Swainson's hawk and Tipton kangaroo rat. Also created and presented worker education classes. Potential San Joaquin kit fox dens and potential Tipton kangaroo tracks were observed. Created and identified appropriate construction free buffer zones and physical barriers to allow construction to move forward without impacting sensitive species.

BURROWING OWL (*Athene cunicularia*)

Tachi Yokuts Tribe expansion – Kings County, CA. (July 2024-ongoing) *Associate Environmental Scientist.*

Conducted preconstruction surveys for a residential housing project, slough restoration and Saltgrass field burns. Target species are the Tipton kangaroo rat. No Tipton kangaroo rats were located; however, a colony of burrowing owls was observed. Created and presented a WEAT to the tribal members and contractors on site.

Freeman Gulch Safety Improvements Project -Kern County, CA (October 2024) *Associates Environmental Scientist.*

Approved to conduct desert tortoise for the Caltrans Freeman Gulch Safety Improvements Project. A Protocol level desert tortoise survey was conducted in a 12.4 mile stretch of SR 14 and an approximate 900-foot section of SR 178. Twenty (20) plus potential desert tortoise dens and one potential burrowing owl burrow were located with additional signs such as tracks, scat and foraging were found. No desert tortoise species observed; however, one (1) burrowing owl was located foraging

in the Project site.

Nextera Energy Solar Farm and Substation - Kings County, CA (August 2021). *Wildlife Biologist.*

Conducted a refresh survey for a solar farm installation in August 2012. Target species included San Joaquin kit fox, burrowing owl, American badger and Swainson's hawk. No special-status species were present although suitable habitat for all species were present. Conducted protocol level camera trapping and excavation of 5 potential San Joaquin kit fox dens.

Deer Creek Pipeline, Homer LLC – Tulare County, CA (November 2020). *Wildlife Biologist.*

Conducted a pre-construction survey for a pipeline installation in November 2020. Target species included San Joaquin kit fox, burrowing owl, tri-colored blackbird. The sensitive species located were 3 burrowing owls.

Wagner Recharge Basin Project – Fresno County, CA (November 2020). *Wildlife Biologist.*

Conducted a pre-construction survey for a recharge basin installation in November 2020. Target species were San Joaquin kit fox, Swainson's hawk and burrowing owl. Also conducted Phase II presence/absence burrowing owl survey, a worker education class and a habitat assessment. No special-status species were present although suitable habitat for all species were present.

Pixley Water Supply and Distribution Project, Pixley Public Utility District – Fresno County, CA (October 2020). *Wildlife Biologist.*

Conducted a pre-construction survey for the district to abandon old wells, modify existing wells and installation of new drinking water wells. Target species include San Joaquin kit fox, burrowing owl, Swainson's hawk and Tipton kangaroo rat. Also created and presented worker education classes. Potential San Joaquin kit fox dens and potential Tipton kangaroo tracks were observed. Created and identified appropriate construction free buffer zones and physical barriers to allow construction to move forward without impacting sensitive species.

Hinkley Ground Water Remediation – San Bernadino County, CA (May 2015 – January 2020). *Wildlife Biologist.*

Conducted mitigation monitoring, SWPPP monitoring, habitat assessments, pest management control programs, noxious weed surveys, worker education classes, preconstruction and protocol level surveys for the desert tortoise, desert kit fox, burrowing owl, Mojave fringe toe lizard and nesting birds. Target Species were desert tortoise, desert kit fox, Mojave ground squirrel, nesting birds, vernal pool fairy shrimp, burrowing owl, American badger, Mojave fringe toe lizard, loggerhead shrike, Barstow wooly sunflower, Lane Mountain milkvetch, Clokey's *cyptantha*, desert *cymopterus*, Mojave spine flower, Mojave monkey flower. Sensitive species found were 4 adult, and 1 juvenile desert tortoises, 2 burrowing owls, 1 American badger, nesting birds. 800 hours of nest monitoring for various avian species protected by the Migratory Bird Treaty Act. Great horned owl nest found while incubation. Monitored nest throughout the activities of feeding and fledging. 3 chicks present. Red tailed hawks nest found while building, monitored during incubation,

feeding and fledging. 2 chicks preset. Small Mammal burrows were onsite and 5 of them were excavated.

TIPTON KANGAROO RAT (*Dipodomys nitratooides nitratooides*)

Tachi Yokuts Tribe expansion – Kings County, CA. (July 2024-ongoing) *Associate Environmental Scientist.*

Conducted preconstruction surveys for a residential housing project, slough restoration and Saltgrass field burns. Target species are the Tipton kangaroo rat. No Tipton kangaroo rats were located; however, a colony of burrowing owls was observed. Created and presented a WEAT to the tribal members and contractors on site.

Reef City CAPM – Kern County, CA (September 2024) *Associate Environmental Scientist.*

Caltrans is upgrading culverts and safety railing along State Route 41. Conducted small mammal burrow mapping along the culverts and shoulders of the road with Designated Biologist Curtis Uptain.

SR 46 Gap Closure Segment 4C - ID: 06-2000-0053-3 (EA 06-442563/06A2671) - Kern County, CA (June 2024 - Present). *Assistant Environmental Scientist.*

The role for this project is to conduct construction monitoring and worker environmental awareness training for the San Joaquin kit fox (*Vulpes macrotis mutica*), Tipton kangaroo rat (*Dipodomys nitroides nitroides*), blunt-nosed leopard lizard (*Gambelia silus*), San Joaquin woolly-threads (*Monolopia congdonii*), giant kangaroo rat (*Dipodomys ingens*), California jewelflower (*Caulanthus californicus*), and migratory birds. Conducted weekly compliance sweeps of the Project area. Monitored San Joaquin kit fox dens, small mammal burrows, and common raven nests.

Pixley Water Supply and Distribution Project, Pixley Public Utility District - Tulare County, CA (October 2020) *Wildlife Biologist*

Conducted a pre-construction survey for the district to abandon old wells, modify existing wells and installation of new drinking water wells. Target species include San Joaquin kit fox, burrowing owl, Swainson's hawk, and Tipton kangaroo rat. Also created and presented worker education classes. Potential San Joaquin kit fox dens and potential Tipton kangaroo tracks were found. Created and identified appropriate construction free buffer zones and physical barriers to allow construction to move forward without impacting sensitive species.

MOJAVE GROUND SQUIRREL (*Xerospermophilus mohavensis*)

Hinkley Ground Water Remediation – San Bernadino County, CA (May 2015 – January 2020). *Wildlife Biologist.*

Conducted mitigation monitoring, SWPPP monitoring, habitat assessments, pest management control programs, noxious weed surveys, worker education classes, preconstruction and protocol level surveys for the desert tortoise, desert kit fox, burrowing owl, Mojave fringe toe lizard and nesting birds. Target Species were desert tortoise, desert kit fox, Mojave ground squirrel, nesting birds, vernal pool fairy shrimp, burrowing owl,



American badger, Mojave fringe toe lizard, loggerhead shrike, Barstow wooly sunflower, Lane Mountain milkvetch, Clokey's *cyptantha*, desert *cymopterus*, Mojave spine flower, Mojave monkey flower. Sensitive species found were 4 adult, and 1 juvenile desert tortoises, 2 burrowing owls, an American badger, nesting birds. 800 hours of nest monitoring for various avian species protected by the Migratory Bird Treaty Act. Great horned owl nest found while incubation. Monitored nest throughout the activities of feeding and fledging. 3 chicks present. Red tailed hawks nest found while building, monitored during incubation, feeding and fledging. 2 chicks preset. Small Mammal burrows were onsite and 5 of them were excavated.



Lauren Fah

Associate Environmental Scientist

AREAS OF EXPERTISE

- Technical Report Writing
- Protocol-level Special-Status Species Plant and Wildlife Surveys
- Data Collection, Management, and Analyses
- CEQA Documents (Drafting and Reviewing)

EDUCATION

- MS, Biology, California State University, Long Beach, 2015
- BS, Biology-Ecology, California State University, Long Beach, 2009 (*summa cum laude*)
- AA, Orange Coast College, Costa Mesa, 2006

REGISTRATIONS / CERTIFICATIONS

- California Department of Fish and Wildlife, Level II Blunt-nosed Leopard Lizard Surveyor.
- PASSPORT training, renewed annually.
- OSHA 40 Hour Hazardous Waste Operation and Emergency Response (HAZWOPER) Certification, renewed annually.
- CPR, AED, and First Aid Training, renewed annually.

PROFESSIONAL ORGANIZATIONS

- Member, The Wildlife Society (TWS), TWS Western Section, San Joaquin Valley Chapter.
- Member, California Native Plant Society (CNPS), Kern County and Orange County Chapters.

CONTINUING EDUCATION

- Bakersfield Cactus Workshop, CNPS: Kern County, November 12, 2022, Bakersfield, CA.
- Introduction to The Mojave Desert Tortoise Workshop, Desert Tortoise Council, November 2022, Ridgecrest, CA.

Ms. Fah is a California State University, Long Beach (CSULB) graduate with a Master of Science in Biology and a Bachelor of Science in Biology with an emphasis in Ecology (*summa cum laude*).

Her professional experience includes technical report writing, data management, field logistics coordination, botanical surveys, pre-construction surveys, rare plant surveys, threatened and endangered species protocol surveys (blunt-nosed leopard lizard (Level II), Western burrowing owl, San Joaquin antelope squirrel, and San Joaquin kit fox), assisting with small mammal burrow excavations, potential den monitoring and subsequent excavations, and assisting with small mammal trapping. She also has experience with assisting in wetland delineation determination surveys using the US Army Corps of Engineer Wetland Delineation Manual.

PROFESSIONAL EMPLOYMENT

2022 – 2024	QK, Associate Environmental Scientist
2017 – 2022	Stantec Consulting Services Inc., Project Biologist
2009 – 2017	California State University Long Beach Stream Ecology and Assessment Laboratory, Stream Ecologist

PROJECT EXPERIENCE

SPECIAL STATUS PLANT SURVEYS

Caltrans District 6: State Route 58 Reward Capital Preventative Maintenance Project (TO#10) – Kern County, CA. *Associate Environmental Scientist* (2022).

Conducted pre-activity survey for sensitive wildlife species including nesting birds, American badger, SJAS, and SJKF. Conducted pre-activity focused botanical survey and assisted in preparing memo summarizing results. Conducted construction monitoring for the repaving of an approximately 9.4-mile segment of the Caltrans right-of-way along State Route 58 to ensure compliance with all applicable environmental permits and provided Worker Environmental Awareness Training for all new construction crew members. All activities were conducted under Incidental Take Permit No. 2081-2020-044-04.

EDF Renewables: Keyhole Wind Facility Project – Kern County, CA. *Associate Environmental Scientist* (2022).

Conducted protocol-level rare plant surveys to identify special-status plant species and special-status habitats for a proposed 7,000-acre wind energy facility and associated infrastructure. Special-status species with the potential to occur within the survey area included Mt. Pinos onion, slender mariposa-lily, alkali mariposa lily, Mt. Gleason paintbrush, California jewelflower, San

- Rattlesnake Handling Workshop, TWS: San Joaquin Valley Chapter, August 14, 2022, Bakersfield, CA .
- Desert Tortoise Training with Dr. Paul Delaney, April 30, 2022, Copper Mountain College.
- 38 Hour Army Corps of Engineers Wetland Delineation Training, Wetland Training Institute (WTI), April 27-28, 2020, Sacramento, CA.
- eDNA: A Practical Workshop, TWS: San Joaquin Valley Chapter, July 29-31, 2019, Lompoc, CA.
- Blunt-nosed Leopard Lizard Identification Workshop, TWS: San Joaquin Valley Chapter, May 18-19, 2018, Bakersfield, CA.
- Waterfowl Ten-week Workshop, Sea & Sage Audubon Society, Spring 2015, Huntington Beach, CA.
- Birds of Southern California Ten-week Workshop, Sea & Sage Audubon Society, Fall 2014, Huntington Beach, CA.
- Riparian Plant Identification for Southern California Coastal Rivers and Streams, WTI, April 7-8, 2011, Costa Mesa, CA.
- California Rapid Assessment Method (CRAM) – Riverine, Southern California Coastal Water Research Project (SCCWRP), May 24-26, 2010, Costa Mesa, CA.

Past Project Approvals

- CDFW Approved as General Biological Monitor for SJAS and SJKF under Incidental Take Permit No. 2081-2015-024-04.
- USFWS Approved as General Monitor for BNLL and SJKF under Biological Opinion No. 08ESMF00-2012-F-0247.
- CDFW Approved as General Biological Monitor for SJAS and SJKF under Incidental Take Permit No. 2081-2016-059-04.

Fernando Valley spineflower, Clokey's cryptantha, Kern mallow, Tejon poppy, pale-yellow layia, Peirson's lupine, Tehachapi monardella, Piute Mountains navarretia, Robbins' nemacladus, Short-joint beavertail, Bakersfield, Latimer's woodland-gilia, and Southern jewelflower.

Belmont Business Park Development Project – Fresno County, CA. Associate Environmental Scientist (2022).

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, Fresno kangaroo rat, and SJKF and sensitive plant species including California jewelflower. Prepared the resulting Biological Resources Evaluation (BRE) report summarizing the survey results.

Clearway Energy: Alta Wind Project – Kern County, CA. Associate Environmental Scientist (2022).

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger desert tortoise, Mohave ground squirrel, desert kit fox, Swainson's hawk, and western burrowing owl and sensitive plant species including Bakersfield cactus, western Joshua tree. Compiled a full plant inventory for species observed on site.

Clearway Energy: Alpine Solar Project – Kern County, CA. Associate Environmental Scientist (2022).

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger desert tortoise, Mohave ground squirrel, desert kit fox, Swainson's hawk, and western burrowing owl and sensitive plant species including Bakersfield cactus, western Joshua tree. Compiled a full plant inventory for species observed on site.

True North Renewable Energy: Kern Organics Renewable Energy Project – Kern County, CA. Associate Environmental Scientist (2022).

Conducted protocol-level rare plant surveys to identify special-status plant species and special-status habitats for a proposed 120-acre biogas collector facility and associated 2.5-mile gen-tie route. Special-status species with the potential to occur within the survey area included alkali mariposa lily, recurved larkspur, Barstow woolly sunflower, Latimer's woodland-gilia, and sagebrush loeflingia.

California High Speed Rail: Construction Package 4 – Kern County, CA. Project Biologist (2017 – 2022).

Assisted in numerous pre-construction surveys for special-status wildlife species throughout the 22-mile CP4 alignment in Kern and Tulare County, CA. Conducted focused rare plant surveys annually in areas of annual grassland and saltbush scrub habitat along the CP4 alignment; special-status species with the potential to occur on site included Kern mallow and San Joaquin woolly threads. Identified Kern mallow and Joaquin woolly threads at appropriate reference sites annually prior to rare plant surveys. Identified approximately 15 Kern mallow individuals during rare plant surveys. Helped coordinate Kern

mallow seed collection in accordance with the Project's Rare Plant Seed Salvage Plan. Prepared annual reports summarizing the results of the rare plant surveys for the client. All activities were conducted under Incidental Take Permit No. 2081-2015-024-04 and Biological Opinion No. 08ESMF00-2012-F-0247.

California Resources Corporation: On-Call Biologist – Kern County, CA. *Project Biologist* (2017 - 2020).

Conducted numerous pre-construction surveys for sensitive wildlife species throughout Kern and Kings counties for new well pads, pipelines, and other oilfield infrastructure. Protected, threatened, and endangered species with the potential to occur on site(s) included American badger, BNLL, burrowing owl, Kern mallow, SJAS, SJKF, TKR, American badger, raptors and nesting birds and Bakersfield cactus. Identified approximately 20 Kern mallow individuals. Drafted multiple pre-construction survey and post-construction compliance reports. Conducted construction monitoring for well pad locations and pipelines and provided Threatened and Endangered Species Awareness Training to crews.

California Resources Corporation: 9D – 12D Gathering Line – Kern County, CA. *Project Biologist* (2017).

Conducted protocol-level rare plant surveys to identify special-status plant species and special-status habitats for a proposed 4.15-mile fiber spar line in the Buena Vista Hills, CA in accordance with USFWS, CDFW, CNPS survey protocols. Special-status species with the potential to occur within the survey area included Kern mallow (*Eremalche kernensis*), San Joaquin woolly threads (*Monolopia congdonii*), California jewelflower (*Caulanthus californicus*), oil nestraw (*Stylocline citroleum*), Lost Hills crownscale (*Atriplex coronata* var. *vallicola*), heartscale (*Atriplex cordulata* var. *cordulata*), Horn's milk-vetch (*Astragalus hornii* var. *hornii*), Tejon poppy (*Eschscholzia lemmonii* ssp. *kernensis*), and gypsum-loving larkspur (*Delphinium gypsophilum* ssp. *gypsophilum*). Special-status species encountered during surveys included gypsum-loving larkspur and burrowing owl (one active burrow).

Devil Canyon Project FERC Relicensing – San Bernardino County, CA. *Project Biologist* (2018).

Conducted botanical surveys of native and non-native vegetation in and around the Department of Water Resources (DWR) Devil Canyon Hydropower plant and Pyramid Lake and Dam as part of the relicensing process. Special-status species encountered during surveys included Palmer's mariposa lily (*Calochortus palmeri*) and South coast range morning glory (*Calystegia collina* ssp. *venusta*).

HABITAT RESTORATION AND MONITORING

Caltrans District 6: Middle Mile Broadband Network Project (TO #23) – Tulare and Kern County, CA. *Associate Environmental Scientist* (2022 - Present).

Performed preliminary habitat assessment and mapping of project routes via windshield field surveys to verify habitat types

and update/develop special-status species distributions. Completed and evaluated database and literature searches for determining potential impacts to special-status species. Assisted in preparing the Natural Environmental Study (NES) Reports.

Caltrans District 6: Middle Mile Broadband Network Project (TO #20) – Fresno County, CA. *Associate Environmental Scientist* (2022 - Present).

Performed preliminary habitat assessment and mapping of project routes via windshield field surveys to verify habitat types and update/develop special-status species distributions. Completed and evaluated database and literature searches for determining potential impacts to special-status species. Assisted in preparing the Natural Environmental Study (NES) Reports.

Caltrans District 6: Middle Mile Broadband Network Project (TO #21) – Kern County, CA. *Associate Environmental Scientist* (2022 - Present).

Performed preliminary habitat assessment and mapping of project routes via windshield field surveys to verify habitat types and update/develop special-status species distributions. Observed two SJAS individuals incidentally during windshield surveys. Completed and evaluated database and literature searches for determining potential impacts to special-status species. Assisted in preparing the Natural Environmental Study (NES) Reports.

Plains All American Pipeline: Line 63 Site Restoration – Los Angeles County, CA. *Project Biologist* (2017 - 2022).

Performed biological construction compliance monitoring for multiple repair and maintenance activities along the Line 63 crude oil pipeline in Angeles National Forest. Additionally, assisted with the subsequent site restoration efforts. Site restoration efforts included monitoring the installation of BMPs, providing oversight of weeding crews for multiple restoration sites, and assisting in quarterly site assessments including conducting plant inventories at restoration sites and evaluating the sites current success criteria for restoration goals.

Plains All American Pipeline: Line 2000 Site Restoration – Los Angeles County, CA. *Project Biologist* (2017 - 2022).

Performed biological construction compliance monitoring for multiple repair and maintenance activities along the Line 2000 crude oil pipeline in Angeles National Forest. Additionally, assisted with the subsequent site restoration efforts. Site restoration efforts included monitoring the installation of BMPs, providing oversight of weeding crews for multiple restoration sites, and assisting in quarterly site assessments including conducting plant inventories at restoration sites and evaluating the sites current success criteria for restoration goals.

Southern California Gas Company: Angeles National Forest Restoration – Los Angeles County, CA. *Project Biologist* (2020).

Conducted site assessment surveys on multiple environmental rehabilitation areas and documented all observed flora, including special status species.

Region 8 Bioassessment – Orange, Riverside, San Bernardino, and Los Angeles counties, CA. *Stream Ecologist* (2009 - 2017).

This long-term project funded by the California State Water Boards quantified the biological health of freshwater streams in the Santa Ana and San Jacinto watersheds. Activities included collecting benthic macroinvertebrates (BMI), water samples, water chemistry data, sediment samples, algae (micro, macro, and diatom) samples, and physical habitat data, in accordance SWAMP protocols. As a certified California Rapid Assessment Method (CRAM: Riverine module) Practitioner conducted approximately 75 CRAM assessments of riparian sites and entered the results into the online CRAM data portal. Helped process invertebrate, ash free dry mass, and micro and macro algae samples in the laboratory. Identified BMI collected to Order or Family using dichotomous keys. Managed all data entry for the lab and maintained detailed records of samples collected using internal laboratory information system. Calculated the Index of Biotic Integrity (IBI) scores and/or California Stream Condition Index (CSCI) for sites sampled, which are multi-metric techniques used to assign a water quality value to the location(s) under study. Coauthored a summary report for the California State Water Boards titled 'Multiyear Report Wadeable Streams Bioassessment: Santa Ana Region 2012 -2015'.

San Diego State University: Alvarado Creek Restoration – San Diego County, CA. *Stream Ecologist* (2015 - 2017).

The project involved monitoring and assessing the success of three separate phases of a restoration effort for sections of Alvarado Creek in San Diego, California. Led a team of four biologist in conducting bioassessment of Alvarado Creek. Worked collaboratively with faculty and students from San Diego State University's environmental engineering department to collect ambient water quality measurements using YSI multiprobe water quality meter, water samples for nutrient analyses, benthic macro invertebrates, diatom samples, and performed annual CRAM assessments (which included identifying dominate vegetative cover) of the three separate phases of restoration at the site. Generated California Stream Condition Index (CSCI) scores for site restoration phases, which is a multi-metric technique used to assign a water quality value to the location under study.

Cold Creek Oil Spill – San Bernardino County, CA. *Stream Ecologist* (2012 - 2017).

Assessed the impacts of an oil release into Cold Creek, a small first-order tributary of the Santa Ana River, in Angelus Oaks, California. Assisted in monitoring the benthic macro invertebrates, diatom, and riparian plant communities in oil-impacted sites and compared them with identified reference sites. Additionally, assisted in the collection of water and sediment samples to evaluate the quality of the water passing through the watershed of the petroleum release and to identify petroleum hydrocarbons remaining in the soil.

NESTING BIRDS

Caltrans District 6: Union Avenue to White Lane 2R Rehabilitation Project (TO#04) – Kern County, CA. *Associate Environmental Scientist (2022).*

Monitored red-tailed hawk (*Buteo jamaicensis*) nest containing two fledglings during construction activities occurring within a 500-foot buffer. The nest/fledglings were continuously monitored for any signs of disturbance during the nearby construction activities.

California High Speed Rail: Construction Package 4 – Kern County, CA. *Project Biologist (2017 - 2022).*

Assisted in numerous pre-construction surveys for sensitive wildlife species throughout the 22-mile CP4 alignment in Kern and Tulare County, CA. Permit covered species with the potential to occur within the Project Area included BNLL, BVLOS, SJAS, SJKF, SWHA, and TKR. Pre-construction surveys included evaluation of habitat suitability, small mammal burrow and potential kit fox den mapping, small mammal burrow evaluation for potential to support Project covered species (BNLL, SJAS, TKR), and surveys for nesting birds. Identified multiple active passerine and raptor nests throughout the pre-construction surveys. Prepared pre-construction survey packages consisting of a notification of commencement summarizing work to be completed at each site, a report of all pre-construction survey results, and if necessary, trapping and relocation site-specific protocols for target species (SJAS/TKR). Prepared active raptor nest buffer reduction requests including proposed mitigation to limit construction impact on nearby active nests. Established and maintained active nest avoidance buffers during construction monitoring. Surveyed known active nests to determine when young were no longer dependent on the nest and the established buffer could be removed. All activities were conducted under Incidental Take Permit No. 2081-2015-024-04 and Biological Opinion No. 08ESMF00-2012-F-0247.

California Resources Corporation: On-Call Biologist – Kern County, CA. *Project Biologist (2017 - 2020).*

Conducted numerous pre-construction surveys for sensitive wildlife species throughout Kern and Kings counties for new well pads, pipelines, and other oilfield infrastructure. Protected, threatened, and endangered species with the potential to occur on site(s) included American badger, BNLL, burrowing owl, Kern mallow, SJAS, SJKF, TKR, American badger, raptors and nesting birds and Bakersfield cactus. Monitored over fifty potential kit fox dens using tracking medium and/or trail cameras. Identified two active San Joaquin kit fox dens via positive identification on trail camera photos. Maintained a complete record of all sign observed and photographs taken during the den monitoring periods. Subsequent to den monitoring completion, set up and maintained approximately 25 den avoidance buffers, temporarily blocked 20 dens, and excavated ten dens. Observed multiple active raptor nests, San Joaquin antelope squirrel (approximately 15 individuals), kangaroo rat track, San Joaquin

kit fox track, Kern mallow individuals, and burrowing owls (identified two active burrow complexes). Drafted multiple pre-construction survey and post-construction compliance reports. Conducted construction monitoring for well pad locations and pipelines and provided Threatened and Endangered Species Awareness Training to crews.

AMERICAN BADGER

Gromer Tentative Track Project – Wasco, Kern County, CA, Associate Environmental Scientist (2023). Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, TKR, and SJKF and sensitive plant species. Prepared the biological section for the Initial Study Mitigation Negative Declarations (ISMND) report summarizing the survey results to be used in CEQA documents. No American badger or their sign were observed during the survey.

Silicon Valley Ranch Residential Subdivision Project – Kings County, CA, Associate Environmental Scientist (2023). Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, Fresno kangaroo rat, Tipton kangaroo rat, and SJKF and sensitive plant species. Prepared the Biological Resources Evaluation (BRE) report summarizing the survey results to be used in CEQA documents. No American badger or their sign were observed during the survey.

California Resource Corporation: Carbon TerraVault 1– Kern County, CA, Associate Environmental Scientist (2022 – Present). Conducted reconnaissance survey for sensitive wildlife species with the potential to occur within the Project site including nesting birds, American badger, BNLL, SNKR, GKR, TKR, SJAS and SJKF and sensitive plant species. Observed approximately 20 SJAS individuals, identified several potential SJKF and American badger dens based on sign (scat and track), observed six burrowing owl individuals and active burrows, identified multiple burrows displaying kangaroo rat sign, and identified a GKR burrow precinct. Prepared the Biological Analysis Report (BAR), which was a section of the Biological Evolution in the Environmental Impact Report (EIR) to be used in CEQA documents.

Caltrans District 6: State Route 58 Reward Capital Preventative Maintenance Project (TO#10) – Kern County, CA, Associate Environmental Scientist (2022).

Conducted pre-activity survey for sensitive wildlife species including nesting birds, American badger, SJAS, and SJKF. Conducted construction monitoring for the repaving of an approximately 9.4-mile segment of the Caltrans right-of-way along State Route 58 to ensure compliance with all applicable environmental permits and provided Worker Environmental Awareness Training for all new construction crew members. One active American badger den was identified during the pre-activity survey. All activities were conducted under Incidental Take Permit No. 2081-2020-044-04.

California Resources Corporation: Young Fee Den Monitoring – Kern County, CA. *Project Biologist* (2017)

Conducted pre-construction surveys for sensitive wildlife species withing the Kern Front Oil Field. Identified and monitored an active badger den via trail camera and tracking medium prior to construction of new well pad. Established and maintained an avoidance buffer of the badger den for the duration of well pad construction and provided Threatened and Endangered Species Awareness Training to crews working on site.

BLUNT-NOSED LEOPARD LIZARD (BNLL)

California Resource Corporation: Carbon TerraVault 1– Kern County, CA. *Associate Environmental Scientist* (2022 – Present).

Conducted reconnaissance survey for sensitive wildlife species with the potential to occur within the Project site including nesting birds, American badger, BNLL, SNKR, GKR, TKR, SJAS and SJKF and sensitive plant species. Observed approximately 20 SJAS individuals, identified several potential SJKF and American badger dens based on sign (scat and track), observed six burrowing owl individuals and active burrows, identified multiple burrows displaying kangaroo rat sign, and identified a GKR burrow precinct. Observed two BNLL individuals incidentally during surveys. Prepared the Biological Analysis Report (BAR), which was a section of the Biological Evolution in the Environmental Impact Report (EIR) to be used in CEQA documents.

California High Speed Rail: Construction Package 4 – Kern County, CA. *Project Biologist* (2017 - 2022).

Assisted in numerous pre-construction surveys for sensitive wildlife species throughout the 22-mile CP4 alignment in Kern and Tulare County, CA. Permit covered species with the potential to occur within the Project Area included BNLL, BVLOS, SJAS, SJKF, SWHA, and TKR. Pre-construction surveys included evaluation of habitat suitability, small mammal burrow and potential kit fox den mapping, small mammal burrow assessment for potential to support Project covered species (BNLL, SJAS, TKR), and surveys for nesting birds. Conducted BNLL protocol level surveys per CDFW 2004 or 2019 methodology annually for three Survey Areas along the CP4 alignment containing BNLL potentially suitable habitat (annual grassland, saltbush scrub, and Valley foothill riparian habitat). Observed approximately ten adult and three hatchling BNLL during protocol surveys. Prepared BNLL Reports for each of the three Survey Areas annually for the client summarizing the results of BNLL protocol surveys. Assisted in drafting a BNLL Avoidance Plan for areas along the CP4 alignment where BNLL were identified during protocol surveys. Prepared Monthly Compliance reports and Annual Status Reports as required by the Project's permits. All activities were conducted under Incidental Take Permit No. 2081-2015-024-04 and Biological Opinion No. 08ESMF00-2012-F-0247.

Aera Energy LLC: Belridge BNLL Protocol Surveys – Kern County, CA. *Project Biologist* (2019 - 2021).

Conducted blunt-nosed leopard lizard (BNLL) protocol level surveys per CDFW 2004 or 2019 methodology in developed areas and saltbush scrub habitat for Section block areas in Taft, CA. Also conducted SJAS visual and vocal identification. Observed approximately six SJAS individuals incidentally during BNLL protocol surveys. Additionally, potential kangaroo rat and SJAS burrow locations and potential kit fox dens were mapped.

California Resources Corporation: BNLL Protocol Surveys – Kern County, CA. *Project Biologist* (2017 - 2018).

Conducted protocol level BNLL surveys for proposed oil well locations following CDFW 2004 survey protocol. Also conducted SJAS visual and vocal identification. Observed approximately eight SJAS individuals incidentally during BNLL protocol surveys. Drafted BNLL Protocol Survey Results reports for the client.

Holmes Western: BNLL Protocol Surveys – Kern County, CA. *Project Biologist* (2019).

Conducted blunt-nosed leopard lizard (BNLL) protocol level surveys per CDFW 2004 methodology in developed areas and saltbush scrub habitat for the installation of new pipeline in Taft, CA. Also conducted SJAS visual and vocal identification, and SJAS burrow locations were recorded.

California Resources Corporation: McDonald Anticline Project – Kern County, CA. *Project Biologist* (2017).

Conducted blunt-nosed leopard lizard (BNLL) protocol level surveys per CDFW 2004 methodology in annual grassland and saltbush scrub habitat for a new well pad location and associated new access road in McKittrick, California. Monitored the installation of BNLL exclusionary fencing, monitored well pad and access road construction, and conducted daily inspections of exclusionary fencing integrity. Escorted drilling crew several miles through sensitive habitat to well pad location in order to enforce BNLL and San Joaquin antelope squirrel avoidance. Monitored BNLL exclusionary fence removal at project completion. Observed over 80 San Joaquin antelope squirrel individuals over duration of the project. Observed a total of twelve adult and one hatchling blunt-nosed leopard lizard during protocol surveys and two hatchling blunt-nosed leopard lizards outside of exclusionary fencing during construction monitoring.

BUENA VISTA LAKE ORNATE SHREW (BVLOS)

California High Speed Rail: Construction Package 4 – Kern County, CA. *Project Biologist* (2017 - 2022).

Assisted the BVLOS Designated Biologist (DB) in the pre-construction survey for the Poso Creek Work Area, which contained suitable habitat for BVLOS. Additionally, assisted the BVLOS DB with camera trapping surveys within the Poso Creek Work Area; one BVLOS individual was positively identified via photograph. Prepared a pre-construction survey package for the Poso Creek Work Area, which included a wildlife exclusionary fencing plan to prevent BVLOS and other sensitive species from entering the Poso Creek Work Area via adjacent suitable habitat. Helped coordinate the initial disturbance to ensure compliance

with all BVLOS conservation measures. All activities were conducted under Incidental Take Permit No. 2081-2015-024-04 and Biological Opinion No. 08ESMF00-2012-F-0247.

BURROWING OWL (BO)

Silicon Valley Ranch Residential Subdivision Project – Kings County, CA, Associate Environmental Scientist (2023). Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, Fresno kangaroo rat, Tipton kangaroo rat, and SJKF and sensitive plant species. Prepared the Biological Resources Evaluation (BRE) report summarizing the survey results to be used in CEQA documents. No burrowing owl or their sign were observed during the survey.

City of Lemoore 55-Acres South of Olam Project – Lemoore, Kings County, CA, Associate Environmental Scientist (2022). Conducted reconnaissance survey for sensitive wildlife species including nesting birds, burrowing owl, and SJKF and sensitive plant species. Prepared memo summarizing survey results. No special-status species or their sign were observed during the survey.

California Resource Corporation: Carbon TerraVault 1– Kern County, CA, Associate Environmental Scientist (2022 – Present). Conducted reconnaissance survey for sensitive wildlife species with the potential to occur within the Project site including nesting birds, American badger, BNLL, SNKR, GKR, TKR, SJAS and SJKF and sensitive plant species. Observed approximately 20 SJAS individuals, identified several potential SJKF and American badger dens based on sign (scat and track), observed six burrowing owl individuals and active burrows, identified multiple burrows displaying kangaroo rat sign, and identified a GKR burrow precinct. Prepared the Biological Analysis Report (BAR), which was a section of the Biological Evolution in the Environmental Impact Report (EIR) to be used in CEQA documents.

California High Speed Rail: Construction Package 4 – Kern County, CA, Project Biologist (2017 - 2022).

Assisted in numerous pre-construction surveys for sensitive wildlife species throughout the 22-mile CP4 alignment in Kern and Tulare County, CA. Permit covered species with the potential to occur within the Project Area included BNLL, BVLOS, SJAS, SJKF, SWHA, and TKR. Pre-construction surveys included evaluation of habitat suitability, small mammal burrow and potential kit fox den mapping, small mammal burrow assessment for potential to support Project covered species (BNLL, SJAS, TKR), and surveys for nesting birds. Observed four adult and multiple juvenile burrowing owls over several years at an active burrow complex adjacent to the CP4 alignment that was identified incidentally during pre-construction surveys. Prepared Monthly Compliance reports and Annual Status Reports as required by the Project's permits. All activities were conducted under Incidental Take Permit No. 2081-2015-024-04 and Biological Opinion No. 08ESMF00-2012-F-0247.

California Resources Corporation: On-Call Biologist – Kern County, CA. *Project Biologist* (2017 - 2020).

Conducted numerous pre-construction surveys for sensitive wildlife species throughout Kern and Kings counties for new well pads, pipelines, and other oilfield infrastructure. Protected, threatened, and endangered species with the potential to occur on site(s) included American badger, BNLL, burrowing owl, Kern mallow, SJAS, SJKF, TKR, American badger, raptors and nesting birds and Bakersfield cactus. Monitored over 50 potential kit fox dens using tracking medium and/or trail cameras. Maintained a complete record of all sign observed and photographs taken during the den monitoring periods. Subsequent to den monitoring completion, set up and maintained approximately 25 den avoidance buffers, temporarily blocked 20 dens, and excavated ten dens. Observed multiple active raptor nests, San Joaquin antelope squirrel (approximately 15 individuals), kangaroo rat track, San Joaquin kit fox track, Kern mallow individuals, and burrowing owls (identified two active burrow complexes). Drafted multiple pre-construction survey and post-construction compliance reports. Conducted construction monitoring for well pad locations and pipelines and provided Threatened and Endangered Species Awareness Training to crews.

California Resources Corporation: 9D – 12D Gathering Line – Kern County, CA. *Project Biologist* (2017).

Conducted protocol-level rare plant surveys to identify special-status plant species and special-status habitats for a proposed 4.15-mile fiber spar line in the Buena Vista Hills, in accordance with USFWS, CDFW, CNPS survey protocols. Sensitive species encountered during surveys included gypsum-loving larkspur and Western burrowing owl (one active burrow).

GIANT KANGAROO RAT (GKR)

California Resource Corporation: Carbon TerraVault 1– Kern County, CA. *Associate Environmental Scientist* (2022 – Present).

Conducted reconnaissance survey for sensitive wildlife species with the potential to occur within the Project site including nesting birds, American badger, BNLL, SNKR, GKR, TKR, SJAS and SJKF and sensitive plant species. Observed approximately 20 SJAS individuals, identified several potential SJKF and American badger dens based on sign (scat and track), observed six burrowing owl individuals and active burrows, identified multiple burrows displaying kangaroo rat sign, and identified a GKR burrow precinct. Prepared the Biological Analysis Report (BAR), which was a section of the Biological Evolution in the Environmental Impact Report (EIR) to be used in CEQA documents.

Caltrans: Panoche Hills CAPM Project (TO#14) – Fresno County, CA. *Associate Environmental Scientist* (2022-Present).

Conducted construction monitoring for installation of Environmentally Sensitive Area (ESA) ERTEC fencing around culvert locations along an eleven mile stretch of the I-5 freeway near Coalinga, CA to ensure compliance with all applicable

environmental permits. Provided Worker Environmental Awareness Training for all new construction crew members. Excavated approximately 45 potential kangaroo rat burrows within wildlife exclusionary fenced work areas after the completion of GKR trapping. Completed small mammal burrow protection per ITP requirements during shoulder backing activities. All activities were conducted under Incidental Take Permit No. 2081-2021-018-04 and Lake and Streambed Alteration Agreement No. FRE-17350-R4.

Caltrans: Tumey Gulch Project (TO#14) – Fresno County, CA.
Associate Environmental Scientist (2022-Present).

Conducted construction monitoring for installation of Environmentally Sensitive Area (ESA) fencing around culvert locations along a stretch of the I-5 freeway spanning Tumey Gulch near Coalinga, CA to ensure compliance with all applicable environmental permits. Excavated approximately 60 potential GKR burrows within exclusionary fenced areas subsequent to trapping activities. All activities were conducted under Incidental Take Permit No. 2081-2021-018-04 and Lake and Streambed Alteration Agreement No. FRE-17350-R4.

SAN JOAQUIN ANTELOPE SQUIRREL (SJAS)

Caltrans District 6: Middle Mile Broadband Network Project (TO #21) – Kern County, CA.
Associate Environmental Scientist (2022 - Present).

Performed preliminary habitat assessment and mapping of project routes via windshield field surveys to verify habitat types and update/develop special-status species distributions. Observed two SJAS individuals incidentally during windshield surveys. Completed and evaluated database and literature searches for determining potential impacts to special-status species. Assisted in preparing the Natural Environmental Study (NES) Reports.

California Resource Corporation: Carbon TerraVault 1– Kern County, CA.
Associate Environmental Scientist (2022 – Present).

Conducted reconnaissance survey for sensitive wildlife species with the potential to occur within the Project site including nesting birds, American badger, BNLL, SNKR, GKR, TKR, SJAS and SJKF and sensitive plant species. Observed approximately 20 SJAS individuals, identified several potential SJKF and American badger dens based on sign (scat and track), observed six burrowing owl individuals and active burrows, identified multiple burrows displaying kangaroo rat sign, and identified a GKR burrow precinct. Prepared the Biological Analysis Report (BAR), which was a section of the Biological Evolution in the Environmental Impact Report (EIR) to be used in CEQA documents.

City of Wasco: Wasco New Well Project – Kern County, CA.
Associate Environmental Scientist (2022).

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, Tipton kangaroo rat, SJAS, SWHA, and SJKF and sensitive plant species including California jewelflower, Kern mallow, and San Joaquin

woollythreads for eight potential new well and pipeline routes. Assisted in preparing the resulting Initial Study and Mitigated Negative Declaration (ISMND) report.

City of Delano: Delano Transit Facility Project – Kern County, CA. *Associate Environmental Scientist (2022).*

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, Tipton kangaroo rat, SJAS, SWHA, and SJKF and sensitive plant species including California jewelflower, Kern mallow, and San Joaquin woollythreads. Assisted in preparing the resulting Biological Assessment (BA) report summarizing the survey results.

Caltrans: Panoche Hills CAPM Project (TO#14) – Fresno County, CA. *Associate Environmental Scientist (2022-Present).*

Conducted construction monitoring for installation of wildlife exclusionary fencing around culvert locations along an eleven mile stretch of the I-5 freeway near Coalinga, CA to ensure compliance with all applicable environmental permits. Provided Worker Environmental Awareness Training for all new construction crew members. Excavated approximately 30 potential SJAS burrows along exclusionary fence path. Constructed and installed SJAS soft release enclosures. Excavated approximately 45 potential SJAS burrows within wildlife exclusionary fenced work areas after the completion of SJAS trapping. All activities were conducted under Incidental Take Permit No. 2081-2021-018-04 and Lake and Streambed Alteration Agreement No. FRE-17350-R4.

City of Bakersfield: On-Call Biological Services – Bakersfield, CA. *Associate Environmental Scientist (2022 to Present).*

Assisted Qualified Biologist approved to work on MBHCP (City of Bakersfield and County of Kern) projects for San Joaquin kit fox and San Joaquin antelope squirrel under Incidental Take Permit #2081-2013-058-04. Assisted with numerous pre-construction surveys under direction of MBHCP Qualified Biologist:

- Lotus Lane Development (2022)
- KHOV Lantana Development (2022)
- Stockdale Stockpile #2 Heath Avenue (2023)

Caltrans District 6: State Route 58 Reward Capital Preventative Maintenance Project (TO#10) – Kern County, CA. *Associate Environmental Scientist (2022).*

Conducted pre-activity survey for sensitive wildlife species including nesting birds, American badger, SJAS, and SJKF. Conducted construction monitoring for the repaving of an approximately 9.4-mile segment of the Caltrans right-of-way along State Route 58 to ensure compliance with all applicable environmental permits and provided Worker Environmental Awareness Training for all new construction crew members. Completed temporary blocking of potential SJAS burrows during shoulder backing activities. Observed two SJAS during pre-activity surveys and ten SJAS as incidental observations during construction monitoring. All activities were conducted under Incidental Take Permit No. 2081-2020-044-04.

California High Speed Rail: Construction Package 4 – Kern County, CA. *Project Biologist* (2017 - 2022).

Assisted in numerous pre-construction surveys for sensitive wildlife species throughout the 22-mile CP4 alignment in Kern and Tulare County, CA. Permit covered species with the potential to occur within the Project Area included BNLL, BVLOS, SJAS, SJKF, SWHA, and TKR. Pre-construction surveys included evaluation of habitat suitability, small mammal burrow and potential kit fox den mapping, small mammal burrow assessment for potential to support Project covered species (BNLL, SJAS, TKR), and surveys for nesting birds. Identified numerous potential kangaroo rat and SJAS burrows based on burrow morphology and/or presence of sign (track, scat, tail drags). Performed focused visual SJAS surveys along the alignment in areas containing potentially suitable habitat when required by Project permits. Assisted Designated Biologist(s) with SJAS trapping (Tomahawk traps) and TKR trapping (Sherman traps) activities and weighed and sexed each rodent species captured (deer mouse, Heermann's kangaroo rat). Participated in small mammal burrow excavations under the guidance of the Designated Biologist(s) and excavated over 200 small mammal burrows. Performed construction monitoring to ensure crews complied with all relevant biological permits and performed daily wildlife exclusionary fence checks to verify fence integrity. Prepared pre-construction survey packages consisting of a notification of commencement summarizing work to be completed at each site, a report of all pre-construction survey results, and if necessary, trapping and relocation site-specific protocols for target species (SJAS/TKR). Prepared Monthly Compliance reports and Annual Status Reports as required by the Project's permits. All activities were conducted under Incidental Take Permit No. 2081-2015-024-04 and Biological Opinion No. 08ESMF00-2012-F-0247.

Aera Energy LLC: Belridge BNLL Protocol Surveys – Kern County, CA. *Project Biologist* (2019 - 2021).

Conducted BNLL protocol level surveys per CDFW 2004 or 2019 methodology in developed areas and saltbush scrub habitat for Section block areas in Taft, CA. Also conducted SJAS visual and vocal identification. Observed approximately six SJAS individuals incidentally during BNLL protocol surveys. Additionally, potential kangaroo rat and SJAS burrow locations and potential kit fox dens were mapped.

California Resources Corporation: On-Call Biologist – Kern County, CA. *Project Biologist* (2017 - 2020).

Conducted numerous pre-construction surveys for sensitive wildlife species throughout Kern and Kings counties for new well pads, pipelines, and other oilfield infrastructure. Protected, threatened, and endangered species with the potential to occur on site(s) included American badger, BNLL, burrowing owl, Kern mallow, SJAS, SJKF, TKR, American badger, raptors and nesting birds and Bakersfield cactus. Monitored over 50 potential kit fox dens using tracking medium and/or trail cameras. Maintained a complete record of all sign observed and photographs taken

during the den monitoring periods. Subsequent to den monitoring completion, set up and maintained approximately 25 den avoidance buffers, temporarily blocked 20 dens, and excavated ten dens. Observed multiple active raptor nests, San Joaquin antelope squirrel (approximately 15 individuals), kangaroo rat track, San Joaquin kit fox track, Kern mallow individuals, and burrowing owls (identified two active burrow complexes). Drafted multiple pre-construction survey and post-construction compliance reports. Conducted construction monitoring for well pad locations and pipelines and provided Threatened and Endangered Species Awareness Training to crews.

Holmes Western: BNLL Protocol Surveys – Kern County, CA.
Project Biologist (2019).

Conducted blunt-nosed leopard lizard (BNLL) protocol level surveys per CDFW 2004 methodology in developed areas and saltbush scrub habitat for the installation of new pipeline in Taft, CA. Also conducted SJAS visual and vocal identification, and SJAS burrow locations were recorded.

Aera Energy LLC: T13-Blocks 3 and 5 Development Project – Kern County, CA.
Project Biologist (2017 - 2018).

Conducted daily construction monitoring for the construction of well pads and associated infrastructure in the Belridge oil field, Kern County, CA. Assisted with SJAS trapping (Tomahawk traps) activities and small mammal burrow excavations under the guidance of the Designated Biologist(s). Observed over 15 SJAS and one SJKF during construction monitoring. Excavated approximately 150 small mammal burrows. All activities were conducted under Incidental Take Permit No. 2081-2016-059-04.

California Resources Corporation: McDonald Anticline Project – Kern County, CA.
Project Biologist (2017).

Conducted BNLL protocol level surveys per CDFW 2004 methodology in annual grassland and saltbush scrub habitat for a new well pad location and associated new access road in McKittrick, California. Monitored the installation of BNLL exclusionary fencing, monitored well pad and access road construction, and conducted daily inspections of exclusionary fencing integrity. Escorted drilling crew several miles through sensitive habitat to well pad location in order to enforce BNLL and SJAS avoidance measures. Monitored BNLL exclusionary fence removal at project completion. Observed over 80 SJAS individuals over duration of the project. Observed a total of twelve adult and one hatchling BNLL during protocol surveys and two hatchling BNLL outside of exclusionary fencing during construction monitoring.

SAN JOAQUIN KIT FOX (SJKF)

Gromer Tentative Track Project – Wasco, Kern County, CA,
Associate Environmental Scientist (2023). Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, TKR, and SJKF and sensitive plant species. Prepared the biological section for the

Initial Study Mitigation Negative Declarations (ISMND) report summarizing the survey results to be used in CEQA documents. No SJKF or their sign were observed during the survey.

City of Madera Tozer Park Project – Madera, Madera County, CA. *Associate Environmental Scientist (2023).*

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, Fresno kangaroo rat, and SJKF and sensitive plant species including California jewelflower. Prepared the Biological Assessment (BA) report, summarizing the survey results, to be used in NEPA documents. No special-status plant or wildlife, or their sign, were observed during the survey.

Silicon Valley Ranch Residential Subdivision Project – Kings County, CA, *Associate Environmental Scientist (2023).*

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, Fresno kangaroo rat, Tipton kangaroo rat, and SJKF and sensitive plant species. Prepared the Biological Resources Evaluation (BRE) report summarizing the survey results to be used in CEQA documents. No SJKF or their sign were observed during the survey.

City of Lemoore 55-Acres South of Olam Project – Lemoore, Kings County, CA, *Associate Environmental Scientist (2022).*

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, burrowing owl, and SJKF and sensitive plant species. Prepared memo summarizing survey results. No special-status species or their sign were observed during the survey.

Caltrans District 6: Lost Hills Rubber Rehabilitation Project (TO#20/TO#31/TO#42/TO#07) – Kern County, CA. *Associate Environmental Scientist (2022 to Present).*

Conducted monitoring sweep of work area, checked potential SJKF dens for sign of activity, and completed weekly summary for a 5-mile stretch of the I-5, and associated laydown areas, north of Lost Hills, CA. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points.

California Resource Corporation: Carbon TerraVault 1– Kern County, CA. *Associate Environmental Scientist (2022 – Present).*

Conducted reconnaissance survey for sensitive wildlife species with the potential to occur within the Project site including nesting birds, American badger, BNLL, SNKR, GKR, TKR, SJAS and SJKF and sensitive plant species. Observed approximately 20 SJAS individuals, identified several potential SJKF and American badger dens based on sign (scat and track), observed six burrowing owl individuals and active burrows, identified multiple burrows displaying kangaroo rat sign, and identified a GKR burrow precinct. Prepared the Biological Analysis Report (BAR), which was a section of the Biological Evolution in the Environmental Impact Report (EIR) to be used in CEQA documents.

City of Wasco: Wasco New Well Project – Kern County, CA.
Associate Environmental Scientist (2022).

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, Tipton kangaroo rat, SJAS, SHWA, and SJKF and sensitive plant species including California jewelflower, Kern mallow, and San Joaquin woollythreads for eight potential new well and pipeline routes. Assisted in preparing the resulting Initial Study and Mitigated Negative Declaration (ISMND) report.

City of Delano: Delano Transit Facility Project – Kern County, CA.
Associate Environmental Scientist (2022).

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, Tipton kangaroo rat, SJAS, SHWA, and SJKF and sensitive plant species including California jewelflower, Kern mallow, and San Joaquin woollythreads. Assisted in preparing the resulting Biological Assessment (BA) report summarizing the survey results.

Caltrans District 6: State Route 58 Reward Capital Preventative Maintenance Project (TO#10) – Kern County, CA.
Associate Environmental Scientist (2022).

Conducted pre-activity survey for sensitive wildlife species including nesting birds, American badger, SJAS, and SJKF. Conducted construction monitoring for the repaving of an approximately 9.4-mile segment of the Caltrans right-of-way along State Route 58 to ensure compliance with all applicable environmental permits and provided Worker Environmental Awareness Training for all new construction crew members. All activities were conducted under Incidental Take Permit No. 2081-2020-044-04

Caltrans District 6: State Route 99 Union Avenue to White Lane 2R Project (TO#04) – Kern County, CA.
Associate Environmental Scientist. (2022-Present).

Conducted daily night sweeps to monitor for SJKF sign and/or activity.

Belmont Business Park Development Project – Fresno County, CA.
Associate Environmental Scientist (2022).

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, Fresno kangaroo rat, and SJKF and sensitive plant species including California jewelflower. Prepared the resulting Biological Resources Evaluation (BRE) report summarizing the survey results.

City of Bakersfield: On-Call Biological Services – Bakersfield, CA.
Associate Environmental Scientist (2022 to Present).

Assisted Qualified Biologist approved to work on MBHCP (City of Bakersfield and County of Kern) projects for San Joaquin kit fox and San Joaquin antelope squirrel under Incidental Take Permit #2081-2013-058-04. Assisted with numerous pre-construction surveys under direction of MBHCP Qualified Biologist:

- Lotus Lane Development (2022)
- KHOV Lantana Development (2022)

- District Avenue Sump SJKF Survey (2022)
- Stockdale Stockpile #2 Heath Avenue (2023)

Tract 6400 Development Project – Fresno County, CA.

Associate Environmental Scientist (2022).

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, burrowing owl, BNLL, Fresno kangaroo rat, and SJKF and sensitive plant species including California jewelflower. Prepared the resulting Biological Resources Evaluation (BRE) report summarizing the survey results.

California High Speed Rail: Construction Package 4 – Kern County, CA. *Project Biologist (2017 - 2022).*

Assisted in numerous pre-construction surveys for sensitive wildlife species throughout the 22-mile CP4 alignment in Kern and Tulare County, CA. Permit covered species with the potential to occur within the Project Area included BNLL, BVLOS, SJAS, SJKF, SWHA, and TKR. Pre-construction surveys included evaluation of habitat suitability, small mammal burrow and potential kit fox den mapping, small mammal burrow assessment for potential to support Project covered species (BNLL, SJAS, TKR), and surveys for nesting birds. Assisted in monitoring over 100 potential kit fox dens using tracking medium and/or trail cameras. Maintained a complete record of all sign observed and photographs taken during the den monitoring periods. Subsequent to den monitoring completion, assisted in temporarily blocking approximately 40 dens and excavating approximately 55 potential dens. Performed construction monitoring to ensure crews complied with all relevant biological permits and performed daily wildlife exclusionary fence checks to verify fence integrity. Prepared pre-construction survey packages consisting of a notification of commencement summarizing work to be completed at each site, a report of all pre-construction survey results, and if necessary, trapping and relocation site-specific protocols for target species (SJAS/TKR). Prepared Monthly Compliance reports and Annual Status Reports as required by the Project's permits. All activities were conducted under Incidental Take Permit No. 2081-2015-024-04 and Biological Opinion No. 08ESMF00-2012-F-0247.

California Resources Corporation: On-Call Biologist – Kern County, CA. *Project Biologist (2017 - 2020).*

Conducted numerous pre-construction surveys for sensitive wildlife species throughout Kern and Kings counties for new well pads, pipelines, and other oilfield infrastructure. Protected, threatened, and endangered species with the potential to occur on site(s) included American badger, BNLL, burrowing owl, Kern mallow, SJAS, SJKF, TKR, American badger, raptors and nesting birds and Bakersfield cactus. Monitored over 50 potential kit fox dens using tracking medium and/or trail cameras. Identified two active San Joaquin kit fox dens via positive identification on trail camera photos. Maintained a complete record of all sign observed and photographs taken during the den monitoring

periods. Subsequent to den monitoring completion, set up and maintained approximately 25 den avoidance buffers, temporarily blocked 20 dens, and excavated ten dens. Observed multiple active raptor nests, San Joaquin antelope squirrel (approximately 15 individuals), kangaroo rat track, San Joaquin kit fox track, Kern mallow individuals, and burrowing owls (identified two active burrow complexes). Drafted multiple pre-construction survey and post-construction compliance reports. Conducted construction monitoring for well pad locations and pipelines and provided Threatened and Endangered Species Awareness Training to crews.

Aera Energy LLC: T13-Blocks 3 and 5 Development Project – Kern County, CA. *Project Biologist* (2017 - 2018).

Conducted daily construction monitoring for the construction of well pads and associated infrastructure in the Belridge oil field, Kern County, CA. Assisted with SJAS trapping (Tomahawk traps) activities and small mammal burrow excavations under the guidance of the Designated Biologist(s). Observed over 15 SJAS and one SJKF during construction monitoring. Excavated approximately 150 small mammal burrows. All activities were conducted under Incidental Take Permit No. 2081-2016-059-04.

SJKF Training, Stantec Consulting – Kern County, CA. *Project Biologist* (2017).

An in-house training provided by lead biologist Brian Berry within the Elk Hills conservation area. Spotlighting techniques were used to locate San Joaquin kit fox and 12 positive identifications were made under the guidance of the lead biologist.

SWAINSON'S HAWK (SWHA)

EDF Renewables: Keyhole Wind Facility Project – Kern County, CA. *Associate Environmental Scientist* (2022).

Conducted rare plant surveys to identify special-status plant species and special-status habitats for a proposed 7,000-acre wind energy facility and associated infrastructure. Mapped all Western Joshua tree individuals present within the Project site using ArcGIS Collector. Observed ten SWHA incidentally during surveys.

City of Delano: Delano Transit Facility Project – Kern County, CA. *Associate Environmental Scientist* (2022).

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, Tipton kangaroo rat, SJAS, SHWA, and SJKF and sensitive plant species including California jewelflower, Kern mallow, and San Joaquin woollythreads. Observed one adult SWHA. Assisted in preparing the resulting Biological Assessment (BA) report summarizing the survey results.

California High Speed Rail: Construction Package 4 – Kern County, CA. *Project Biologist* (2017 – 2022).

Assisted in numerous pre-construction surveys for sensitive wildlife species throughout the 22-mile CP4 alignment in Kern and Tulare County, CA. Permit covered species with the potential

to occur within the Project Area included BNLL, BVLOS, SJAS, SJKF, SWHA, and TKR. Pre-construction surveys included evaluation of habitat suitability, small mammal burrow mapping, small mammal burrow evaluation for potential to support Project covered species (BNLL, SJAS, TKR), potential kit fox den mapping, and surveys for nesting birds. Performed construction monitoring to ensure crews complied with all relevant biological permits and performed daily wildlife exclusionary fence checks to verify fence integrity. Observed four SWHA individuals flying over the alignment during construction monitoring. Prepared pre-construction survey packages consisting of a notification of commencement summarizing work to be completed at each site, a report of all pre-construction survey results, and if necessary, trapping and relocation site-specific protocols for target species (SJAS/TKR). Summarized the results of monthly SWHA protocol surveys performed by a SWHA Designated Biologist(s) during nesting season in the pre-construction survey packages. Prepared Monthly Compliance reports and Annual Status Reports as required by the Project's permits. All activities were conducted under Incidental Take Permit No. 2081-2015-024-04 and Biological Opinion No. 08ESMF00-2012-F-0247.

TIPTON KANGAROO RAT (TKR)

Gromer Tentative Track Project – Wasco, Kern County, CA, Associate Environmental Scientist (2023). Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, TKR, and SJKF and sensitive plant species. Prepared the biological section for the Initial Study Mitigation Negative Declarations (ISMND) report summarizing the survey results to be used in CEQA documents. No kangaroo rat or their sign were observed during the survey.

City of Madera Tozer Park Project – Madera, Madera County, CA, Associate Environmental Scientist (2023). Conducted reconnaissance survey for sensitive wildlife species including nesting birds, Fresno kangaroo rat, and SJKF and sensitive plant species including California jewelflower. Prepared the Biological Assessment (BA) report, summarizing the survey results, to be used in NEPA documents. No kangaroo rats, or their sign, were observed during the survey.

Silicon Valley Ranch Residential Subdivision Project – Kings County, CA, Associate Environmental Scientist (2023). Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, Fresno kangaroo rat, Tipton kangaroo rat, and SJKF and sensitive plant species. Prepared the Biological Resources Evaluation (BRE) report summarizing the survey results to be used in CEQA documents. No kangaroo rat or their sign were observed during the survey.

California Resource Corporation: Carbon TerraVault 1– Kern County, CA, Associate Environmental Scientist (2022 – Present). Conducted reconnaissance survey for sensitive wildlife species with the potential to occur within the Project site including nesting birds, American badger, BNLL, SNKR, GKR, TKR, SJAS

and SJKF and sensitive plant species. Observed approximately 20 SJAS individuals, identified several potential SJKF and American badger dens based on sign (scat and track), observed six burrowing owl individuals and active burrows, identified multiple burrows displaying kangaroo rat sign, and identified a GKR burrow precinct. Prepared the Biological Analysis Report (BAR), which was a section of the Biological Evolution in the Environmental Impact Report (EIR) to be used in CEQA documents.

City of Wasco: Wasco New Well Project – Kern County, CA.
Associate Environmental Scientist (2022).

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, Tipton kangaroo rat, SJAS, SHWA, and SJKF and sensitive plant species including California jewelflower, Kern mallow, and San Joaquin woollythreads for eight potential new well and pipeline routes. Assisted in preparing the resulting Initial Study and Mitigated Negative Declaration (ISMND) report.

City of Delano: Delano Transit Facility Project – Kern County, CA.
Associate Environmental Scientist (2022).

Conducted reconnaissance survey for sensitive wildlife species including nesting birds, American badger, BNLL, Tipton kangaroo rat, SJAS, SHWA, and SJKF and sensitive plant species including California jewelflower, Kern mallow, and San Joaquin woollythreads. Assisted in preparing the resulting Biological Assessment (BA) report summarizing the survey results.

Northern Orchard (RWE): Burrow Mapping of Conservation Site – Kern County, CA.
Associate Environmental Scientist (2022).

Participated in assessing and mapping all potential kangaroo rat burrows on the conservation site.

California High Speed Rail: Construction Package 4 – Kern County, CA.
Project Biologist (2017 - 2022).

Assisted in numerous pre-construction surveys for sensitive wildlife species throughout the 22-mile CP4 alignment in Kern and Tulare County, CA. Permit covered species with the potential to occur within the Project Area included BNLL, BVLOS, SJAS, SJKF, SWHA, and TKR. Pre-construction surveys included evaluation of habitat suitability, small mammal burrow and potential kit fox den mapping, small mammal burrow assessment for potential to support Project covered species (BNLL, SJAS, TKR), and surveys for nesting birds. Identified numerous potential kangaroo rat and SJAS burrows based on burrow morphology and/or presence of sign (track, scat, tail drags). Assisted with SJAS trapping (Tomahawk traps) and TKR trapping (Sherman traps) activities and weighed and sexed each rodent species captured (deer mouse, Heermann's kangaroo rat). Participated in small mammal burrow excavations under the guidance of the Designated Biologist(s) and excavated over 200 small mammal burrows. Performed construction monitoring to ensure crews complied with all relevant biological permits and performed daily wildlife exclusionary fence checks to verify fence integrity. Prepared pre-construction survey

packages consisting of a notification of commencement summarizing work to be completed at each site, a report of all pre-construction survey results, and if necessary, trapping and relocation site-specific protocols for target species (SJAS/TKR). Prepared Monthly Compliance reports and Annual Status Reports as required by the Project's permits. All activities were conducted under Incidental Take Permit No. 2081-2015-024-04 and Biological Opinion No. 08ESMF00-2012-F-0247.

California Resources Corporation: On-Call Biologist – Kern County, CA. *Project Biologist* (2017 - 2020).

Conducted numerous pre-construction surveys for sensitive wildlife species throughout Kern and Kings counties for new well pads, pipelines, and other oilfield infrastructure. Protected, threatened, and endangered species with the potential to occur on site(s) included American badger, BNLL, burrowing owl, Kern mallow, SJAS, SJKF, TKR, American badger, raptors and nesting birds and Bakersfield cactus. Monitored over 50 potential kit fox dens using tracking medium and/or trail cameras. Identified two active San Joaquin kit fox dens via positive identification on trail camera photos. Maintained a complete record of all sign observed and photographs taken during the den monitoring periods. Subsequent to den monitoring completion, set up and maintained approximately 25 den avoidance buffers, temporarily blocked 20 dens, and excavated ten dens. Observed multiple active raptor nests, San Joaquin antelope squirrel (approximately 15 individuals), kangaroo rat track, San Joaquin kit fox track, Kern mallow individuals, and burrowing owls (identified two active burrow complexes). Drafted multiple pre-construction survey and post-construction compliance reports. Conducted construction monitoring for well pad locations and pipelines and provided Threatened and Endangered Species Awareness Training to crews.

WETLAND DELINEATIONS

Maas Energy: Merced Biogas Pipeline – Merced and Madera County, CA. *Associate Environmental Scientist* (2022).

Assisted in identifying, characterizing, and delineating potential state and federal jurisdictional waters for seven aquatic features crossing the proposed route of a biogas pipeline to connect up to six new dairy facilities within Merced and Madera Counties, California. Assisted in preparation of an Aquatic Resource Delineation Report that was submitted to the agencies for jurisdictional determination and impact analysis.

Maas Energy: Bayou Vista Canal Delineation – Tulare County, CA. *Associate Environmental Scientist* (2022).

Assisted in identifying, characterizing, and delineating potential state and federal jurisdictional waters for the Bayou Vista Canal crossing of the proposed biogas pipeline. Additionally, prepared the resulting Aquatic Resources Report.

Aera Energy LLC: Belridge Wetland Mapping – Kern County,

CA. Project Biologist (2020 - 2022).

Assisted in identifying, characterizing, and delineating potential state and federal jurisdictional waters for multiple project areas located in the Belridge Area facilities. Additionally, assisted in preparing the resulting Aquatic Resources Reports.

South SWP Hydropower Relicensing – Los Angeles County, CA. Project Biologist (2017 - 2018).

Assisted in Proper Functioning Condition (PFC) assessments using Bureau of Land Management methodology, vegetation inventories, and mapping of Project facilities using ArcCollector application. Conducted botanical surveys of native and non-native vegetation in and around the Department of Water Resources (DWR) Devil Canyon Hydropower plant as part of the relicensing process.

8 Minute Energy: Eland 1 Solar Project – Kern County, CA. Project Biologist (2017).

Assisted in identifying, characterizing, and delineating potential state and federal jurisdictional waters for approximately 3,000-acre project area located in the western Mojave.

JOSHUA TREE

Clearway Energy: Rosamond South Solar Project – Kern County, CA. Associate Environmental Scientist (2022).

Participated in survey of western Joshua tree (*Yucca brevifolia*) for a proposed 1,292-acre solar development project. Western Joshua trees were mapped and the following information for each individual was recorded: height, general health/condition, mechanism of reproduction (sexual or asexual/clonal), number of branching terminal flower panicles (if applicable).

EDF Renewables: Keyhole Wind Facility Project – Kern County, CA. Associate Environmental Scientist (2022).

Conducted rare plant surveys to identify special-status plant species and special-status habitats for a proposed 7,000-acre wind energy facility and associated infrastructure. Mapped all Western Joshua tree individuals present within the Project site using ArcGIS Collector.

True North Renewable Energy: Kern Organics Renewable Energy Project – Kern County, CA.

Associate Environmental Scientist (2022).

Conducted rare plant surveys to identify special-status plant species and special-status habitats for a proposed 120-acre biogas collector facility and associated 2.5-mile gen-tie route. Mapped all Western Joshua tree individuals present within the Project site using ArcGIS Collector.

DESERT TORTOISE

EDF Renewables: Keyhole Wind Facility Project – Kern County, CA. Associate Environmental Scientist (2022).

Assisted with 25 days (225+ hours) of protocol level desert tortoise (*Gopherus agassizii*) surveys under the guidance of authorized desert tortoise biologist Jeff Erway for a proposed 7,000-acre wind energy facility and associated infrastructure. One desert tortoise burrow was observed and identified via the presence of scat (both fresh and old).

Desert Tortoise Training with Dr. Paul Delaney, Copper Mountain College, San Bernardino County, CA. *Associate Environmental Scientist (April 30, 2022).*

Attended desert tortoise (*Gopherus agassizii*) field training taught by Dr. Paul Delaney, from Copper Mountain College, and Jeff Erway, both authorized desert tortoise biologists. Training consisted of conducting a protocol level desert tortoise survey of the Copper Mountain College desert tortoise preserve under the guidance of the approved desert tortoise biologists. Two and half hours were spent attending desert tortoise training in the field. One hatchling and one adult desert tortoise were observed during the training. Observed procedures for assessing health, marking, and providing supplemental hydration (nasal-oral water administration and via shallow water bath) for the hatchling tortoise. Identified 10+ potential desert tortoise burrows, 10+ scat pieces both fresh and old, and tracks.

CEQA/NEPA DOCUMENTS

California Resource Corporation: Carbon TerraVault 1– Kern County, CA. *Associate Environmental Scientist (2022 – Present).* Prepared Biological Analysis Report (BAR) which was a section of the Biological Evolution in the Environmental Impact Report (EIR) to be used in CEQA documents.

Gromer Tentative Track Project – Wasco, Kern County, CA, *Associate Environmental Scientist (2023).* Prepared the biological section for the Initial Study Mitigation Negative Declarations (ISMND) report summarizing the survey results to be used in CEQA documents.

City of Madera Tozer Park Project – Madera, Madera County, CA. *Associate Environmental Scientist (2023).*

Prepared the Biological Assessment (BA) report, summarizing the survey results, to be used in NEPA documents.

Silicon Valley Ranch Residential Subdivision Project – Kings County, CA, *Associate Environmental Scientist (2023).* Prepared the Biological Resources Evaluation (BRE) report summarizing the survey results to be used in CEQA documents.

California Resources Corporation: Buena Vista Hills and Mt. Poso Well Sites Project – Kern County, CA. *Associate Environmental Scientist. (2022-Present).*

Assisted in drafting the biological section for eight Initial Study Mitigation Negative Declarations (ISMND).

EDF Renewables: Keyhole Wind Facility Project – Kern County, CA. *Associate Environmental Scientist (2022).* Assisted in preparation of Biological Analysis Report (BAR) which was a section of the Biological Evolution in the Environmental Impact Report (EIR) to be used in CEQA documents.



Belmont Business Park Development Project – Fresno County, CA. *Associate Environmental Scientist (2022).* Prepared the resulting Biological Resources Evaluation (BRE) report summarizing the survey results.

City of Delano: Delano Transit Facility Project – Kern County, CA. *Associate Environmental Scientist (2022).* Prepared the Biological Assessment (BA) report, summarizing the survey results, to be used in NEPA documents.

City of Wasco: Wasco New Well Project – Kern County, CA. *Associate Environmental Scientist (2022).* Assisted in drafting the biological section for eight Initial Study Mitigation Negative Declarations (ISMND).

Tract 6400 Development Project – Fresno County, CA. *Associate Environmental Scientist (2022).* Prepared the resulting Biological Resources Evaluation (BRE) report summarizing the survey results.



Robert Vovilla

Assistant Environmental Scientist

AREAS OF EXPERTISE

- Construction Monitoring and Compliance
- Special Status Species Surveys
- Habitat Mitigation
- Bird and Bat Exclusions
- Raptor/Nesting Bird Surveys
- Habitat Restoration
- Native & Invasive Species
- Biological Field Surveys
- Technical Reporting
- GPS/GIS Mapping (ArcGIS)
- Database query and management
- Plant Surveys

EDUCATION

- B.S. Wildlife Management & Conservation, Humboldt State University, 2019
- A.A. History, Bakersfield College, 2014

REGISTRATIONS / CERTIFICATIONS

- Wilderness First Aid Certification
- Rattlesnake Handling Certification
- CPR and First Aid
- Oilfield Hazard Awareness Certification

PROFESSIONAL ORGANIZATIONS

- Member, The Wildlife Society (TWS), Western Section

Mr. Vovilla obtained his B.S. in Wildlife Management and Conservation. For the past six years, he has been employed as a seasonal and staff biologist at a private consulting firm in Kern County. He provides biological survey support on oil and gas development, solar, and urban development projects. Mr. Vovilla participated in teams of biologists conducting inventory and monitoring tasks associated with biological consulting activities. He has created potential dens and monitored using tracking material and remote sensing camera stations for track identification. He has conducted special status species surveys, bird/bat exclusions, and written technical reports.

PROFESSIONAL EMPLOYMENT

02/2024 – 12/2024	QK, Assistant Environmental Scientist
08/2023 – 02/2024	McCormick Biological Inc., On Call Biologist
09/2020 – 12/2023	Sequoia Park Zoo, Zookeeper aide
05/2023 – 08/2023	Alluvion Biological, On Call Biologist
5/2018 – 09/2020	McCormick Biological Inc., Seasonal BNLL Surveyor, Staff Biologist

PROJECT EXPERIENCE

SAN JOAQUIN KIT FOX (*Vulpes macrotis mutica*)

Chevron San Joaquin Valley Business Unit, Kern River, Midway Sunset, Lost Hills, Cymric, and Coalinga Oilfield Facility Development – CA. *Staff Biologist I.* (05/2019 – 09/2020)

Has placed tracking material and remote-sensing cameras at potential dens for track identification for San Joaquin kit fox (*Vulpes macrotis mutica*; SJKF). Conducted biological resource avoidance measures. Conducted surveys as a biologist and monitored dens (with tracking material and remote-sensing cameras) at various project sites throughout the San Joaquin Valley with oversight from qualified biologists. Survey hours: approximately 100 SJKF dens, and approximately 90 monitoring hours. Monitored 25 known dens, 2 natal dens, and 100+ potential dens, 10 of which were identified.

Mercy Southwest Hospital (MSW) Development Project, Common Spirit Health – Kern County, CA. *On-Call Biologist.* (10/2023 – 02/2024)

Assisted the CDFW-approved biologist and project lead, with a daily compliance sweep and SJKF sweep during construction for development and expansion of the hospital. Used spotlighting and telemetry to locate and track SJKF that had previously been fitted with a VHF collar. Telemetry techniques were successfully used to verify that one female SJKF was using a known earthen den. Estimated survey hours: 20, 1 known den identified, 1 SJKF observed.

Campus Maintenance Projects, California State University of Bakersfield – Kern County, CA. *Biological Consultant I.* (10/2023 – 02/2024)

Participated in SJKF surveys and burrow occupancy assessments for ongoing maintenance for the University. Telemetry techniques were successfully implemented to track and monitor a collared SJKF. Assisted a qualified biologist by marking and verifying numerous potential dens, as well as unmarking and removing flags from unviable burrows/dens. Assisted in monitoring potential and historic known natal dens on campus using remote-sensing camera stations. Multiple SJKF were identified and confirmed to be using recently unblocked known den site.

SJKF Trapping, Endangered Species Recovery Program – Kern County, CA. *Biological technician, Staff Biologist I.* (12/2019, 07/2020)

Participated with ESRP staff in trapping SJKF for ongoing research. Assisted in checking SJKF traps and processing individuals. ESRP staff drew blood, checked physical and dental condition, checked existing collars, or applied new collars to SJKF captured. Observed three SJKF that were trapped and worked up. Four hours of SJKF observations were logged.

Road 5.5 Bridge Replacement Project, Alluvion Biological – Madera County, CA. *On-call Biologist.* (05/2023)

Performed a preconstruction survey for special status species including Swainson's hawk (*Buteo swainsoni*), Northern Harrier (*Circus hudsonius*), SJKF, and Western pond turtle (*Actinemys marmorata*).

Tank Repair Monitoring, Crimson Midstream – Kern County, CA. *Staff Biologist I.* (06/2020)

Worked as a biological monitor during painting and repair of tanks in a facility. Monitoring was focused on an active red-tailed hawk (*Buteo jamaicensis*, 30 hours) nest within proximity of the work. During his monitoring activities, located a San Joaquin kit fox (*Vulpes macrotis mutica*, 30 hours) adult in a pipe within the perimeter of the facility. Established an avoidance buffer and alerted workers to the presence of the fox.

The Wildlands Conservancy, Windwolves Preserve – Kern County, CA. *Volunteer.* (06/2020)

Volunteered with his employer McCormick Biological, to participate in the installation of 5 artificial San Joaquin kit fox (*Vulpes macrotis mutica*) dens.

SAN JOAQUIN ANTELOPE SQUIRREL (*Ammospermophilus nelsoni*)

CLNM Panoche Valley San Joaquin Antelope Squirrel (SJAS) Population Study – San Benito County, CA. *On-call Biologist.* (09/2023)

Assisted the Center of Natural Land Management staff in their ongoing research of the SJAS population on their property within the Panoche Valley. Spent a week setting, baiting, and checking Sherman traps set for SJAS. Handled and collected data on 20 SJAS.

Protocol BNLL Surveys – Oil and Gas Developers – Kern, Kings, Fresno, and Monterey Counties, CA. *Biological Technician/Staff Biologist I.* (09/2023)

Assisted with protocol-level blunt-nosed leopard lizard surveys (*Gambelia sila*; 100+ hours) conducted under an on-call biological consulting services contract. Participated in more than 50 days of surveys following the applicable California Department of Fish and Wildlife survey methodology for the species. In addition, has demonstrated the ability to identify all lizard species that may be encountered during these surveys. Also responsible for identification of all wildlife observed while conducting surveys including any federal or state listed species (e.g., loggerhead shrike (*Lanius ludovicianus*), LeConte's thrasher (*Toxostoma lecontei*), San Joaquin coachwhip (*Coluber flagellum ruddocki*), and San Joaquin antelope squirrel (*Ammospermophilus nelsoni*).

BLUNT-NOSED LEOPARD LIZARD (*Gambelia sila*)

Protocol BNLL Surveys – Oil and Gas Developers – Kern, Kings, Fresno, and Monterey Counties, CA. *Biological Technician/Staff Biologist I.* (09/2023)

Assisted with protocol-level blunt-nosed leopard lizard (*Gambelia sila* BNLL, 100+ hours) conducted under an on-call biological consulting services contract. Participated in more than 50 days of surveys following the applicable California Department of Fish and Wildlife survey methodology for the species. In addition, has demonstrated the ability to identify all lizard species that may be encountered during these surveys. Also responsible for identification of all wildlife observed while conducting surveys including any federal or state listed species (e.g., loggerhead shrike (*Lanius ludovicianus*), LeConte's thrasher (*Toxostoma lecontei*), San Joaquin coachwhip (*Coluber flagellum ruddocki*), and San Joaquin antelope squirrel (*Ammospermophilus nelsoni*).

TIPTON'S KANGAROO RAT (*Dipodomys nitratoides nitratoides*)

Kern National Wildlife Refuge Complex Monitoring – Kern County, CA. *Biological Technician.* (2018)

While under the direct supervision of a permitted biologist, assisted during annual detection trapping for species presence targeting special-status small mammals (e.g., Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*)).

WESTERN POND TURTLE (*Actinemys marmorata*)

Crocker Bridge Bike and Pedestrian Passage over Russian River, Alluvion Biological – Sonoma County, CA. *On-Call Biologist.* (07/2023)

Assisted the Qualified Biologist with protocol surveys for California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylei*), California giant salamander (*Dicamptodon ensatus*), and Western pond turtle (*Actinemys marmorata*).

CALIFORNIA RED-LEGGED FROG (*Frog (Rana draytonii)*)

Crocker Bridge Bike and Pedestrian Passage over Russian River, Alluvion Biological – Sonoma County, CA. *On-Call Biologist*. (07/2023)

Assisted the Qualified Biologist with surveys for California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylei*), California giant salamander (*Dicamptodon ensatus*), and Western pond turtle (*Actinemys marmorata*).

FOOTHILL YELLOW-LEGGED FROG (*Rana draytonii*)

Crocker Bridge Bike and Pedestrian Passage over Russian River, Alluvion Biological – Sonoma County, CA. *On-Call Biologist*. (07/2023)

Assisted the Qualified Biologist with surveys for California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylei*), California giant salamander (*Dicamptodon ensatus*), and Western pond turtle (*Actinemys marmorata*)

CALIFORNIA GIANT SALAMANDER (*Rana draytonii*)

Crocker Bridge Bike and Pedestrian Passage over Russian River, Alluvion Biological – Sonoma County, CA. *On-Call Biologist*. (07/2023)

Assisted the Qualified Biologist with surveys for California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylei*), California giant salamander (*Dicamptodon ensatus*), and Western pond turtle (*Actinemys marmorata*).

SAN JOAQUIN COACHWHIP (*Coluber flagellum ruddocki*)

Protocol BNLL Surveys – Oil and Gas Developers - Kern, Kings, Fresno, and Monterey Counties, CA. *Biological Technician/Staff Biologist I*. (09/2023)

Assisted with protocol-level blunt-nosed leopard lizard (*Gambelia sila* 100+ hours) conducted under an on-call biological consulting services contract. Participated in more than 50 days of surveys following the applicable California Department of Fish and Wildlife survey methodology for the species. In addition, has demonstrated the ability to identify all lizard species that may be encountered during these surveys. Also responsible for identification of all wildlife observed while conducting surveys including any federal or state listed species (e.g., loggerhead shrike (*Lanius ludovicianus*), LeConte's thrasher (*Toxostoma lecontei*), San Joaquin coachwhip (*Coluber flagellum ruddocki*), and San Joaquin antelope squirrel (*Ammospermophilus nelsoni*)).

CALIFORNIA TIGER SALAMANDER (*Ambystoma californiense*)

Union Road Bridge Over San Benito River, Alluvion Biological – San Benito County, CA *On-call Biologist*. (05/2023)

Participated in a preconstruction survey and flagging of potential California tiger salamander (*Ambystoma californiense*) burrows. Worked as a biological monitor of exclusion fencing construction for CTS.

SWAINSONS HAWK (*Buteo swainsoni*)

Road 5.5 Bridge Replacement Project, Alluvion Biological – Madera County, CA. On-call Biologist. (05/2023)

Performed a preconstruction survey for special status species including Swainson's hawk (*Buteo swainsoni*), Northern Harrier (*Circus hudsonius*), SJKF, and Western pond turtle (*Actinemys marmorata*).

SAN FRANCISCO DUSKY-FOOTED WOODRAT (*Neotoma fuscipes annectens*)

Uvas Creek Bridge Project, Alluvion Biological – Santa Clara County, CA. On-call Biologist. (05/2023-06/2023)

Worked as a biological monitor for bridge renovation construction and water diversion implementation. Nesting bird surveys and monitoring were conducted for white-breasted nuthatch (*Sitta carolinensis*) and black phoebe (*Sayornis nigricans*). Conducted surveys for San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) nests, and potential nests were flagged.

04-297634 SR84 Expressway Widening and I-680 Improvements, Alluvion Biological – Alameda County, CA. On-call Biologist. (05/2023)

Worked as a biological monitor for bridge widening and roadway construction. Nesting bird surveys and monitoring were conducted for cliff swallow (*Petrochelidon pyrrhonota*) and killdeer (*Charadrius vociferus*). Participated in roosting bat surveys under the designated biologist. Assisted in checking on potential San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) nests to see if the residents could be relocated.

NESTING BIRDS

Road 5.5 Bridge Replacement Project, Alluvion Biological – Madera County, CA. On-call Biologist. (05/2023)

Performed a preconstruction survey for special status species including Swainson's hawk (*Buteo swainsoni*), Northern Harrier (*Circus hudsonius*), SJKF, and Western pond turtle (*Actinemys marmorata*).

Tank Repair Monitoring, Crimson Midstream – Kern County, CA. Staff Biologist I. (06/2020)

Worked as a biological monitor during painting and repair of tanks in a facility based on the presence of an active red-tailed hawk (*Buteo jamaicensis*, 30 hours) nest within proximity of the work. During monitoring activities, located a San Joaquin kit fox (*Vulpes macrotis mutica*, 30 hours) adult in a pipe within the perimeter of the facility. Established an avoidance buffer and alerted workers to the presence of the fox.

Manor Street Bridge Rehabilitation and Seismic Retrofit Project, – Kern County, CA. Staff Biologist I. (05/2020-08/2020)

Worked as a biological monitor during bird and bat roost exclusion implementation and general bridge retrofit construction. Bat surveys conducted for the project included bat roost habitat assessments, active acoustic monitoring surveys, and bat roost emergence surveys. Nesting bird surveys were conducted for mourning dove (*Zenaida macroura*) and Anna's

hummingbird (*Calypte anna*). Also identified one indigo bunting (*Passerina cyanea*), as well as a juvenile brown-headed cowbird (*Molothrus ater*) parasitizing a male yellow warbler (*Setophaga petechia*) during the project.

Uvas Creek Bridge Project, Alluvion Biological – Santa Clara County, CA. On-call Biologist. (05/2023-06/2023)

Worked as a biological monitor for bridge renovation construction and water diversion implementation. Nesting bird surveys and monitoring were conducted for white-breasted nuthatch (*Sitta carolinensis*) and black phoebe (*Sayornis nigricans*). Surveys for San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) nests were conducted, and potential nests were flagged.

04-297634 SR84 Expressway Widening and I-680 Improvements, Alluvion Biological – Alameda County, CA. On-call Biologist. (05/2023)

Worked as a biological monitor for bridge widening and roadway construction. Nesting bird surveys and monitoring were conducted for cliff swallow (*Petrochelidon pyrrhonota*) and killdeer (*Charadrius vociferus*). Participated in roosting bat surveys under a designated biologist. Assisted in checking on potential San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) nests for relocation.

10-1F4604 San Joaquin Middle River Bridge Roadway Realignment, Alluvion Biological – San Joaquin County, CA. On-call Biologist. (05/2023)

Performed site check of ongoing construction and monitored continuing mourning dove (*Zenaida macroura*) nest.

RESEARCH / VOLUNTEERING

Pronghorn Ecology Study, California Department of Fish and Wildlife – Modoc County, CA. Volunteer. (2015)

Participated in ongoing data collection of pronghorn (*Antilocapra americana*) fawn health and survival rates. Utilized radio telemetry to locate, capture, and collar pronghorn fawn, and assisted as a scribe for data collection in the field.

Wright Refuge, Humboldt State University Foundation and Humboldt Area Foundation – Humboldt County, CA. Bird-banding Intern. (2017)

Was selected as one of five interns to assist in running a MAPS protocol station for the summer season. Facilitated impermanent mist net set up and take down, and assisted in the trapping, extraction, banding, aging and sexing of resident and migratory birds in the area.

The Effects of Bait and Distance to Dune Forest on Raccoon (*Procyon lotor*) and Gray Fox (*Urocyon cinereoargenteus*) Humboldt State University – Humboldt County, CA. Student. (2017)

Participated in a full class project that utilized baited camera traps to identify raccoon and fox frequencies within a dune ecosystem and distance to forest edge.

Black Phoebe (*Sayornis nigricans*) Perch Selection in a Rural Anthropogenic Landscape, Humboldt State University – Humboldt County, CA. *Student*. (2017)

Participated in a small group class project that measured perch selection type while foraging in rural settings using a stratified random sampling technique and a chi-squared analysis to compare proportional use and availability of perch type.

Seasonal Elk Study, California Department of Fish and Wildlife – Humboldt County, CA. *Volunteer*. (2018-2019)

Assisted staff with ongoing elk study data collection. Fieldwork consisted of telemetry monitoring, use of GPS and waypoint marking, and Mark recapture techniques through fecal DNA collection.

Foraging Rates of the Black Phoebe (*Sayornis nigricans*) during Spring Breeding Months, Humboldt State University – Humboldt County, CA. *Senior Capstone*. (2019)

Designed and completed a solo research project that measured the frequency of foraging throughout the day during spring nesting season. Data was collected via road and walking surveys; single factor ANOVA was used to compare the mean averages of both rates and proportions of foraging.

The Wildlands Conservancy, Windwolves Preserve – Kern County, CA. *Volunteer*. (2019)

In partnership with employer McCormick Biological, participated in extracting, replanting, and health monitoring of Bakersfield cactus (*Opuntia treleasei*).

The Wildlands Conservancy, Windwolves Preserve – Kern County, CA. *Volunteer*. (2020)

In partnership with employer McCormick Biological, participated in the installation of artificial San Joaquin kit fox (*Vulpes macrotis mutica*) dens.

The Wildlands Conservancy, Windwolves Preserve – Kern County, CA. *Volunteer*. (2019)

In partnership with employer McCormick Biological, participated in surveys for the blunt-nosed leopard lizard (*Gambelia sila*) on Conservancy owned land. Annual reference observations were conducted to confirm BNLL activity at a location known to be occupied by the species.

Bat Seasonality in High and Low Elevations along the Kern River, Erika Noel, MS Thesis, California State University, Bakersfield – Kern County, CA. *Research Assistant*. (2019-2020)

Assisted with scouting for ideal locations and proper set up of bat detection equipment, as well as subsequent data analysis for a M.S. candidate.

Kern Bat Working Group, Regional Chapter of the California Bat Working Group – Kern County, CA. *Volunteer*. (2020)

Participated in acoustic studies for priority bat calls in Kern County utilizing SonoBat software for bat call analysis.



Robert Mitchell (Mitch) Wayman

Associate Environmental Scientist

AREAS OF EXPERTISE

- Conservation Management of Threatened and Endangered Species
- Protocol-level Special-Status Species Plant and Wildlife Surveys
- California Desert Plant Surveys
- Small Mammal Trapping
- Environmental Compliance Monitoring
- GPS
- CEQA Documents (Drafting and Reviewing)
- Science Communicator and Presenter

EDUCATION

- Basic Leaders Course, NCOA Camp Parks, CA; 2020
- BS, Biology, California State University, Bakersfield; 2021
- Advanced Leaders Course, RTS-M Camp Robert, CA; 2023

TRAINING

- Blunt-Nosed Leopard Lizard ID & CDFW Survey Protocols, McCormick Biological; 2018 & 2020
- San Joaquin Kit Fox ID & Den Protocols, McCormick Biological; 2018
- Desert Tortoise Identification and Field Observations, QK; 2021
- Rattlesnake Safety, Capture, Transport and Release Training, Central Coast Snake Services; 2021
- Advanced Open Water Certification, Professional Association of Diving Instructors (PADI); In Progress

PROFESSIONAL ORGANIZATIONS

- The Wildlife Society (TWS), TWS Western Section, San Joaquin Valley (CA) Chapter and California Central Coast Chapter; 2022 – PRESENT
- American Elasmobranch Society (AES); 2022 – PRESENT
- American Cetacean Society (ACS); Monterey Bay Chapter; 2023 – PRESENT
- American Fisheries Society (AFS); California-Nevada Chapter; 2023- PRESENT

Mr. Wayman is a California State University Bakersfield (CSUB) graduate with a Bachelor of Science in Biology. He is a wildlife biologist with over five years of biological consulting experience who has conducted species presence/ absence surveys for plants and animals, nesting bird surveys, protocol San Joaquin kit fox surveys, monitoring, and den excavations, small mammal trapping and census, protocol botanical and sensitive plant surveys, protocol desert tortoise surveys, and protocol blunt-nosed leopard lizard surveys. He has drafted a variety of documents from letter reports to biological sections of California Environmental Quality Act Environmental Impact Reports.

He has also worked as a biological monitor on active construction sites for protected, threatened, and endangered species such as: desert tortoise, San Joaquin kit fox, San Joaquin Antelope squirrel, blunt-nosed leopard lizard, Tipton's kangaroo rat, western burrowing owl, Swainson's hawk, and special-status rare plants. Conversant with species specific rare plant survey protocols for CDFW, USFWS, BLM, and USFWS. He has conducted Joshua tree census surveys on several in construction and future proposed solar projects in the Mojave Desert.

Mr. Wayman is a soldier in the California Army National Guard (CA-ARNG) as a Non-commissioned Officer (NCO) with over 16 years and continuing military service to the state of California. He is an Honor Graduate of the Basic Leaders Course (BLC) at the NCO Academy in 2020 and a Commandant's List and Distinguished Honor Graduate of the Advanced Leaders Course (ALC) in 2023. He has served a 14-month deployment to Afghanistan (AFG) in 2011-2012, NCOIC (Non-commissioned Officer in charge) for a multi-state forward refuel point, NCOIC for base security of support operations for the 2016 Super Bowl in Santa Clara, CA, supported human intelligence teams in AFG with languages and investigations, a support team member for Task Force 10 (10th Special Forces Group) during combat operations in Kabul, AFG, and acted as the Supply Sergeant for a Headquarters Support Company (HSC) for the Brigade Support Battalion (BSB) of an artillery brigade in 2022. He served as an infantryman in a brigade reconnaissance platoon, mechanic and maintenance shop supervisor for an ISAF (International Security Assistance Force) NATO-led field shop in AFG, military police officer, maintenance field recovery squad leader, supply and logistics NCOIC for brigade support battalion, and is currently an advising and supervising maintenance NCOIC of a detachment for a brigade support battalion.

PROFESSIONAL EMPLOYMENT

06/2021 – 09/2023	QK, Associate Environmental Scientist
02/2020 – 06/2021	McCormick Biological, Biological Technician

PERMITS

- CDFW – California Endangered Species Act (CESA) and Native Plant Protection Act (NPPA) Permit
 - Plant Voucher Collecting Permit No. 2081(a)-23-099-V

REGISTRATIONS / CERTIFICATIONS

- Central Coast Snake Services, Rattlesnake Safety, Capture, Transport and Release Training
- CPR, AED, and First Aid Certification renewed every three years.
- California Department of Fish and Wildlife, Level II blunt-nosed Leopard Lizard Surveyor
- PASSPORT/OPL training, renewed annually.
- U.S. Army, Combat Lifesaver

AWARDS / RECOGNITION

- Army Commendation Medal, U.S. Army; 2012
- Afghanistan Campaign Medal with Campaign Star, U.S. Army; 2011- 2012
- Overseas Service Ribbon, U.S. Army; 2011- 2012
- Driver and Mechanics Badge with Driver Wheeled-Vehicle Clasp, U.S. Army; 2012
- Driver and Mechanics Badge with Mechanics Clasp, U.S. Army; 2012
- AOG, NEIC, AROA Coin, Colonel- Group Commander; 2011
- Overseas Service Ribbon, U.S. Army, 2012
- 548th Combat Support Battalion Coin, Colonel- Battalion Commander; 2012
- 648th Regional Support Group Coin, Command Sergeant Major- CSM; 2012
- 224th Sustainment Brigade Coin, Colonel- Brigade Commander; 2016
- 224th Sustainment Brigade Coin, Lieutenant Colonel- Brigade Commander; 2021
- Army Commendation Medal, U.S. Army; 2022
- Distinguished Honor Graduate and Commandant's List; ALC 2023
- California Achievement Medal, CA Army National Guard; March 2023

VOLUNTEER WORK

03/2019 – 09/2019	McCormick Biological, <i>Biological Technician</i>
05/2018 – 09/2018	McCormick Biological, <i>Biological Technician</i>
07/2021 – PRESENT	California Army National Guard – U.S. Army, <i>Staff Sergeant (E6)</i>
01/2016 – 07/2021	California Army National Guard – U.S. Army, <i>Sergeant (E5)</i>
08/2008 – 01/2016	California Army National Guard – U.S. Army, <i>Mechanic & Military Policeman (E2-E4)</i>
12/2006 – 08/2008	California Army National Guard – U.S. Army, <i>Reconnaissance Infantryman (E1-E2)</i>

PROJECT EXPERIENCE

AMERICAN BADGER

(Taxidea taxus)

Well Abandonment Project, Chevron Lost Hills – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential American badger or their sign (i.e., scat, tracks, or potential dens) and none were observed during survey.

ENAS 23-58, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential American badger or their sign (i.e., scat, tracks, or potential dens) and none were observed during survey.

ENAS 23-26R, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential American badger or their sign (i.e., scat, tracks, or potential dens) and none were observed during survey.

Tannehill Water Disposal Line, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential American badger or their sign (i.e., scat, tracks, or potential dens) and none were observed during survey.

SW Potter 2019, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential American badger or their sign (i.e., scat, tracks, or potential dens) and none were observed during survey.

Severini Water Line Mixing Pad Project, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential American badger or their sign (i.e., scat, tracks, or potential dens) and none were observed during survey.

Cordeniz Land Development Unit 1 Project, JJR Management Services, Inc. – Tulare, CA. *Assistant Environmental Scientist.*

- Animal Keeper- Raptors, California Living Museum, Bakersfield, CA; January-April 2018.
- Segment Contributor, Jeep Talk Show- Podcast; October 2019 - May 2020
- The Wildlife Society (TWS), TWS Western Section Online Community Manager- Discord; Feb 2022- Oct 2023.

RESEARCH WORK

- Aquarium of the Pacific and SoCal Turtles; Sea Turtle Monitoring at the San Gabriel River; Long Beach, CA; October 2022- PRESENT
- Aquarium of the Pacific; Sea Turtle High Tide Monitoring Project Leader at the San Gabriel River; Long Beach, CA; September 2023- PRESENT

PRESENTATIONS

- West Coast Sea Turtle Symposium; Aquarium of the Pacific; Oct 19-20, 2022
 - devil weed (*Sargassum horneri*)
- American Fisheries Society Cal-Neva Chapter 57th Annual Meeting; March 1-3, 2023
 - Invasive species the devil weed (*Sargassum horneri*)
- American Scuba Academy: Reef Rangers Dive Club; Corona, CA; March 2, 2023
 - Invasive species the devil weed (*Sargassum horneri*)
- Scuba Show 2023, Long Beach, CA; June 3-4, 2023.
 - Invasive species the devil weed (*Sargassum horneri*)
- Bakersfield Scuba Shark Week; Bakersfield, CA; July 15, 2023.
 - Common Sharks of California

CONTINUING EDUCATION

- San Diego Zoo Wildlife Alliance Academy, Animal Welfare Professional; February 2018; Online Course.
- The American Association of Zoo Keepers, California Condor Conservation; March 14, 2018; Online Course.
- Blunt-nosed Leopard Lizard Identification Workshop by Randi McCormick at McCormick Biological; May 31- June 1, 2018; Bakersfield, CA.
- San Joaquin kit fox training, dens, and identification Workshop with Steve Pruett

Conducted reconnaissance biological survey for potential American badger or their sign (i.e., scat, tracks, or potential dens). No American badger or sign was observed.

Tract 935; City of Lemoore – Lemoore, CA. Assistant Environmental Scientist.

Conducted reconnaissance biological survey for potential American badger or their sign (i.e., scat, tracks, or potential dens). No American badger or sign was observed.

Porterville College, City of Porterville – Porterville, CA. Assistant Environmental Scientist.

Conducted reconnaissance biological survey for potential American badger or their sign (i.e., scat, tracks, or potential dens). No American badger or sign was observed.

Keyhole Wind Farm Project, EDF Renewables – Kern County, CA. Assistant Environmental Scientist- Associate Environmental Scientist I.

Conducted reconnaissance biological survey for potential American badger or their sign (i.e., scat, tracks, or potential dens). No American badger was observed, and potential dens were observed.

True North, Organic Waste Renewable Energy – Kern County, CA.

Assistant Environmental Scientist.

Conducted reconnaissance biological survey for potential American badger or their sign (i.e., scat, tracks, or potential dens). No American badger or sign was observed.

Keyhole Wind Farm Project, EDF Renewables – Kern County, CA. Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted reconnaissance biological survey and protocol plant surveys for listed species of plants and animals to include the DKF, SWHA, desert tortoise, CA Condor, eagles, raptors, or their sign (i.e., scat, tracks, or potential dens) and nest. No AMBA was observed during the surveys and several potential dens were discovered.

Zephyr Lane New School Project, Fairfax School District—Kern County, CA. Associate Environmental Scientist I (2022- Present).

Conducted a reconnaissance biological survey for listed plants and animals to include the American badger, SJKF, SJAS, giant kangaroo rat, BUOW, raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). No AMBA or potential dens were observed during surveys.

California Resource Company: Terra Vault 1— Kern County, CA. Associate Environmental Scientist I (2022- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. NO AMBA was observed, however several potential dens were present.

Khaptibi Solar Project, Khaptibi Solar LLC – Rosamond, CA. Associate Environmental Scientist I (2022).

by McCormick Biological, July 19-20, 2018; Bakersfield, CA.

- Wildnote Series: Remote Data Sensing for Monitoring and Evaluations with Jessie Norriss; November 10, 2020; Webinar.
- CEQA 101 for Biologists presented by Association of Environmental Professionals- Central Valley Chapter; July 29, 2021; Webinar.
- Wildnote Series: Migratory Bird Treaty Act and Linear Construction Compliance with Southern California Edison's Avian Program Manager, Kara Donohue; August 10, 2021; Webinar.
- Conservation Lecture Series: Conservation of endangered Buena Vista Lake Shrews through investigation of taxonomic status, distribution, and use of non-invasive survey methods; December 20, 2021; Webinar.
- Wildnote Live! Photo Management; October 13, 2022; Webinar.
- West Coast Sea Turtle Symposium; Oct 19-20, 2022; Long Beach, CA.
- American Fisheries Society Cal-Neva Chapter 57th Annual Meeting; March 1-3, 2023; Long Beach, CA.

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No AMBA or sign was observed during the survey.

Jadidollah Solar Project, Jadidollah Solar LLC – Rosamond, CA.
Associate Environmental Scientist I (2022).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No AMBA or sign was observed during the survey.

Rosamond Central Solar Project, Clearway Energy Group, LLC – Rosamond, CA.
Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. Conducted construction monitoring. No AMBA or sign was observed.

Rosamond South Solar Project, Clearway Energy Group, LLC – Rosamond, CA.
Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. No AMBA or sign was observed.

Broadband Project, CalTrans— South San Joaquin Valley, CA.
Associate Environmental Scientist I (2022- Present).

Performed habitat assessments and related support activities for the Middle Mile Broadband Network (Kern County) project (EA 06-1F340, EA 06-1F390, EA 06-1F400, and EA 06-1F410). Habitats along portions of State Routes: 115, 58, 178, 184, 204, 223, 33, and 43 were assessed for potential impacts to special-status species, and other biological resources. Habitat assessment surveys occurred throughout the valley floor and Sierra Nevada Mountains within Kern County, CA. No AMBA or potential dens were observed during surveys.

McKittrick Well Project, SESPE Consulting, Inc.—Kern County, CA.

Associate Environmental Scientist I (June 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard

lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. NO AMBA was observed.

Bullhead Met Tower, EDF Renewables, Inc.—Kern County, CA.

Associate Environmental Scientist I (September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species to include the Joshua tree. Conducted protocol-level botanical surveys for rare and listed plants. Conducted biological compliance monitoring for construction work from initial grubbing to completion. No AMBA or sign was observed.

BLUNT-NOSED LEOPARD LIZARD

(Gambelia sila)

Arcadis: Gates Tulare – Tulare County, CA. *Biological Technician* (June 2018).

Conducted protocol BNLL surveys in Project area on power line poles. No BNLL observed during the surveys.

Berry Petroleum: Derby Acres – Kern County, CA. *Biological Technician* (May 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: 21Z Lease – Kern County, CA. *Biological Technician* (June 2018- May 2021).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: B40 Site – Kern County, CA. *Biological Technician* (July 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: Brogden Lease – Kern County, CA. *Biological Technician*.

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys. (July 2019)

Berry Petroleum: Midway 32 Lease – Kern County, CA. *Biological Technician* (June 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: Tannehill Lease – Kern County, CA. *Biological Technician* (April- June 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: PRI Davis – Kern County, CA. *Biological Technician* (August 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: 32D Lease – Kern County, CA. *Biological Technician* (May- July 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: Trapezoid Lease – Kern County, CA. *Biological Technician* (June 2019- May 2021).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: Belgian Lease – Kern County, CA. *Biological Technician* (August 2019- May 2021).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: Pan Fee – Kern County, CA. *Biological Technician* (August 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: Poso Creek – Kern County, CA. *Biological Technician* (August 2019- May 2021).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: FFA Lease – Kern County, CA. *Biological Technician* (April- May 2021).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: Severini – Kern County, CA. *Biological Technician* (May- August 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: Hill Property – Kern County, CA. *Biological Technician* (August 2020).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: Origami – Kern County, CA. *Biological Technician* (May 2020).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: H&V Potter – Kern County, CA. *Biological Technician* (May 2020).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: Hovey Hills – Kern County, CA. *Biological Technician* (June 2020- April 2021).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: Homebase – Kern County, CA. *Biological Technician* (June- September 2020).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: Lucky Boy – Kern County, CA. *Biological Technician* (June- July 2020).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: Gusher 301 – Kern County, CA. *Biological Technician* (May 2020- May 2021).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Berry Petroleum: FFD Lease – Kern County, CA. *Biological Technician* (May 2021).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron CEMC: 1Y Lease – Kern County, CA. *Biological Technician* (August 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron CEMC: MWSS 36T – Kern County, CA. *Biological Technician*.

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron CEMC: 26F – Kern County, CA. *Biological Technician* (June 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron CEMC: 2SF Gas Compressor – Kern County, CA. *Biological Technician* (July 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron CEMC: MAYS 57 – Kern County, CA. *Biological Technician* (June 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron CEMC: MWSS West 54, 55 – Kern County, CA. *Biological Technician* (June 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron CEMC: MWSS West 18, 29 – Kern County, CA. *Biological Technician* (June 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron CEMC: Chaparral – Kern County, CA. *Biological Technician* (June 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron CEMC: KR KRU Project – Kern County, CA. *Biological Technician* (June 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron CEMC: KR GOVT2 Project – Kern County, CA. *Biological Technician* (June 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron CEMC: Section 11/13 Gauges – Kern County, CA. *Biological Technician* (June- August 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Coalinga: 23D Lease – Kings County, CA. *Biological Technician* (August 2018- September 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Coalinga: 12D Lease – Kings County, CA. *Biological Technician* (August 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Coalinga: 13D Lease – Kings County, CA. *Biological Technician* (August 2019- September 2020).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Coalinga: 25D Lease – Kings County, CA. *Biological Technician* (July 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Cymric: 36W Lease – Kern County, CA. *Biological Technician* (August 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Cymric: Antelope Shale – Kern County, CA. *Biological Technician* (July 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Cymric: 7Z Lease – Kern County, CA. *Biological Technician* (August 2018- August 2020).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Cymric: Cymric Water Line Project – Kern County, CA. *Biological Technician* (June- August 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Cymric: 1Y Lease – Kern County, CA. *Biological Technician* (May 2019- May 2021).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Cymric: 36W Lease – Kern County, CA. *Biological Technician* (August 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Cymric: Cymric Pipeline/Wells Project – Kern County, CA. *Biological Technician* (June- July 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Cymric: 2020 Wells Project – Kern County, CA. *Biological Technician* (May 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Cymric: Production Pipeline Upgrade, 2A & 2B – Kern County, CA. *Biological Technician* (May- August 2020).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Cymric: 17DM Lease – Kern County, CA. *Biological Technician* (May- August 2020).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Cymric: 19Z Lease – Kern County, CA. *Biological Technician* (May 2020).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Cymric: HM Infil 9 & 10 Project – Kern County, CA. *Biological Technician* (May 2021).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Kern River: Section 25 – Kern County, CA. *Biological Technician* (June- August 2018).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Kern River: Chanselor – Kern County, CA. *Biological Technician* (June- August 2018).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Lost Hills: 32US West & Section 5 – Kern County, CA. *Biological Technician* (July- August 2018).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Lost Hills: 32US East & Section 29 – Kern County, CA. *Biological Technician* (June- July 2018).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Lost Hills: Lost Hills Solar Project – Kern County, CA. *Biological Technician* (June 2018- June 2019).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Lost Hills: 997, 998, 999 Injection Project – Kern County, CA. *Biological Technician* (May 2021).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Lost Hills: Field 003 Project – Kern County, CA. *Biological Technician* (May 2021).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Midway Sunset: 23F & 26F – Kern County, CA. *Biological Technician* (August 2018).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Midway Sunset: 7S – Kern County, CA. *Biological Technician* (June 2018- July 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Midway Sunset: 25 Hill – Kern County, CA. *Biological Technician* (May- August 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Midway Sunset: Tulare Growth– Kern County, CA. *Biological Technician* (May- August 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Midway Sunset: 17S/20BP SPEL – Kern County, CA. *Biological Technician* (June- July 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Midway Sunset: Fast Cat – Kern County, CA. *Biological Technician* (June- July 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Midway Sunset: 2-22 Oil Ship – Kern County, CA. *Biological Technician* (July 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Midway Sunset: Storm Water Divergent Project – Kern County, CA. *Biological Technician* (May 2021).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Chevron Midway Sunset: 2SF Gas Compressor – Kern County, CA. *Biological Technician* (August 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

GEI Consultants: BVWSD Belridge Pipelines– Kern County, CA. *Biological Technician* (April- May 2020).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Insignia Environmental: Elk Hills to Lake Station Project – Kern County, CA. *Biological Technician* (June 2019- May 2021).

Conducted protocol BNLL surveys on project site. 15 BNLL observed during the surveys.

Insignia Environmental: Midway Road – Kern County, CA. *Biological Technician* (July 2019).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Kern National Wildlife Refuge: Pixley Refuge- In Kind – Kern County, CA. *Biological Technician* (August 2018).

Conducted permitted Heermann's kangaroo rat population census trapping. Two BNLL observed during project work.

KP Environmental: Lost Hills Solar Recondutor Project – Kern County, CA. *Biological Technician* (August 2018).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

McCormick Biological, Inc.: Lokern Training – Kern County, CA.
Biological Technician (June 2018- May 2020).
Conducted protocol BNLL surveys on training site. 9 BNLL observed during the surveys.

Valley Wastewater Management: Maricopa Reach 12 – Kern County, CA. *Biological Technician* (May 2020).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Westervelt Ecological Services: Poso Plains (High Speed Rail) – Kern County, CA. *Biological Technician* (July 2019).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

Apex Energy Solutions, LLC: Gas Company Road Solar Energy Storage Project – Kern County, CA. *Assistant Environmental Scientist* (July- September 2021).
Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys.

California Resource Company: Terra Vault 1– Kern County, CA. *Associate Environmental Scientist I.*
Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. Observed 2 BNLL and several active and potentially active SJKF dens with sign present (i.e.: tracks, scat, prey remains).

Broadband Project, CalTrans— South San Joaquin Valley, CA. *Associate Environmental Scientist I* (2022- Present).
Performed habitat assessments and related support activities for the Middle Mile Broadband Network (Kern County) project (EA 06-1F340, EA 06-1F390, EA 06-1F400, and EA 06-1F410). Habitats along portions of State Routes: 115, 58, 178, 184, 204, 223, 33, and 43 were assessed for potential impacts to special-status species, and other biological resources. Habitat assessment surveys occurred throughout the valley floor and Sierra Nevada Mountains within Kern County, CA. No BNLL was observed during surveys.

Wastewater Disposal Site, SESPE Consulting, Inc. – McKittrick, CA. *Associate Environmental Scientist I* (2023).
Conducted pre-activity survey for species of plants and animal to include potential presence of BNLL. No BNLL were observed during survey.

TO-28 Blackwell's Corner CAPM, CalTrans – Lost Hills, CA. *Associate Environmental Scientist I* (2023).
Conducted protocol BNLL surveys on project site and construction monitoring. 2 BNLL were observed during surveys.

McKittrick Well Project, SESPE Consulting, Inc.—Kern County, CA. *Associate Environmental Scientist I* (June 2023)
Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in

the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. NO BNLL was observed.

BURROWING OWL

(Athene cunicularia)

Well Abandonment Project, Chevron Lost Hills – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential burrowing owl or their sign (i.e., potential nests) and none were observed during survey.

ENAS 23-58, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential burrowing owl or their sign (i.e., potential nests) and none were observed during survey.

ENAS 23-26R, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential burrowing owl or their sign (i.e., potential nests) and none were observed during survey.

Tannehill Water Disposal Line, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential burrowing owl or their sign (i.e., potential nests) and none were observed during survey.

SW Potter 2019, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential burrowing owl or their sign (i.e., potential nests) and none were observed during survey.

Severini Water Line Mixing Pad Project, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential burrowing owl or their sign (i.e., potential nests) and none were observed during survey.

OGO Wells Construction, Chevron Midway Sunset – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential burrowing owl or their sign (i.e., potential nests) and none were observed during survey.

Cordeniz Land Development Unit 1 Project, JJR Management Services, Inc. – Tulare, CA. *Assistant Environmental Scientist.*

Conducted reconnaissance biological survey for potential burrowing owl or their sign (i.e., potential nests) and none were observed during survey.

Tract 935; City of Lemoore – Lemoore, CA. *Assistant Environmental Scientist.*

Conducted reconnaissance biological survey for potential

burrowing owl or their sign (i.e., potential nests) and none were observed during survey.

Porterville College, City of Porterville – Porterville, CA. *Assistant Environmental Scientist.*

Conducted

Conducted reconnaissance biological survey for potential burrowing owl or their sign (i.e., potential nests) and none were observed during survey.

Keyhole Wind Farm Project, EDF Renewables – Kern County, CA. *Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).*

Conducted reconnaissance biological survey and protocol plant surveys for listed species of plants and animals to include the DKF, SWHA, desert tortoise, CA Condor, eagles, raptors, or their sign (i.e., scat, tracks, or potential dens) and nest. No BUOW was observed during survey and several potential burrows were discovered.

Rosamond Central Solar Project, Clearway Energy Group, LLC – Rosamond, CA. *Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).*

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. Conducted construction monitoring. No BUOW or sign was observed.

Rosamond South Solar Project, Clearway Energy Group, LLC – Rosamond, CA. *Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).*

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. No BUOW or sign was observed.

True North, Organic Waste Renewable Energy – Kern County, CA.

Assistant Environmental Scientist.

Conducted reconnaissance biological survey for potential burrowing owl or their sign (i.e., potential nests) and two were observed during survey.

Zephyr Lane New School Project, Fairfax School District—Kern County, CA. *Associate Environmental Scientist I (2022- Present).*

Conducted a reconnaissance biological survey for listed plants and animals to include the American badger, SJKF, SJAS, giant kangaroo rat, BUOW, raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). 2 BUOWs and one active burrow were observed during surveys.

Khabtibi Solar Project, Khabtibi Solar LLC – Rosamond, CA.
Associate Environmental Scientist I (2022).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No BUOW or sign was observed during the survey.

Jadidollah Solar Project, Jadidollah Solar LLC – Rosamond, CA.
Associate Environmental Scientist I (2022).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No BUOW or sign was observed during the survey.

California Resource Company: Terra Vault 1– Kern County, CA.
Associate Environmental Scientist I.

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No BUOW was observed, however several potential burrows were observed.

Broadband Project, CalTrans— South San Joaquin Valley, CA.
Associate Environmental Scientist I (2022- Present).

Performed habitat assessments and related support activities for the Middle Mile Broadband Network (Kern County) project (EA 06-1F340, EA 06-1F390, EA 06-1F400, and EA 06-1F410). Habitats along portions of State Routes: 115, 58, 178, 184, 204, 223, 33, and 43 were assessed for potential impacts to special-status species, and other biological resources. Habitat assessment surveys occurred throughout the valley floor and Sierra Nevada Mountains within Kern County, CA. No BUOW observed during surveys.

Wastewater Disposal Site, SESPE Consulting, Inc. – McKittrick, CA.

Associate Environmental Scientist I (2023).

Conducted pre-activity survey for species of plants and animal to include potential presence of BUOW. No BUOW was observed on the project site.

TO-28 Blackwell's Corner CAPM, CalTrans – Lost Hills, CA.
Associate Environmental Scientist I (2023).

Conducted protocol BNLL surveys on project site and construction monitoring. No BUOW was observed on the project site.

TO-29 Kern 33 Culvert Rehab, CalTrans – McKittrick, CA.
Associate Environmental Scientist I (2023).

Monitored for sensitive and listed species of plants and animals during construction activities. No BUOW was observed on the project site.

McKittrick Well Project, SESPE Consulting, Inc.—Kern County, CA.

Associate Environmental Scientist I (June 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. NO BUOW was observed.

RB Inyokern Solar Project, Dimension Renewable Energy—Inyo County, CA.

Associate Environmental Scientist I (August 2023- Present)

Conducted daily environmental sensitive area fence checks and burrow/den monitoring for the presence of sensitive special-status wildlife to include burrowing owls, Mohave ground squirrel, and the desert kit fox. BUOW were observed during surveys and prior to protocol extirpation from the project site.

Prop 84 Arsenic Exceedance Remediation Project, Village Mobile Home Park—Los Angeles County, CA.

Associate Environmental Scientist I (August 2023- September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. NO BUOW was observed.

Bullhead Met Tower, EDF Renewables, Inc.—Kern County, CA.

Associate Environmental Scientist I (September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species to include the Joshua tree. Conducted protocol-level botanical surveys for rare and listed plants.

Conducted biological compliance monitoring for construction work from initial grubbing to completion. No BUOW or sign was observed.

DESERT KIT FOX

(Vulpes macrotis)

BigBeau Solar Project, EDF Renewables – Kern County, CA.

Assistant Environmental Scientist.

Monitor for DKF or their sign (i.e., scat, tracks, or potential dens) during construction phase of site. No DKF or sign was observed during construction phase.

Keyhole Wind Farm Project, EDF Renewables – Kern County, CA.

Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted reconnaissance biological survey and protocol plant surveys for listed species of plants and animals to include the DKF, SWHA, desert tortoise, CA Condor, eagles, raptors, or their sign (i.e., scat, tracks, or potential dens) and nest. No DKF was observed during the survey and several potential dens were discovered.

True North, Organic Waste Renewable Energy – Kern County, CA.

Assistant Environmental Scientist.

Conducted reconnaissance biological survey for DKF or their sign (i.e., scat, tracks, or potential dens). No DKF was observed during the survey and several potential dens were discovered.

Rosamond Central Solar Project, Clearway Energy Group, LLC – Rosamond, CA. *Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).*

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. Conducted construction monitoring. DKF sign was observed.

Rosamond South Solar Project, Clearway Energy Group, LLC – Rosamond, CA. *Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).*

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. DKF sign was observed.

Khaptibi Solar Project, Khaptibi Solar LLC – Rosamond, CA. *Associate Environmental Scientist I (2022).*

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No DKF or sign was observed during the survey.

Jadidollah Solar Project, Jadidollah Solar LLC – Rosamond, CA. *Associate Environmental Scientist I (2022).*

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No DKF or sign was observed during the survey.

RB Inyokern Solar Project, Dimension Renewable Energy—Inyo County, CA.

Associate Environmental Scientist I (August 2023- Present)

Conducted daily environmental sensitive area fence checks and burrow/den monitoring for the presence of sensitive special-status wildlife to include burrowing owls, Mohave ground squirrel, and the desert kit fox. DKF were observed during surveys and prior to protocol extirpation from the project site.

Prop 84 Arsenic Exceedance Remediation Project, Village Mobile Home Park—Los Angeles County, CA.

Associate Environmental Scientist I (August 2023- September

2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. NO DKF was observed.

Bullhead Met Tower, EDF Renewables, Inc.—Kern County, CA.

Associate Environmental Scientist I (September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species to include the Joshua tree. Conducted protocol-level botanical surveys for rare and listed plants. Conducted biological compliance monitoring for construction work from initial grubbing to completion. No DKF or sign was observed.

DESERT TORTOISE

(Gopherus agassizii)

Olancha Cartago 4-lane Project Desert Tortoise Training, Caltrans, Inyo County, CA. (September 18, 2021).

Assistant Environmental Scientist

Attended training on the desert tortoise (*Gopherus agassizii*) taught by Curtis Uptain. Observed one hatchling and one adult desert tortoise. The hatchling was seen in the burrow opening and the adult tortoise was seen both inside the burrow and basking outside of the burrow. Identified one active hatchling burrow, three active adult burrows, two inactive adult burrows, and desert tortoise scat and tracks. Six hours were spent attending desert tortoise training in the field.

Keyhole Wind Farm Project, EDF Renewables – Kern County, CA.

Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted reconnaissance biological survey and protocol plant surveys for listed species of plants and animals to include the DKF, SWHA, desert tortoise, CA Condor, eagles, raptors, or their sign (i.e., scat, tracks, or potential dens) and nest. No DT were observed during the survey and several potential dens were discovered with signs.

Rosamond Central Solar Project, Clearway Energy Group, LLC – Rosamond, CA. Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. Conducted construction monitoring. No DT or sign was observed.

Rosamond South Solar Project, Clearway Energy Group, LLC – Rosamond, CA. Associate Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. No DT or sign was observed.

Khaptibi Solar Project, Khaptibi Solar LLC – Rosamond, CA. Associate Environmental Scientist I (2022).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No DT or sign was observed during the survey.

Jadidollah Solar Project, Jadidollah Solar LLC – Rosamond, CA. Associate Environmental Scientist I (2022).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No DT or sign was observed during the survey.

McKittrick Well Project, SESPE Consulting, Inc.—Kern County, CA.

Associate Environmental Scientist I (June 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No DT was observed.

RB Inyokern Solar Project, Dimension Renewable Energy—Inyo County, CA.

Associate Environmental Scientist I (August 2023- Present)

Conducted daily environmental sensitive area fence checks and burrow/den monitoring for the presence of sensitive special-status wildlife to include burrowing owls, Mohave ground squirrel, and the desert kit fox. No DT was observed.

Prop 84 Arsenic Exceedance Remediation Project, Village Mobile Home Park—Los Angeles County, CA.

Associate Environmental Scientist I (August 2023- September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No DT was observed.

Bullhead Met Tower, EDF Renewables, Inc.—Kern County, CA.

Associate Environmental Scientist I (September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species to include the Joshua tree. Conducted protocol-level botanical surveys for rare and listed plants. Conducted biological compliance monitoring for construction work from initial grubbing to completion. No DT or sign was observed.

FERRUGINOUS HAWK

(Buteo regalis)

Broadband Project, CalTrans— South San Joaquin Valley, CA.

Associate Environmental Scientist I (2022- Present).

Performed habitat assessments and related support activities for the Middle Mile Broadband Network (Kern County) project (EA 06-1F340, EA 06-1F390, EA 06-1F400, and EA 06-1F410). Habitats along portions of State Routes: 115, 58, 178, 184, 204, 223, 33, and 43 were assessed for potential impacts to special-status species, and other biological resources. Habitat assessment surveys occurred throughout the valley floor and Sierra Nevada Mountains within Kern County, CA. Observed 1 FEHA foraging and perching on nearby power pole.

GIANT KANGAROO RAT

(Dipodomys ingens)

Well Abandonment Project, Chevron Lost Hills – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential GKR or their sign (i.e., scat, tracks, or tail drags) and none were observed during survey.

ENAS 23-58, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential GKR or their sign (i.e., scat, tracks, or tail drags) and none were observed during survey.

ENAS 23-26R, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential GKR or their sign (i.e., scat, tracks, or tail drags) and none were observed during survey.

Tannehill Water Disposal Line, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential GKR or their sign (i.e., scat, tracks, or tail drags) and none were observed during survey.

SW Potter 2019, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential GKR or their sign (i.e., scat, tracks, or tail drags) and none were observed during survey.

Severini Water Line Mixing Pad Project, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential GKR or their sign (i.e., scat, tracks, or tail drags) and none were observed during survey.

Porterville College, City of Porterville – Porterville, CA. *Assistant Environmental Scientist.*

Conducted reconnaissance biological survey for potential GKR or their sign (i.e., scat, tracks, or potential dens). No GKR or sign was observed.

Zephyr Lane New School Project, Fairfax School District—Kern County, CA. *Associate Environmental Scientist I* (2022- Present).

Conducted a reconnaissance biological survey for listed plants and animals to include the American badger, SJKF, SJAS, giant kangaroo rat, BUOW, raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). No GKR or potential dens were observed during surveys.

California Resource Company: Terra Vault 1—Kern County, CA. *Associate Environmental Scientist I.*

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No GKR was observed however several potential precincts were observed.

Broadband Project, CalTrans— South San Joaquin Valley, CA. *Associate Environmental Scientist I* (2022- Present).

Performed habitat assessments and related support activities for the Middle Mile Broadband Network (Kern County) project (EA 06-1F340, EA 06-1F390, EA 06-1F400, and EA 06-1F410). Habitats along portions of State Routes: 115, 58, 178, 184, 204, 223, 33, and 43 were assessed for potential impacts to special-status species, and other biological resources. Habitat assessment surveys occurred throughout the valley floor and Sierra Nevada Mountains within Kern County, CA. No GKR or potential burrows were observed during surveys.

Wastewater Disposal Site, SESPE Consulting, Inc. – McKittrick, CA.

Associate Environmental Scientist I (2023).

Conducted pre-activity survey for species of plants and animal to include potential presence of GKR. No GKR was observed on the project site.

TO-28 Blackwell's Corner CAPM, CalTrans – Lost Hills, CA. *Associate Environmental Scientist I* (2023).

Conducted protocol BNLL surveys on project site and construction monitoring for sensitive and listed species of plants and animals. No GKR was observed on the project site.

TO-29 Kern 33 Culvert Rehab, CalTrans – McKittrick, CA.

Associate Environmental Scientist I (2023).

Monitored for sensitive and listed species of plants and animals during construction activities. No GKR was observed on the project site.

McKittrick Well Project, SESPE Consulting, Inc.—Kern County, CA.

Associate Environmental Scientist I (June 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No GKR was observed.

GOLDEN EAGLE

(Aquila chrysaetos)

Chevron Midway Sunset: 7S – Kern County, CA. *Biological Technician.*

Conducted protocol BNLL surveys on project site. Observed three golden eagles on site.

Chevron Coalinga: 13D Lease – Kings County, CA. *Biological Technician* (August 2019- September 2020).

Conducted protocol BNLL surveys on project site. One golden eagle observed during the surveys.

Keyhole Wind Farm Project, EDF Renewables – Kern County, CA.

Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted reconnaissance biological survey and protocol plant surveys for listed species of plants and animals to include the DKF, SWHA, desert tortoise, CA Condor, eagles, raptors, or their sign (i.e., scat, tracks, or potential dens) and nest. No GOEA was observed during surveys.

Rosamond Central Solar Project, Clearway Energy Group, LLC – Rosamond, CA. *Assistant Environmental Scientist- Associate Environmental Scientist I* (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. Conducted construction monitoring. No GOEA or sign was observed.

Rosamond South Solar Project, Clearway Energy Group, LLC – Rosamond, CA. *Assistant Environmental Scientist- Associate Environmental Scientist I* (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys,

and scientific assessments on Joshua Trees. No GOEA or sign was observed.

California Resource Company: Terra Vault 1-- Kern County, CA.
Associate Environmental Scientist I.

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No GOEA was observed during surveys.

Khaptibi Solar Project, Khaptibi Solar LLC – Rosamond, CA.
Associate Environmental Scientist I (2022).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No GOEA or sign was observed during the survey.

Jadidollah Solar Project, Jadidollah Solar LLC – Rosamond, CA.
Associate Environmental Scientist I (2022).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No GOEA or sign was observed during the survey.

Broadband Project, CalTrans— South San Joaquin Valley, CA.
Associate Environmental Scientist I (2022- Present).

Performed habitat assessments and related support activities for the Middle Mile Broadband Network (Kern County) project (EA 06-1F340, EA 06-1F390, EA 06-1F400, and EA 06-1F410). Habitats along portions of State Routes: 115, 58, 178, 184, 204, 223, 33, and 43 were assessed for potential impacts to special-status species, and other biological resources. Habitat assessment surveys occurred throughout the valley floor and Sierra Nevada Mountains within Kern County, CA. No GOEA observed during surveys.

Wastewater Disposal Site, SESPE Consulting, Inc. – McKittrick, CA.

Associate Environmental Scientist I (2023).

Conducted pre-activity survey for species of plants and animal to include potential presence of GOEA. No GOEA was observed on the project site.

TO-28 Blackwell's Corner CAPM, CalTrans – Lost Hills, CA.
Associate Environmental Scientist I (2023).

Conducted protocol BNLL surveys on project site and construction monitoring for sensitive and listed species of plants and animals. No GOEA was observed on the project site.

TO-29 Kern 33 Culvert Rehab, CalTrans – McKittrick, CA.
Associate Environmental Scientist I (2023).

Monitored for sensitive and listed species of plants and animals

during construction activities. No GOEA was observed on the project site.

McKittrick Well Project, SESPE Consulting, Inc.—Kern County, CA.

Associate Environmental Scientist I (June 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No GOEA was observed.

RB Inyokern Solar Project, Dimension Renewable Energy—Inyo County, CA.

Associate Environmental Scientist I (August 2023- Present)

Conducted daily environmental sensitive area fence checks and burrow/den monitoring for the presence of sensitive special-status wildlife to include burrowing owls, Mohave ground squirrel, and the desert kit fox. No GOEA was observed.

Prop 84 Arsenic Exceedance Remediation Project, Village Mobile Home Park—Los Angeles County, CA.

Associate Environmental Scientist I (August 2023- September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No GOEA was observed.

Bullhead Met Tower, EDF Renewables, Inc.—Kern County, CA.

Associate Environmental Scientist I (September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species to include the Joshua tree. Conducted protocol-level botanical surveys for rare and listed plants. Conducted biological compliance monitoring for construction work from initial grubbing to completion. No GOEA or sign was observed.

HEERMANN'S KANGAROO RAT

(Dipodomys heermanni)

Kern National Wildlife Refuge: Pixley Refuge- In Kind – Kern County, CA. Biological Technician.

Conducted permitted Heermann's kangaroo rat population census trapping. 120 traps checked with 7 handles. ESRP, Brian Cypher recovery permit #TE-023496.

Porterville College, City of Porterville – Porterville, CA. Assistant Environmental Scientist.

Conducted reconnaissance biological survey for potential HKR or their sign (i.e., scat, tracks, or potential dens). No HKR or sign was observed.

JOSHUA TREE

Rosamond Solar Project, Clearway Energy Group, LLC. – Kern County, CA. Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted Joshua tree census (*Yucca brevifolia*) to gather data regarding heights, branching, and potential for reproduction for CDFW and permitting.

True North, Organic Waste Renewable Energy – Kern County, CA.

Assistant Environmental Scientist.

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species to include the Joshua tree.

Keyhole Wind Farm Project, EDF Renewables – Kern County, CA.

Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted reconnaissance biological survey and protocol plant surveys for listed species of plants and animals to include the Joshua tree, DKF, SWHA, desert tortoise, CA Condor, eagles, raptors, or their sign (i.e., scat, tracks, or potential dens) and nest.

Rosamond Central Solar Project, Clearway Energy Group, LLC – Rosamond, CA. Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. Conducted construction monitoring.

Rosamond South Solar Project, Clearway Energy Group, LLC – Rosamond, CA. Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees.

Khaptibi Solar Project, Khaptibi Solar LLC – Rosamond, CA.

Associate Environmental Scientist I (2022).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA,

eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species.

Jadidollah Solar Project, Jadidollah Solar LLC – Rosamond, CA.
Associate Environmental Scientist I (2022).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species.

Prop 84 Arsenic Exceedance Remediation Project, Village Mobile Home Park—Los Angeles County, CA.

Associate Environmental Scientist I (August 2023- September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species.

Bullhead Met Tower, EDF Renewables, Inc.—Kern County, CA.
Associate Environmental Scientist I (September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species to include the Joshua tree. Conducted protocol-level botanical surveys for rare and listed plants. Conducted biological compliance monitoring for construction work from initial grubbing to completion.

MOHAVE GROUND SQUIRREL

(Xerospermophilus mohavensis)

BigBeau Solar Project, EDF Renewables – Kern County, CA.
Associate Environmental Scientist I (2021 to Present).

Conducted construction monitoring for DT, SWHA, DKF, BO, golden eagle (GOEA), nesting birds and raptors or any of their signs (i.e., dens, burrows, scat, tracks, or nests) during the construction phase. Provided Worker Environmental Awareness Training to new crew members as part of the EIR Mitigation Measure 4.4-2. Monitored Arizona crossing construction installation following the Lake and Streambed Alteration Agreement (LSAA) Notification No. 600-2020-0086-R4.

Keyhole Wind Farm Project, EDF Renewables – Kern County, CA.
Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted reconnaissance biological survey and protocol plant surveys for listed species of plants and animals to include the DKF, SWHA, desert tortoise, CA Condor, eagles, raptors, or their sign (i.e., scat, tracks, or potential dens) and nest. No Mohave ground squirrel were observed during surveys.

True North, Organic Waste Renewable Energy – Kern County, CA.
Assistant Environmental Scientist (2021-2022).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No Mohave ground squirrel were observed during the survey.

Rosamond Central Solar Project, Clearway Energy Group, LLC – Rosamond, CA. *Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).*

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. Conducted construction monitoring. No Mohave ground squirrel or sign was observed.

Rosamond South Solar Project, Clearway Energy Group, LLC – Rosamond, CA. *Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).*

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. No Mohave ground squirrel or sign was observed.

Khaptibi Solar Project, Khaptibi Solar LLC – Rosamond, CA. *Associate Environmental Scientist I (2022).*

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No Mohave ground squirrel were observed during the survey.

Jadidollah Solar Project, Jadidollah Solar LLC – Rosamond, CA. *Associate Environmental Scientist I (2022).*

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No Mohave ground squirrel were observed during the survey.

RB Inyokern Solar Project, Dimension Renewable Energy—Inyo County, CA.

Associate Environmental Scientist I (August 2023- Present)

Conducted daily environmental sensitive area fence checks and burrow/den monitoring for the presence of sensitive special-status wildlife to include burrowing owls, Mohave ground squirrel, and the desert kit fox. No Mohave ground squirrel was observed.

Prop 84 Arsenic Exceedance Remediation Project, Village Mobile Home Park—Los Angeles County, CA.

Associate Environmental Scientist I (August 2023- September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No Mohave ground squirrel was observed.

Bullhead Met Tower, EDF Renewables, Inc.—Kern County, CA.

Associate Environmental Scientist I (September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species to include the Joshua tree. Conducted protocol-level botanical surveys for rare and listed plants. Conducted biological compliance monitoring for construction work from initial grubbing to completion. No Mohave ground squirrel or sign was observed.

PACIFIC GREEN SEA TURTLE

(Chelonia mydas)

San Gabriel River Sea Turtle Monitoring, Aquarium of the Pacific— Los Angeles County, CA. *Citizen Science Volunteer*
(October 2022- Current).

Volunteer monitor once a month to collect data on the sea turtle population size in the San Gabriel River in Long Beach, California. Monitor received training from Aquarium of the Pacific staff on identifying and approximating the size of sea turtles breaching the surface. Observed 82 individuals with 136 sightings.

SAN JOAQUIN ANTELOPE SQUIRREL

(Ammospermophilus nelson)

Berry Petroleum: Brogden Lease – Kern County, CA. *Biological Technician* (July 2019).

Conducted protocol BNLL surveys on project site. One SJAS was observed on site during surveys.

Berry Petroleum: Midway 32 Lease – Kern County, CA. *Biological Technician* (June 2019).

Conducted protocol BNLL surveys on project site. One SJAS was observed on site during surveys.

Berry Petroleum: 32D Lease – Kern County, CA. *Biological Technician* (May- July 2019).

Conducted protocol BNLL surveys on project site. Two SJAS were observed on site during surveys.

Berry Petroleum: Trapezoid Lease – Kern County, CA. *Biological Technician* (June 2019- May 2021).

Conducted protocol BNLL surveys on project site. 10 SJAS were observed on site during surveys.

Berry Petroleum: 21Z Lease – Kern County, CA. *Biological Technician* (June 2018- May 2021).

Conducted protocol BNLL surveys on project site. 12 SJAS were observed on site during surveys.

Berry Petroleum: Pan Fee – Kern County, CA. *Biological Technician* (August 2019).

Conducted protocol BNLL surveys on project site. One SJAS was observed on site during surveys.

Berry Petroleum: FFA Lease – Kern County, CA. *Biological Technician* (April- May 2021).

Conducted protocol BNLL surveys on project site. Four SJAS were observed on site during surveys.

Berry Petroleum: Severini – Kern County, CA. *Biological Technician* (May- August 2019).

Conducted protocol BNLL surveys on project site. 12 SJAS were observed on site during surveys.

Berry Petroleum: Origami – Kern County, CA. *Biological Technician* (May 2020).

Conducted protocol BNLL surveys on project site. Two SJAS were observed on site during surveys.

Berry Petroleum: Belgian Lease – Kern County, CA. *Biological Technician* (August 2019- May 2021).

Conducted protocol BNLL surveys on project site. Four SJAS were observed on site during surveys.

Berry Petroleum: Hovey Hills – Kern County, CA. *Biological Technician* (June 2020- April 2021).

Conducted protocol BNLL surveys on project site. Four SJAS were observed on site during surveys.

Berry Petroleum: Homebase – Kern County, CA. *Biological Technician* (June- September 2020).

Conducted protocol BNLL surveys on project site. One SJAS was observed on site during surveys.

Berry Petroleum: Lucky Boy – Kern County, CA. *Biological Technician* (June- July 2020).

Conducted protocol BNLL surveys on project site. Three SJAS were observed on site during surveys.

Berry Petroleum: Gusher 301 – Kern County, CA. *Biological Technician* (May 2020- May 2021).

Conducted protocol BNLL surveys on project site. Three SJAS were observed on site during surveys.

Chevron Cymric: Cymric Pipeline/Wells Project – Kern County, CA. *Biological Technician* (June- July 2019).

Conducted protocol BNLL surveys on project site. One SJAS was observed on site during surveys.

Chevron Cymric: 1Y Lease – Kern County, CA. *Biological Technician* (May 2019- May 2021).

Conducted protocol BNLL surveys on project site. Three SJAS were observed on site during surveys.

Chevron Cymric: 17DM Lease – Kern County, CA. *Biological Technician* (May- August 2020).

Conducted protocol BNLL surveys on project site. Two SJAS were observed on site during surveys.

Chevron Midway Sunset: 2SF Gas Compressor – Kern County, CA. *Biological Technician* (August 2018).

Conducted protocol BNLL surveys on project site. Two SJAS were observed on site during surveys.

Chevron Midway Sunset: 7S – Kern County, CA. *Biological Technician* (June 2018- July 2019).

Conducted protocol BNLL surveys on project site. Four SJAS were observed on site during surveys.

Chevron Midway Sunset: 25 Hill – Kern County, CA. *Biological Technician* (May- August 2018).

Conducted protocol BNLL surveys on project site. Three SJAS were observed on site during surveys.

Chevron Midway Sunset: Tulare Growth– Kern County, CA. *Biological Technician* (May- August 2019).

Conducted protocol BNLL surveys on project site. Three SJAS were observed on site during surveys.

Chevron Midway Sunset: 17S/20BP SPEL – Kern County, CA. *Biological Technician* (June- July 2019).

Conducted protocol BNLL surveys on project site. One SJAS was observed on site during surveys.

Chevron Midway Sunset: Fast Cat – Kern County, CA. *Biological Technician* (June- July 2018).

Conducted protocol BNLL surveys on project site. One SJAS was observed on site during surveys.

Chevron Midway Sunset: Storm Water Divergent Project – Kern County, CA. *Biological Technician* (May 2021).

Conducted protocol BNLL surveys on project site. One SJAS was observed on site during surveys.

Insignia Environmental: Elk Hills to Lake Station Project – Kern County, CA. *Biological Technician* (June 2019- May 2021).

Conducted protocol BNLL surveys on project site. 82 SJAS were observed during the surveys.

Well Abandonment Project, Chevron Lost Hills – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential SJAS and none were observed during survey.

ENAS 23-58, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential SJAS and none were observed during survey.

ENAS 23-26R, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential SJAS and none were observed during survey.

Tannehill Water Disposal Line, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential SJAS and none were observed during survey.

SW Potter 2019, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential SJAS and two were observed during survey.

Severini Water Line Mixing Pad Project, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential SJAS and six were observed during survey.

Valley Wastewater Management: Maricopa Reach 12 – Kern County, CA. *Biological Technician* (May 2020).

Conducted protocol BNLL surveys on project site. Two SJAS were observed on site during surveys.

Apex Energy Solutions, LLC: Gas Company Road Solar Energy Storage Project – Kern County, CA. *Assistant Environmental Scientist* (July- September 2021).

Conducted protocol BNLL surveys on project site. No BNLL observed during the surveys. 8 SJAS were observed on site during surveys.

Broadband Project, CalTrans— South San Joaquin Valley, CA. *Associate Environmental Scientist I* (2022- Present).

Performed habitat assessments and related support activities for the Middle Mile Broadband Network (Kern County) project (EA 06-1F340, EA 06-1F390, EA 06-1F400, and EA 06-1F410). Habitats along portions of State Routes: 115, 58, 178, 184, 204, 223, 33, and 43 were assessed for potential impacts to special-status species, and other biological resources. Habitat assessment surveys occurred throughout the valley floor and Sierra Nevada Mountains within Kern County, CA. 12 SJAS observed during surveys.

California Resource Company: Terra Vault 1— Kern County, CA. *Associate Environmental Scientist I.*

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. 52 SJAS were observed during surveys.

Zephyr Lane New School Project, Fairfax School District—Kern County, CA. *Associate Environmental Scientist I* (2022- Present).

Conducted a reconnaissance biological survey for listed plants and animals to include the American badger, SJKF, SJAS, giant kangaroo rat, BUOW, raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). No SJAS or potential dens were observed during surveys.

Wastewater Disposal Site, SESPE Consulting, Inc. – McKittrick, CA.

Associate Environmental Scientist I (2023).

Conducted pre-activity survey for species of plants and animal to include potential presence of SJAS. No SJAS was observed on the project site.

TO-28 Blackwell's Corner CAPM, CalTrans – Lost Hills, CA.

Associate Environmental Scientist I (2023).

Conducted protocol BNLL surveys on project site and construction monitoring for sensitive and listed species of plants and animals. No SJAS was observed on the project site.

TO-29 Kern 33 Culvert Rehab, CalTrans – McKittrick, CA.

Associate Environmental Scientist I (2023).

Monitored for sensitive and listed species of plants and animals during construction activities. No SJAS was observed on the project site.

McKittrick Well Project, SESPE Consulting, Inc.—Kern County, CA.

Associate Environmental Scientist I (June 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No SJAS was observed.

SAN JOAQUIN COACHWHIP

(Masticophis flagellum ruddocki)

Chevron Coalinga: 13D Lease – Kings County, CA. *Biological Technician* (August 2019- September 2020).

Conducted protocol BNLL surveys on project site. One SJCO observed during the surveys.

Chevron Cymric: 17DM Lease – Kern County, CA. *Biological Technician* (May- August 2020).

Conducted protocol BNLL surveys on project site. One SJCO observed during the surveys.

Insignia Environmental: Elk Hills to Lake Station Project – Kern County, CA. *Biological Technician* (June 2019- May 2021).

Conducted protocol BNLL surveys on project site. Three SJCO were observed during the surveys.

Zephyr Lane New School Project, Fairfax School District—Kern County, CA. *Associate Environmental Scientist I* (2022- Present).

Conducted a reconnaissance biological survey for listed plants and animals to include the American badger, SJKF, SJAS, giant kangaroo rat, BUOW, raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). No SJCO or potential dens were observed during surveys.

California Resource Company: Terra Vault 1—Kern County, CA. *Associate Environmental Scientist I.*

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard

lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No SJCO was observed during surveys.

Broadband Project, CalTrans— South San Joaquin Valley, CA.
Associate Environmental Scientist I (2022- Present).

Performed habitat assessments and related support activities for the Middle Mile Broadband Network (Kern County) project (EA 06-1F340, EA 06-1F390, EA 06-1F400, and EA 06-1F410). Habitats along portions of State Routes: 115, 58, 178, 184, 204, 223, 33, and 43 were assessed for potential impacts to special-status species, and other biological resources. Habitat assessment surveys occurred throughout the valley floor and Sierra Nevada Mountains within Kern County, CA. No SJCO was observed during surveys.

Wastewater Disposal Site, SESPE Consulting, Inc. – McKittrick, CA.

Associate Environmental Scientist I (2023).

Conducted pre-activity survey for species of plants and animal to include potential presence of SJCO. No SJCO was observed on the project site.

TO-28 Blackwell's Corner CAPM, CalTrans – Lost Hills, CA.

Associate Environmental Scientist I (2023).

Conducted protocol BNLL surveys on project site and construction monitoring for sensitive and listed species of plants and animals. No SJCO was observed on the project site.

TO-29 Kern 33 Culvert Rehab, CalTrans – McKittrick, CA.

Associate Environmental Scientist I (2023).

Monitored for sensitive and listed species of plants and animals during construction activities. No SJCO was observed on the project site.

McKittrick Well Project, SESPE Consulting, Inc.—Kern County, CA.

Associate Environmental Scientist I (June 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No SJCO was observed.

SAN JOAQUIN KIT FOX

(Vulpes macrotis mutica)

SJKF Training, McCormick Biological – Kern County, CA.

Biological Technician.

A 2-day in house training provided by Steve Pruett detailing SJKF life history, biology, ID, den monitoring and den ID, and survey protocols.

OPP 2019 Wells Project, Berry Petroleum – Kern County, CA.

Biological Technician.

Conducted protocol-level SJKF den monitoring with diatomaceous earth (DE) and game-cameras for four potential SJKF dens and excavated vacant dens. Conducted daily sweeps

on the project sites looking for SJKF or their sign (i.e., scat, tracks, or potential dens).

Chevron Kern River: Section 25 – Kern County, CA. *Biological Technician.*

Conducted protocol-level SJKF den monitoring with diatomaceous earth (DE) and game-cameras for two potential SJKF dens and excavated vacant dens. Conducted daily sweeps on the project sites looking for SJKF or their sign (i.e., scat, tracks, or potential dens).

Pan Fee Injectors 2019, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted protocol-level SJKF den monitoring with diatomaceous earth (DE) and game-cameras for seven potential SJKF dens and excavated vacant dens. Conducted daily sweeps on the project sites looking for SJKF or their sign (i.e., scat, tracks, or potential dens).

OGO Wells Construction, Chevron Lost Hills – Kern County, CA. *Biological Technician.*

Conducted protocol-level SJKF den monitoring with diatomaceous earth (DE) for three potential SJKF dens and capped vacant dens. Conducted daily sweeps on the project sites looking for SJKF or their sign (i.e., scat, tracks, or potential dens).

Well Abandonment Project, Chevron Lost Hills – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential SJKF or their sign (i.e., scat, tracks, or potential dens) and two potential dens were observed during survey.

Lost Hills Solar 2019, Chevron Lost Hills – Kern County, CA. *Biological Technician.*

Conducted protocol-level SJKF den monitoring with diatomaceous earth (DE) for 12 potential SJKF dens and excavated vacant dens. Conducted daily sweeps on the project sites looking for SJKF or their sign (i.e., scat, tracks, or potential dens).

Kern River Oil Field Chevron Kern River – Bakersfield, CA. *Biological Technician.*

Conducted protocol-level SJKF den monitoring with diatomaceous earth (DE) for 12 potential SJKF dens and excavated vacant dens. Conducted daily sweeps on the project sites looking for SJKF or their sign (i.e., scat, tracks, or potential dens).

ENAS 23-58, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential SJKF or their sign (i.e., scat, tracks, or potential dens) and two potential dens were observed during survey.

ENAS 23-26R, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential SJKF or their sign (i.e., scat, tracks, or potential dens) and none were observed during survey.

Tannehill Water Disposal Line, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential SJKF or their sign (i.e., scat, tracks, or potential dens) and none were observed during survey.

SW Potter 2019, Berry Petroleum – Kern County, CA. *Biological Technician.*

Conducted pre-activity survey for species of plants and animal to include potential SJKF or their sign (i.e., scat, tracks, or potential dens) and none were observed during survey.

Calso Pipeline Project, AERA – Kern County, CA. *Biological Technician.*

Conducted protocol-level SJKF den monitoring with diatomaceous earth (DE) for 12 potential SJKF dens and excavated vacant dens. Conducted daily sweeps on the project sites looking for SJKF or their sign (i.e., scat, tracks, or potential dens).

Cordeniz Land Development Unit 1 Project, JJR Management Services, Inc. – Tulare, CA. *Assistant Environmental Scientist.*

Conducted reconnaissance biological survey for potential SJKF or their sign (i.e., scat, tracks, or potential dens). No SJKF or sign was observed during construction phase.

Tract 935; City of Lemoore – Lemoore, CA. *Assistant Environmental Scientist*

Conducted reconnaissance biological survey for potential SJKF or their sign (i.e., scat, tracks, or potential dens). No SJKF or sign was observed during construction phase.

TO-18 HWY 99 Olive to Stockdale, – CalTrans, Bakersfield, CA. *Assistant Environmental Scientist (2021-2022).*

Conducted daily pre-activity sweeps for the potential of SJKF presence, to include diagnostic sign (i.e., scat, tracks, or potential dens), along and around work areas of highway 99.

TO-04 HWY 99 White to Union, CalTrans – Bakersfield, CA. *Assistant Environmental Scientist- Associate Environmental Scientist I (2022- Present).*

Conducted daily pre-activity sweeps for the potential of SJKF presence, to include diagnostic sign (i.e., scat, tracks, or potential dens), along and around work areas of highway 99.

Porterville College, City of Porterville – Porterville, CA. *Assistant Environmental Scientist.*

Conducted reconnaissance biological survey for potential SJKF or their sign (i.e., scat, tracks, or potential dens). No SJKF observed, however sign was observed during reconnaissance.

Gas Company Road Solar Project, Apex Energy Solutions LLC – Taft, CA. *Assistant Environmental Scientist.*

Conducted reconnaissance biological survey for potential SJKF or their sign (i.e., scat, tracks, or potential dens). No SJKF observed, however sign was observed during reconnaissance.

TO-42/TO-07 Lost Hills Rubber Rehab, CalTrans, Lost Hills, CA.
Assistant Environmental Scientist- Associate Environmental Scientist I (2021-2022).

Conducted protocol-level SJKF den monitoring with diatomaceous earth (DE) for 17 potential SJKF dens and blocked vacant dens. Conducted daily sweeps on the project sites looking for SJKF or their sign (i.e., scat, tracks, or potential dens).

Taft Solar Project, Apex Energy Solution LLC – Taft, CA.
Assistant Environmental Scientist.

Conducted reconnaissance biological surveys for potential SJKF or their sign (i.e., scat, tracks, or potential dens). No SJKF observed, however sign was observed during reconnaissance.

CalGEM CEQA Documents, CRC Wells – Kern County, CA.
Assistant Environmental Scientist- Associate Environmental Scientist I.

Conducted reconnaissance biological surveys for potential SJKF or their sign (i.e., scat, tracks, or potential dens). No SJKF observed, however sign was observed during reconnaissance.

Lantana III, k. Hovnanian Company of California – Bakersfield, CA.
Assistant Environmental Scientist (2021- Present).

Conducted reconnaissance biological surveys for potential SJKF or their sign (i.e., scat, tracks, or potential dens). No SJKF observed, however sign was observed during reconnaissance.

TO-10 Reward CAPM, CalTrans – McKittrick, CA.
Associate Environmental Scientist I (2022).

Conducted reconnaissance biological survey for potential SJKF or their sign (i.e., scat, tracks, or potential dens) and construction monitoring. No SJKF observed during construction work.

TO-14 Panoche CAPM, CalTrans – Firebaugh, CA.
Associate Environmental Scientist I (2022).

Conducted construction monitoring for potential SJKF or their sign (i.e., scat, tracks, or potential dens). No SJKF observed.

Tumey Gulch CAPM, CalTrans—Firebaugh, CA.
Associate Environmental Scientist I (2022).

Conducted construction monitoring for potential SJKF or their sign (i.e., scat, tracks, or potential dens). No SJKF observed.

California Resource Company: Terra Vault 1— Kern County, CA.
Associate Environmental Scientist I.

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No SJKF were observed, however several potential dens were observed during surveys.

Broadband Project, CalTrans— South San Joaquin Valley, CA.
Associate Environmental Scientist I (2022- Present).

Performed habitat assessments and related support activities for the Middle Mile Broadband Network (Kern County) project (EA 06-1F340, EA 06-1F390, EA 06-1F400, and EA 06-1F410). Habitats along portions of State Routes: 115, 58, 178, 184, 204, 223, 33, and 43 were assessed for potential impacts to special-

status species, and other biological resources. Habitat assessment surveys occurred throughout the valley floor and Sierra Nevada Mountains within Kern County, CA. No SJKF observed during surveys.

Zephyr Lane New School Project, Fairfax School District—Kern County, CA. *Associate Environmental Scientist I* (2022- Present). Conducted a reconnaissance biological survey for listed plants and animals to include the American badger, SJKF, SJAS, giant kangaroo rat, BUOW, raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). No SJKF or potential dens were observed during surveys.

Wastewater Disposal Site, SESPE Consulting, Inc. – McKittrick, CA.

Associate Environmental Scientist I (2023).

Conducted pre-activity survey for species of plants and animal to include potential presence of SJKF. No SJKF was observed on the project site.

TO-28 Blackwell's Corner CAPM, CalTrans – Lost Hills, CA.

Associate Environmental Scientist I (2023).

Conducted protocol BNLL surveys on project site and construction monitoring for sensitive and listed species of plants and animals. No SJKF was observed on the project site.

TO-29 Kern 33 Culvert Rehab, CalTrans – McKittrick, CA.

Associate Environmental Scientist I (2023).

Monitored for sensitive and listed species of plants and animals during construction activities. No SJKF was observed on the project site.

McKittrick Well Project, SESPE Consulting, Inc.—Kern County, CA.

Associate Environmental Scientist I (June 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No SJKF was observed.

SWAINSON'S HAWK

(Buteo swainsonii)

BigBeau Solar Project, EDF Renewables – Kern County, CA.

Associate Environmental Scientist I (2021 to Present).

Conducted construction monitoring for DT, SWHA, DKF, BO, golden eagle (GOEA), nesting birds and raptors or any of their signs (i.e., dens, burrows, scat, tracks, or nests) during the construction phase. Provided Worker Environmental Awareness Training to new crew members as part of the EIR Mitigation Measure 4.4-2. Monitored Arizona crossing construction installation following the Lake and Streambed Alteration Agreement (LSAA) Notification No. 600-2020-0086-R4.

Cordeniz Land Development Unit 1 Project, JJR Management Services, Inc. – Tulare, CA. *Assistant Environmental Scientist.*

Conducted reconnaissance biological survey for potential Swainson's hawk or their sign (i.e., potential nests) and observed two SWHA.

Rosamond Solar Project, Clearway – Kern County, CA.

Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted reconnaissance biological survey for potential Swainson's hawk or their sign (i.e., potential nests) and observed one SWHA.

Tract 935; City of Lemoore – Lemoore, CA. Assistant Environmental Scientist.

Conducted reconnaissance biological survey for potential Swainson's hawk or their sign (i.e., potential nests) and observed no SWHA.

Porterville College, City of Porterville – Porterville, CA. Assistant Environmental Scientist.

Conducted reconnaissance biological survey for potential Swainson's hawk or their sign (i.e., potential nests) and observed no SWHA.

Keyhole Wind Farm Project, EDF Renewables – Kern County, CA.

Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted reconnaissance biological survey and protocol plant surveys for listed species of plants and animals to include the DKF, SWHA, desert tortoise, CA Condor, eagles, raptors, or their sign (i.e., scat, tracks, or potential dens) and nest. No SWHA was observed during surveys.

Rosamond Central Solar Project, Clearway Energy Group, LLC – Rosamond, CA. Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. Conducted construction monitoring. SWH was observed.

Rosamond South Solar Project, Clearway Energy Group, LLC – Rosamond, CA. Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. SWHA was observed.

True North, Organic Waste Renewable Energy – Kern County, CA.

Assistant Environmental Scientist.

Conducted reconnaissance biological survey for potential Swainson's hawk or their sign (i.e., potential nests) and observed no SWHA.

California Resource Company: Terra Vault 1-- Kern County, CA.
Associate Environmental Scientist I.

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No SWHA was observed during surveys.

Khaptibi Solar Project, Khaptibi Solar LLC – Rosamond, CA.
Associate Environmental Scientist I (2022).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No SWHA or sign was observed during the survey.

Jadidollah Solar Project, Jadidollah Solar LLC – Rosamond, CA.
Associate Environmental Scientist I (2022).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. No SWHA or sign was observed during the survey.

Broadband Project, CalTrans— South San Joaquin Valley, CA.
Associate Environmental Scientist I (2022- Present).

Performed habitat assessments and related support activities for the Middle Mile Broadband Network (Kern County) project (EA 06-1F340, EA 06-1F390, EA 06-1F400, and EA 06-1F410). Habitats along portions of State Routes: 115, 58, 178, 184, 204, 223, 33, and 43 were assessed for potential impacts to special-status species, and other biological resources. Habitat assessment surveys occurred throughout the valley floor and Sierra Nevada Mountains within Kern County, CA. No SWHA was observed during surveys.

Zephyr Lane New School Project, Fairfax School District—Kern County, CA. *Associate Environmental Scientist I (2022- Present).*

Conducted a reconnaissance biological survey for listed plants and animals to include the American badger, SJKF, SJAS, giant kangaroo rat, BUOW, raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). No SWHA or potential dens were observed during surveys.

Wastewater Disposal Site, SESPE Consulting, Inc. – McKittrick, CA.

Associate Environmental Scientist I (2023).

Conducted pre-activity survey for species of plants and animal to include potential presence of SWHA. No SWHA was observed on the project site.

TO-28 Blackwell's Corner CAPM, CalTrans – Lost Hills, CA.
Associate Environmental Scientist I (2023).

Conducted protocol BNLL surveys on project site and construction monitoring for sensitive and listed species of plants and animals. No SWHA was observed on the project site.

TO-29 Kern 33 Culvert Rehab, CalTrans – McKittrick, CA.
Associate Environmental Scientist I (2023).

Monitored for sensitive and listed species of plants and animals during construction activities. No SWHA was observed on the project site.

McKittrick Well Project, SESPE Consulting, Inc.—Kern County, CA.

Associate Environmental Scientist I (June 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No SWHA was observed.

RB Inyokern Solar Project, Dimension Renewable Energy—Inyo County, CA.

Associate Environmental Scientist I (August 2023- Present)

Conducted daily environmental sensitive area fence checks and burrow/den monitoring for the presence of sensitive special-status wildlife to include burrowing owls, Mohave ground squirrel, and the desert kit fox. No SWHA was observed.

Prop 84 Arsenic Exceedance Remediation Project, Village Mobile Home Park—Los Angeles County, CA.

Associate Environmental Scientist I (August 2023- September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No SWHA was observed.

Bullhead Met Tower, EDF Renewables, Inc.—Kern County, CA.

Associate Environmental Scientist I (September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species to include the Joshua tree. Conducted protocol-level botanical surveys for rare and listed plants. Conducted biological compliance monitoring for construction work from initial grubbing to completion. No SWHA was observed.

WESTERN POND TURTLE

(Emys marmorata)

Lake Truxton, Bakersfield Water Resources Department—Bakersfield, CA. *Associate Environmental Scientist I (August 2022).*

Conducted surveys for turtles in the manmade lakes of the Lake

Truxton system for the presence of the western pond turtle and to advise the city in determining actions during a severe drought year as the lakes are drained by the city. No WPT was observed during surveys.

NESTING BIRDS

Berry Petroleum: 32D Lease – Kern County, CA. *Biological Technician* (May- July 2019).

Conducted protocol BNLL surveys on project site. One active common raven nest was observed on site during surveys.

Well Abandonment Project, Chevron Lost Hills – Kern County, CA. *Biological Technician*.

Conducted pre-activity survey for nesting birds or their sign (i.e., potential nests). No nests and nesting birds were observed during the survey.

ENAS 23-58, Berry Petroleum – Kern County, CA. *Biological Technician*.

Conducted pre-activity survey for nesting birds or their sign (i.e., potential nests). No nests and nesting birds were observed during the survey.

ENAS 23-26R, Berry Petroleum – Kern County, CA. *Biological Technician*.

Conducted pre-activity survey for nesting birds or their sign (i.e., potential nests). No nests and nesting birds were observed during the survey.

Tannehill Water Disposal Line, Berry Petroleum – Kern County, CA. *Biological Technician*.

Conducted pre-activity survey for nesting birds or their sign (i.e., potential nests). No nests and nesting birds were observed during the survey.

SW Potter 2019, Berry Petroleum – Kern County, CA. *Biological Technician*.

Conducted pre-activity survey for nesting birds or their sign (i.e., potential nests). No nests and nesting birds were observed during the survey.

Severini Water Line Mixing Pad Project, Berry Petroleum – Kern County, CA. *Biological Technician*.

Conducted pre-activity survey for nesting birds or their sign (i.e., potential nests). No nests and nesting birds were observed during the survey.

Cordeniz Land Development Unit 1 Project, JJR Management Services, Inc. – Tulare, CA. *Assistant Environmental Scientist*.

Conducted reconnaissance biological survey for nesting birds or their sign (i.e., potential nests). No nests and nesting birds were observed during the survey.

Tract 935; City of Lemoore – Lemoore, CA. *Assistant Environmental Scientist*.

Conducted reconnaissance biological survey for nesting birds or their sign (i.e., potential nests). No nests and nesting birds were observed during the survey.

Porterville College, City of Porterville – Porterville, CA. Assistant Environmental Scientist.

Conducted reconnaissance biological survey for nesting birds or their sign (i.e., potential nests). No nests and nesting birds were observed during the survey.

Keyhole Wind Farm Project, EDF Renewables – Kern County, CA. Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted reconnaissance biological survey and protocol plant surveys for listed species of plants and animals to include the DKF, SWHA, desert tortoise, CA Condor, eagles, raptors, or their sign (i.e., scat, tracks, or potential dens) and nest. Barn Owl nests and nesting Barn Owls were observed during surveys.

True North, Organic Waste Renewable Energy – Kern County, CA. Assistant Environmental Scientist (2021- Present).

Conducted reconnaissance biological survey for nesting birds or their sign (i.e., potential nests). No nests and nesting birds were observed during the survey.

Rosamond Central Solar Project, Clearway Energy Group, LLC – Rosamond, CA. Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. Conducted construction monitoring. No nesting birds were observed.

Rosamond South Solar Project, Clearway Energy Group, LLC – Rosamond, CA. Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. No nesting birds were observed.

Caltrans District 6: Reward CAPM (TO#60/TO#10) – Kern County. Associate Environmental Scientist I (2021-2022).

Conducted protocol blunt-nosed leopard lizard surveys, protocol floristic surveys, monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on State Route 58 between Post Mile (PM) 6.0 and 15.4 near McKittrick, California. Observed 15 inactive and active stick nests occupied by American crows or ravens, 30 potential San Joaquin kit fox dens, and three active American badger dens. No direct observation of a blunt-nosed leopard lizard, San Joaquin kit fox, burrowing owl, American badger, or special-status plant

species. Observed 15 SJAS within the Project boundary. Drafted weekly summaries and pre-construction survey reports.

California Resource Company: Terra Vault 1-- Kern County, CA.
Associate Environmental Scientist I (2022- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. Observed 2 BNLL and several active and potentially active SJKF dens with sign present (i.e.: tracks, scat, prey remains).

Zephyr Lane New School Project, Fairfax School District--Kern County, CA. *Associate Environmental Scientist I (2022- Present).*
Conducted a reconnaissance biological survey for listed plants and animals to include the American badger, SJKF, SJAS, giant kangaroo rat, BUOW, raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). 23 potential raptor nests were observed during surveys.

Wastewater Disposal Site, SESPE Consulting, Inc. – McKittrick, CA.

Associate Environmental Scientist I (2023).

Conducted pre-activity survey for species of plants and animal to include potential presence of nesting birds. No nesting birds were observed on the project site.

TO-28 Blackwell's Corner CAPM, CalTrans – Lost Hills, CA.

Associate Environmental Scientist I (2023).

Conducted protocol BNLL surveys on project site and construction monitoring for sensitive and listed species of plants and animals. No nesting birds were observed on the project site.

TO-29 Kern 33 Culvert Rehab, CalTrans – McKittrick, CA.

Associate Environmental Scientist I (2023).

Monitored for sensitive and listed species of plants and animals during construction activities. No nesting birds were observed on the project site.

McKittrick Well Project, SESPE Consulting, Inc.--Kern County, CA.

Associate Environmental Scientist I (June 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No nesting birds were observed.

RB Inyokern Solar Project, Dimension Renewable Energy--Inyo County, CA.

Associate Environmental Scientist I (August 2023- Present)

Conducted daily environmental sensitive area fence checks and burrow/den monitoring for the presence of sensitive special-status wildlife to include burrowing owls, Mohave ground squirrel, and the desert kit fox. No nesting birds were observed.

Prop 84 Arsenic Exceedance Remediation Project, Village Mobile Home Park—Los Angeles County, CA.

Associate Environmental Scientist I (August 2023- September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity included San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, San Joaquin antelope squirrel, and several rare plants species. No nesting birds were observed.

Bullhead Met Tower, EDF Renewables, Inc.—Kern County, CA.

Associate Environmental Scientist I (September 2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species to include the Joshua tree. Conducted protocol-level botanical surveys for rare and listed plants.

Conducted biological compliance monitoring for construction work from initial grubbing to completion. No nesting birds were observed.

PROTOCOL-RARE PLANT SURVEYS

Rosamond Solar Project, Clearway Energy Group, LLC. – Kern County, CA.

Assistant Environmental Scientist- Associate

Environmental Scientist I (2021- Present).

Conducted Joshua tree census (*Yucca brevifolia*) to gather data regarding heights, branching, and potential for reproduction for CDFW and permitting.

Keyhole Wind Farm Project, EDF Renewables – Kern County, CA.

Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted reconnaissance biological survey and protocol plant surveys for listed species of plants and animals to include the Joshua tree, DKF, SWHA, desert tortoise, CA Condor, eagles, raptors, or their sign (i.e., scat, tracks, or potential dens) and nest.

Rosamond Central Solar Project, Clearway Energy Group, LLC – Rosamond, CA.

Assistant Environmental Scientist- Associate

Environmental Scientist I (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. Conducted construction monitoring.

Rosamond South Solar Project, Clearway Energy Group, LLC – Rosamond, CA.

Assistant Environmental Scientist- Associate

Environmental Scientist I (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees.

ENVIRONMENTAL COMPLIANCE MONITORING

BigBeau Solar Project, EDF Renewables – Kern County, CA.

Assistant Environmental Scientist- Associate Environmental Scientist I (2020- Present).

Monitored during the construction phase as part of the EIR Mitigation Measure 4.4-4. Provided Worker Environmental Awareness Training to new crew members as part of the EIR Mitigation Measure 4.4-2. Monitored Arizona crossing construction installation following the Lake and Streambed Alteration Agreement (LSAA) Notification No. 600-2020-0086-R4.

Rosamond Central Solar Project, Clearway Energy Group, LLC – Rosamond, CA. Assistant Environmental Scientist- Associate Environmental Scientist I (2021- Present).

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. Conducted construction monitoring.

TO-18 HWY 99 Olive to Stockdale, CalTrans – Bakersfield, CA.

Assistant Environmental Scientist (2021-2022).

Conducted daily pre-activity sweeps and construction monitoring on Project site, located on State Route 99.

TO-04 HWY 99 White to Union, CalTrans – Bakersfield, CA.

Assistant Environmental Scientist- Associate Environmental Scientist I (2022- Present).

Conducted daily pre-activity sweeps and construction monitoring on Project site, located on State Route 99.

TO-42/TO-07 Lost Hills Rubber Rehab, CalTrans – Lost Hills, CA. Assistant Environmental Scientist- Associate Environmental Scientist I (2021-2022).

Conducted monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on Interstate 5.

TO-14 Panoche CAPM, CalTrans – Firebaugh, CA. Associate Environmental Scientist I (2022).

Conducted monthly pre-construction surveys, weekly site visits,

and construction monitoring on Project site, located on Interstate 5.

TO-18 Tumey Gulch CAPM, CalTrans – Firebaugh, CA. *Associate Environmental Scientist I* (2022).

Conducted monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on Interstate 5.

Caltrans District 6: Reward CAPM (TO#60/TO#10) – Kern County. *Assistant Environmental Scientist- Associate Environmental Scientist I* (2021-2022).

Conducted monthly pre-construction surveys, weekly site visits, and construction monitoring on Project site, located on State Route 58 near McKittrick, California.

TO-28 Blackwell's Corner CAPM, CalTrans – Lost Hills, CA. *Associate Environmental Scientist I* (2023).

Conducted protocol BNLL surveys on project site and construction monitoring for sensitive and listed species of plants and animals.

TO-29 Kern 33 Culvert Rehab, CalTrans – McKittrick, CA. *Associate Environmental Scientist I* (2023).

Monitored for sensitive and listed species of plants and animals during construction activities.

Bullhead Met Tower, EDF Renewables, Inc. – Kern County, CA. *Associate Environmental Scientist I* (September 2023- Present)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plants species to include the Joshua tree. Conducted protocol-level botanical surveys for rare and listed plants. Conducted biological compliance monitoring for construction work from initial grubbing to completion.

TO-19 Conway Ranch Shoulders, CalTrans – Mono County, CA. *Associate Environmental Scientist I* (2023).

Provided full-time biological monitoring during construction within Permitted and jurisdictional waters areas to include within the high-water banks of Wilson's Creek in which the creek was diverted for replacement culverts and headwall construction.

CEQA DOCUMENTS

Cordeniz Land Development Unit 1 Project, JJR Management Services, Inc. – Tulare, CA. *Assistant Environmental Scientist.*

Drafted the Biological Analysis Report (BAR) which was a chapter of the Environmental Impact Report for the proposed project site.

Rosamond Solar Project, Clearway Energy Group, LLC. – Kern County, CA. *Associate Environmental Scientist I* (2019- Present).

Assisted with preparing and submitting three Conditional Use Permits and associated forms for proposed 100-MW solar project, approximately 1,292-acres, to the Kern County Planning

Department for review. Conducted reconnaissance level surveys, nesting bird surveys, and Joshua tree census (*Yucca brevifolia*) and two seasons of rare-plant surveys. Observed one desert kit fox, one deceased desert kit fox pup, two adult Swainson's hawks, one adult burrowing owl, and a population of alkali mariposa lily (*Calochortus striatus*). Drafted the Biological Analysis Report that would be used to write the Environmental Impact Report. Assisted with drafting the Incidental Take Permit (ITP) application package and associated figures and calculations submitted to CDFW for approval.

Zephyr Lane New School Project, Fairfax School District—Kern County, CA. *Associate Environmental Scientist I* (2022- Present). Drafted the biological section of the Initial Study Mitigated Negative Declaration which was used to determine if a Negative Declaration or Environmental Impact Report for the proposed project site was required.

Wastewater Disposal Site, SESPE Consulting, Inc. – McKittrick, CA.

Associate Environmental Scientist I (2023).

Conducted pre-activity survey for species of plants and animal to include potential presence sensitive plants and animals. Drafted and finalized a Biological Resource Evaluation report for the client.

VOLUNTEER WORK

California Living Museum, Bakersfield, CA. *Volunteer Zookeeper* (January- April 2018).

Prepped diets, fed, cared for species health, and cleaned exhibits within my care area of Raptors. Species within Raptors Area: golden eagles, bald eagles, red-tail hawks, American badgers, American kestrels, common ravens, California condors, Cooper's hawk, osprey, red shouldered hawks, turkey vultures, and a porcupine. Handled one SJKF, named Dash; cleaned, fed, and maintained his exhibit.

RESEARCH WORK

San Gabriel River Sea Turtle Monitoring, Aquarium of the Pacific— Los Angeles County, CA. *Citizen Science Volunteer* (October 2022- Present).

Volunteer monitor once a month to collect data on the sea turtle population size in the San Gabriel River in Long Beach, California. Monitor received training from Aquarium of the Pacific staff on identifying and approximating the size of sea turtles breaching the surface. Observed 82 individuals with 136 sightings.

San Gabriel River Sea Turtle High Tide Monitoring, Aquarium of the Pacific— Los Angeles County, CA. *Citizen Science Volunteer Project Leader* (September 2023- Present).

Volunteer Project Leader who plans, coordinates, and data collects during high tides to collect data on the sea turtle



population size in the San Gabriel River in Long Beach, California. Monitor received training from Aquarium of the Pacific staff on identifying and approximating the size of sea turtles breaching the surface.



William Ryan

Assistant Environmental Scientist

AREAS OF EXPERTISE

- Conservation Management of Threatened and Endangered Species
- Mojave Desert Plant Surveys
- Protocol-level Special-Status Species Plant and Wildlife Surveys
- Environmental Compliance Monitoring
- Use of GPS for surveying and maps
- Biological Reconnaissance Report Writing

EDUCATION

- BS, Biology, California State University, Bakersfield, 2021
- AA, Liberal Arts (Emphasis in Math and Science) Taft College, 2018

REGISTRATIONS / CERTIFICATIONS

- WEAP Training, California Rail Builders
- California Department of Fish and Wildlife, Level II Blunt-nosed Leopard Lizard Surveyor
- PASSPORT/OPL training, renewed annually
- CPR, AED, and First Aid Certification, renewed every two years

PROFESSIONAL ORGANIZATIONS

- Wildlife Society, Western Section

Mr. Ryan is a California State University, Bakersfield (CSUB) graduate with a Bachelor of Science in Biology.

He has conducted protocol level surveys for State and federally listed wildlife species including San Joaquin kit fox (*Vulpes macrotis mutica*) known den monitoring, spotlighting, track station and natal den monitoring. He is a level II researcher and has conducted protocol surveys for blunt-nosed leopard lizard (*Gambelia sila*) and has assisted in small mammal trapping for a variety of listed species.

Mr. Ryan has also worked as a biological monitor on active construction sites for protected, threatened, and endangered species (special-status) such as: San Joaquin kit fox, San Joaquin antelope squirrel (*Ammospermophilus nelsoni*), blunt-nosed leopard lizard, Tipton kangaroo rat (*Dipodomys nitratoide nitratoide*), short-nosed kangaroo rat (*Dipodomys nitratoide brevinasus*), burrowing owl (*Athene cunicularia*), and special-status rare plants. He has extensive experience using Global Positioning System (GPS) data to create figures and maps for field surveys and write project reports.

PROFESSIONAL EMPLOYMENT

01/2023 – 2/2024	QK, Assistant Environmental Scientist
04/2021 – 01/2023	West Kern Environmental Consulting, LLC., Biological Consultant I
05/2020 – 09/2020	McCormick Biological Inc., Seasonal BNLL Surveyor

PROJECT EXPERIENCE

CONSTRUCTION MONITORING

Solar Project - Rosamond Central Solar Project, Clearway Energy Group, LLC – Rosamond, Kern County, California. Assistant Environmental Scientist. (04/2023 – 01/2024)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federally listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mojave ground squirrel, and several rare plant species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, surveys, and scientific assessments on Joshua Trees. Conducted construction monitoring. Sensitive species were logged if observed.

SAN JOAQUIN KIT FOX

(Vulpes macrotis mutica)

Elk Hills Oil Field (EHOF) Threatened and Endangered Species Monitoring Program – Tupman, Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Conducted monitoring activities on the EHOF to measure trends in species abundance of the San Joaquin kit fox (*Vulpes macrotis mutica*, SJKF). These activities included semiannual spotlighting surveys, scent station/camera station monitoring with diatomaceous earth (DE), natal den surveys/monitoring, and SJKF preconstruction surveys and monitoring for oil field construction activities. Activities also included burrow scoping and collapsing empty potential SJKF dens prior to construction of well pads and related oilfield infrastructure projects. Surveyed for an estimated 20 hours, monitored for an estimated 5 hours, and observed 25 individual SJKF. Annual reporting of monitoring and survey results to USFWS and CDFW.

WESTERN JOSHUA TREE

(Yucca brevifolia)

Rosamond South Solar Project, Clearway Energy Group, LLC – Rosamond, Kern County, California. *Assistant Environmental Scientist.* (01/2023 – 09/2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federal Lee listed species in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plant species. Conducted protocol-level botanical surveys for rare and listed plants, including silver cholla (*Cylindropuntia echinocarpa*). Silver cholla was observed and all observed individuals were mapped. Conducted census, service, and scientific assessments on Joshua Trees.

RB Inyokern Silver Cholla survey, Kern County, CA. *Assistant Environmental Scientist* (07/2023). Conducted a reconnaissance biological survey for listed plants and animals to include the Desert Kit Fox, BUOW, silver cholla (*Cylindropuntia echinocarpa*), raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). Silver cholla was observed and all observed individuals were mapped.

Bullhead Project, EDF Renewables, inc., Kern County, CA.

Assistant Environmental Scientist (09/2023 – Present).

Conducted a pre-construction clearance survey for species of plants and animals of special concern, including Desert Tortoise, Desert Kit Fox, BUOW, silver cholla, Mohave Ground Squirrel, Joshua Trees, raptors and nesting birds or their sign (i.e., scat, tracks, or potential dens). None were observed during the survey.

Windhub WJT Census Survey, Kern County, CA. *Assistant Environmental Scientist* (12/2023 – Present). Conducted a pre-construction clearance survey for species of plants and animals of special concern, including Desert Tortoise, Desert Kit Fox, BUOW, silver cholla, Mohave Ground Squirrel, Joshua Trees, raptors and nesting birds or their sign (i.e., scat, tracks, or potential dens). Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, service, and scientific assessments on Joshua Trees.

BLUNT-NOSED LEOPARD LIZARD

(Gambelia sila)

Elk Hills Oil Field (EHOF) Threatened and Endangered Species Monitoring Program – Tupman, Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Conducted monitoring activities on the EHOF to measure trends in species abundance for Blunt-nosed Leopard Lizard (BNLL). These activities included protocol and non-protocol walking transect surveys and driving surveys on established routes on the EHOF conservation lands. Surveyed for an estimated 200 hours and observed 20 individual BNLL. Annual reporting of monitoring and survey results were submitted to USFWS and CDFW.

McCormick Biological, Inc. BNLL Surveys – Kern County CA. *Seasonal BNLL Surveyor.* (05/2020 – 09/2020)

Conducted BNLL surveys following protocol on Berry, Chevron, and Insignia oil leases. Surveyed for an estimated 450 hours and observed 6 individual BNLL.

Protocol BNLL Surveys, Cymric Substation, Sentinel Peak Resources – McKittrick, Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Conducted BNLL surveys following protocol. Survey for an estimated 25 hours and no BNLL were observed during the surveys.

Protocol BNLL Surveys, Dow Chanslor Pipeline, Sentinel Peak Resources – McKittrick, Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Conducted BNLL surveys following protocol. Survey for an estimated 25 hours and no BNLL were observed during the surveys.

Protocol BNLL Surveys, Stantec Consulting Services – Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Conducted BNLL surveys following protocol on Berry and Chevron oil leases. Surveyed for an estimated 100 hours and no BNLL were observed during the surveys.

Protocol BNLL Surveys, Quad Knopf Inc. – Kern County, CA. *Assistant Environmental Scientist.* (05/2023 – 09/2023)

Conducted BNLL surveys following protocol for California Department of Transportation (Caltrans). Surveyed for an estimated 60 hours and observed 4 individual BNLL.

SAN JOAQUIN ANTELOPE SQUIRREL

(Ammospermophilus nelsoni)

Elk Hills Oil Field (EHOF) Threatened and Endangered Species Monitoring Program – Tupman, Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Conducted BNLL surveys following protocol and observed San Joaquin antelope squirrel (SJAS) incidentally. Surveyed for an estimated 100 hours and observed 55 individual SJAS during said surveys.

Protocol BNLL Surveys, Cymric Substation, Sentinel Peak Resources – McKittrick, Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Conducted BNLL surveys following protocol and observed SJAS incidentally. Surveyed for an estimated 25 hours and observed 5 individual SJAS during said surveys. No BNLL were observed during the surveys.

Protocol BNLL Surveys, Insignia Petroleum Company Oil Leases – Valley Acres, Kern County, CA. *Seasonal BNLL Surveyor* (05/2020 – 09/2020)

Conducted BNLL surveys following protocol and observed SJAS incidentally. Surveyed for an estimated 50 hours and observed 15 individual SJAS during said surveys.

Protocol BNLL Surveys, Stantec Consulting Services – Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Conducted Blunt-nosed Leopard Lizard (*Gambelia sila*. BNLL) surveys following protocol and observed SJAS incidentally. Surveyed for an estimated 200 hours and observed 6 individual SJAS during said surveys. No BNLL were observed during the surveys.

Protocol BNLL Surveys, Quad Knopf Inc. – Kern County, CA. *Assistant Environmental Scientist.* (05/2023 – present)

Conducted BNLL surveys following protocol for California Department of Transportation (Caltrans). Surveyed for an estimated 40 hours and observed 1 individual SJAS.

HEERMANN'S KANGAROO RAT

(Dipodomys heermanni)

Pleito Ranch / Wind Wolves Preserve, California Resources Corporation (CRC) – Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Conducted construction monitoring for an oil and gas pipeline and observed Heermann's kangaroo rats (HKR) in the project area. All work was paused until individuals were relocated to a safe distance away from the work site. Three individual HKR were observed during the estimated 25 hours of monitoring.

TIPTON'S KANGAROO RAT

(Dipodomys nitratooides nitratooides)

Elk Hills Oil Field (EHOF) Threatened and Endangered Species Monitoring Program – Tupman, Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Conducted construction monitoring for an oil and gas pipeline and observed Tipton's kangaroo rats (TKR) in the project area. All work was paused until individuals were relocated to a safe distance away from the work site. Five individual TKR were observed during the estimated 25 hours of monitoring.

DESERT TORTOISE

(Gopherus agassizii)

RB Inyokern desert tortoise survey, Kern County, CA.

Assistant Environmental Scientist (07/2023 – 12/2023).

Conducted reconnaissance biological surveys for listed plants and animals to include the Desert Kit Fox, BUOW, silver cholla (*Cylindropuntia echinocarpa*), raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). No desert tortoise were observed during the survey.

MOHAVE GROUND SQUIRREL

(Xerospermophilus mohavensis)

RB Inyokern Mohave ground squirrel survey, Kern County, CA.

Assistant Environmental Scientist (07/2023 – 12/2023).

Conducted reconnaissance biological surveys for listed plants and animals to include the Desert Kit Fox, BUOW, silver cholla (*Cylindropuntia echinocarpa*), raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). No Mohave ground squirrels were observed during the survey.

SAN JOAQUIN COACHWHIP

(Coluber flagellum ruddocki)

Protocol BNLL Surveys, Stantec Consulting Services – Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Conducted BNLL surveys following protocol on Berry oil leases. One San Joaquin coachwhip (SJCO) was observed during the surveys.

AMERICAN BADGER

(Taxidea taxus)

McCormick Biological, Inc. BNLL Surveys – Kern County CA. *Seasonal BNLL Surveyor.* (05/2020 – 09/2020) Conducted BNLL surveys following protocol on a Chevron oil lease and one American Badger was observed during the survey.

Protocol BNLL Surveys, Stantec Consulting Services – Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Conducted BNLL surveys following protocol on a Berry oil lease and one American Badger was observed during the survey.

BURROWING OWL

(Athene cunicularia)

Elk Hills Oil Field (EHOF) Threatened and Endangered Species Monitoring Program – Tupman, Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Conducted protocol-level SJKF natal den surveys for species of plants and animal to include potential SJKF or their sign (i.e., scat, tracks, or potential dens) and one burrowing owl (BUOW) was observed during the survey.

Merced Biogas Pipeline – Phase 2 Project – Merced, Merced County, CA. *Assistant Environmental Scientist.* (03/2023)

Conducted a reconnaissance biological survey to determine BUOW presence within 500 feet of the project site. No BUOW were observed during the survey.

Zephyr Lane New School Project, Fairfax School District—Kern County, CA. *Assistant Environmental Scientist* (01/2023).

Conducted a reconnaissance biological survey for listed plants and animals to include the American badger, SJKF, SJAS, giant kangaroo rat, BUOW, raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). One BUOW was observed during the survey.

RB Inyokern Burrowing Owl survey, Kern County, CA.

Assistant Environmental Scientist (07/2023 – 11/2023).

Conducted reconnaissance biological surveys for listed plants and animals to include the Desert Kit Fox, BUOW, silver cholla (*Cylindropuntia echinocarpa*), raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). No BUOW were observed during the survey.

SWAINSONS HAWK

(Buteo swainsoni)

Merced Biogas Pipeline – Phase 2 Project – Merced, Merced County, CA. *Assistant Environmental Scientist.* (03/2023)

Conducted protocol-level Swainsons hawk survey to determine presence of birds or their sign (i.e., potential nests). No Swainsons hawks were observed during the survey.

NESTING BIRDS

Merced Biogas Pipeline – Phase 2 Project – Merced, Merced County, CA. *Assistant Environmental Scientist.* (03/2023)

Conducted a reconnaissance biological survey for nesting birds or their sign (i.e., potential nests). Several red-tailed hawk (*Buteo jamaicensis*) nests and nesting red-tailed hawks were observed during the survey.

FLORISTIC SURVEYS

Rosamond South Solar Project, Clearway Energy Group, LLC – Rosamond, Kern County, California. *Assistant Environmental Scientist.* (03/2023 – 06/2023)

Conducted a reconnaissance level survey for species of plants and animals with potential state and federal Lee listed species

in the vicinity including desert kit fox, desert tortoise, AMBA, SWHA, eagles, raptors, nesting birds, Mohave ground squirrel, and several rare plant species. Conducted protocol-level botanical surveys for rare and listed plants. Conducted census, service, and scientific assessments on Joshua Trees.

RB Inyokern Silver Cholla survey, Kern County, CA. *Assistant Environmental Scientist* (07/2023). Conducted a reconnaissance biological survey for listed plants and animals to include the Desert Kit Fox, BUOW, silver cholla (*Cylindropuntia echinocarpa*), raptors, and nesting birds or their sign (i.e., scat, tracks, or potential dens). Silver cholla was observed and all observed individuals were mapped.

Bullhead Project, EDF Renewables, inc., Kern County, CA. *Assistant Environmental Scientist* (09/2023). Conducted a pre-construction clearance survey for species of plants and animals of special concern, including Desert Tortoise, Desert Kit Fox, BUOW, silver cholla, Mohave Ground Squirrel, Joshua Trees, raptors and nesting birds or their sign (i.e., scat, tracks, or potential dens). None were observed during the survey.

MINE EXPANSION SURVEYS

Solari Sand and Gravel Mine, Granite Construction Company – Kern County, CA. *Assistant Environmental Scientist* (09/2023 - 11/2023).

Conducted den monitoring for one potential San Joaquin kit fox den. Maintained a complete record of all species observed, photographs taken, and biological resources GPS points. Conducted pre-construction surveys for proposed mine expansion sites.

WATER DELINIATION SURVEYS

Biogas Gathering Facility, Kings County, CA. *Assistant Environmental Scientist* (10/2023).

Conducted an aquatic resource delineation of Highline canal in Kings County, California. Assisted with preparing an Aquatic Resource Delineation Report that was submitted to the agencies for jurisdictional determination and impact analysis.

CONSTRUCTION MONITORING

Burrow Excavations, High Speed Rail (Zones 2 and 5) – Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

General biological monitor for small mammal burrow excavations along High Speed Rail construction zones 2 and 5. Excavated previously flagged burrows under supervision of Designated Biologist. Backfilled excavated burrows once end was reached and no species were observed in the burrows. Monitored for an estimated 30 hours. All species observed were documented, and no listed species were observed.

Gas Line Repair, Coles Levee Oilfield, Kern County, CA. *Biological Consultant I.* (04/2021 – 01/2023)

Third party monitor for a gas line repair project in North Coles Levee protocol. Monitored project for an estimated 10 hours. All species observed were documented, and no listed species were observed.

Gas Line Installation – Elk Hills Oilfield, Kern County, CA.
Biological Consultant I. (04/2021 – 01/2023)

Third party monitor for a gas line installation on Elk Hills following protocol. Monitored project for an estimated 8 hours. All species observed were documented, and no listed species were observed.

Gas Line Installation – Elk Hills Oilfield, Kern County, CA.
Biological Consultant I. (04/2021 – 01/2023)

Third party monitor for a gas line installation in Section 27R at Elk Hills following protocol. Monitored project for an estimated 40 hours. All species observed were documented. Listed species observed included 5 Tipton's kangaroo rats.

New Well Construction – Buena Vista Oilfield, Kern County, CA.
Biological Consultant I. (04/2021 – 01/2023)

Third party monitor for a new well drill site in section 25B in Buena Vista Oilfield following protocol. Monitored project for an estimated 3 hours. All species observed were documented, and no listed species were observed.

New Well Construction – Elk Hills Oilfield, Kern County, CA.
Biological Consultant I. (04/2021 – 01/2023)

Third party monitor for a new well drill site in section 35S on Elk Hills following protocol in compliance with CDFW. Monitored project for an estimated 3 hours. All species observed were documented, and no listed species were observed.

Pipeline Anomaly Repair, Phillips 66 NC 20 Coalinga – Fresno County, CA.
Biological Consultant I. (04/2021 – 01/2023)

Third party monitor for pipeline anomaly repair at Phillips 66 NC 20 Coalinga following protocol in compliance with CDFW. Monitored project for an estimated 100 hours. All species observed were documented, and no listed species were observed.

Pipeline Construction, Pleito Ranch/Wind Wolves Preserve – Kern County, CA.
Biological Consultant I. (04/2021 – 01/2023)

Third party monitor for pipeline relocation project in Pleito Ranch/Wind Wolves Preserve following protocol. Monitored project for an estimated 8 hours. All species observed were documented, and no listed species were observed.

Pipeline Construction, Pleito Ranch/Wind Wolves Preserve – Kern County, CA.
Biological Consultant I. (04/2021 – 01/2023)

Third party monitor for pipeline relocation project in Pleito Ranch / Wind Wolves Preserve following protocol. Monitored project for an estimated 25 hours. All species observed were documented. Listed species observed included 3 Heermann's kangaroo rats.

Powerline Installation – Sentinel Peak, Kern County, CA.
Biological Consultant I. (04/2021 – 01/2023)

Third party monitor for a powerline installation project for Hopkins Solar Project at Sentinel Peak following protocol.

Monitored project for an estimated 120 hours. All species observed were documented. All species observed were documented, and no listed species were observed.

Release Cleanup – Mt. Poso Oilfield, Kern County, CA. *Biological Consultant I. (04/2021 – 01/2023)*

Third party monitor for a release cleanup for OSPR at Mt. Poso following protocol in compliance with CDFW. Monitored project for an estimated 50 hours. All species observed were documented, and no listed species were observed.

Release Cleanup – Coles Levee, Kern County, CA. *Biological Consultant I. (04/2021 – 01/2023)*

Third party monitor for release cleanup for SCLU 56-10 at Coles Levee following protocol. Monitored project for an estimated 10 hours. All species observed were documented, and no listed species were observed.

Release Cleanup – Elk Hills Oilfield, Kern County, CA. *Biological Consultant I. (04/2021 – 01/2023)*

Third party monitor for OSPR on a release in Section 27B at Elk Hills Oilfield following protocol in compliance with CDFW. Monitored project for an estimated 40 hours. All species observed were documented, and no listed species were observed.

Release Cleanup – Elk Hills Oilfield, Kern County, CA. *Biological Consultant I. (04/2021 – 01/2023)*

Third party monitor for OSPR on a release in Section 20B at Elk Hills Oilfield following protocol in compliance with CDFW. Monitored project for an estimated 40 hours. All species observed were documented. All species observed were documented, and no listed species were observed.

Release Cleanup – Elk Hills Oilfield, Kern County, CA. *Biological Consultant I. (04/2021 – 01/2023)*

Third party monitor for OSPR on a release in Section 36B at Elk Hills Oilfield following protocol in compliance with CDFW. Monitored project for an estimated 50 hours. All species observed were documented, and no listed species were observed.

Road Repair – Coles Levee, Kern County, CA. *Biological Consultant I. (04/2021 – 01/2023)*

Third party monitor for road repair for a well in South Coles Levee following protocol. Monitored project for an estimated 3 hours. All species observed were documented, and no listed species were observed.

Culvert Rehabilitation – Caltrans, Kern County, California. *Assistant Environmental Scientist. (05/2023 – 08/2023).*

Conducted monitoring for culvert rehabilitation along SR 33 from Derby Acres to Lost Hills areas, which involved digging holes to locate pipelines that consisted of oil, gas, telecommunication, and water lines. Project areas were surveyed before crews dug holes to confirm burrows or other signs of sensitive species were absent from project area. If signs were present, crew was informed and advised to relocate away from areas. Sensitive species were logged if observed.



TOTAL CONSTRUCTION MONITORING HOURS: 810

Preconstruction Endangered Species Training – Various Locations, CA. *Biological Consultant I.* (04/2021 – 01/2023)

- Conducted preconstruction species training.
- 50 training sessions provided for construction crews.

VOLUNTEER WORK

California Living Museum (CALM), Bakersfield, CA. *Volunteer.* (May 2022)

Volunteer for information booth on Kern County endangered species for CALM 39th birthday celebration. Relayed information to visitors on local endangered species and displayed ambassadors of said species. Communicated to visitors methods of conservation and mitigation measures to protect Kern County endangered species.

**Reconnaissance Surveys for Agassiz's Desert Tortoise,
Habitat Assessments for Burrowing Owl, Mohave Ground Squirrel, and General
Biological Resource and Plant Assessment for a
307-acre± Site (APN 341-010-11) and a 121-acre± Site (APN 341-154-10)
near the Community of Inyokern, Kern County, California**

(U.S. Geological Survey 7.5' Freemont Junction and Inyokern Southeast quadrangles,
Township 27 South, Range 38 East, portions of Sections 11 and 16, respectively, S.B.B.&M.)

Job#: 25-027

Prepared by:

Circle Mountain Biological Consultants, Inc.
P.O. Box 3197

Wrightwood, California 92397

PH/FAX: (760) 249-4948

Website: www.circlemountainbiological.com

Emails: ed.larue@verizon.net

sharon_dougherty@circlemountainbiological.com

Contacts: Ed LaRue, Sharon Dougherty

Prepared for:

R&L Capital, Inc.

82740 Trona Road, P.O. Box 907

Trona, California 93562

PH: (760) 372-4830

Email: rbarker@vwconstructionservices.com

Contact: Robbie Barker

On behalf of:

Desert Tortoise Preserve Committee, Inc.

P.O. Box 940

Ridgecrest, CA 93556

PH: (213) 300-5220

Email: junylee@gmail.com

Contact: Jun Lee

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



Circle Mountain Biological Consultants, Inc.
Author and Field Investigator: Edward L. LaRue, Jr.

August 2025

Figure 1. APNs 341-054-10 and 341-010-11: Vicinity Map

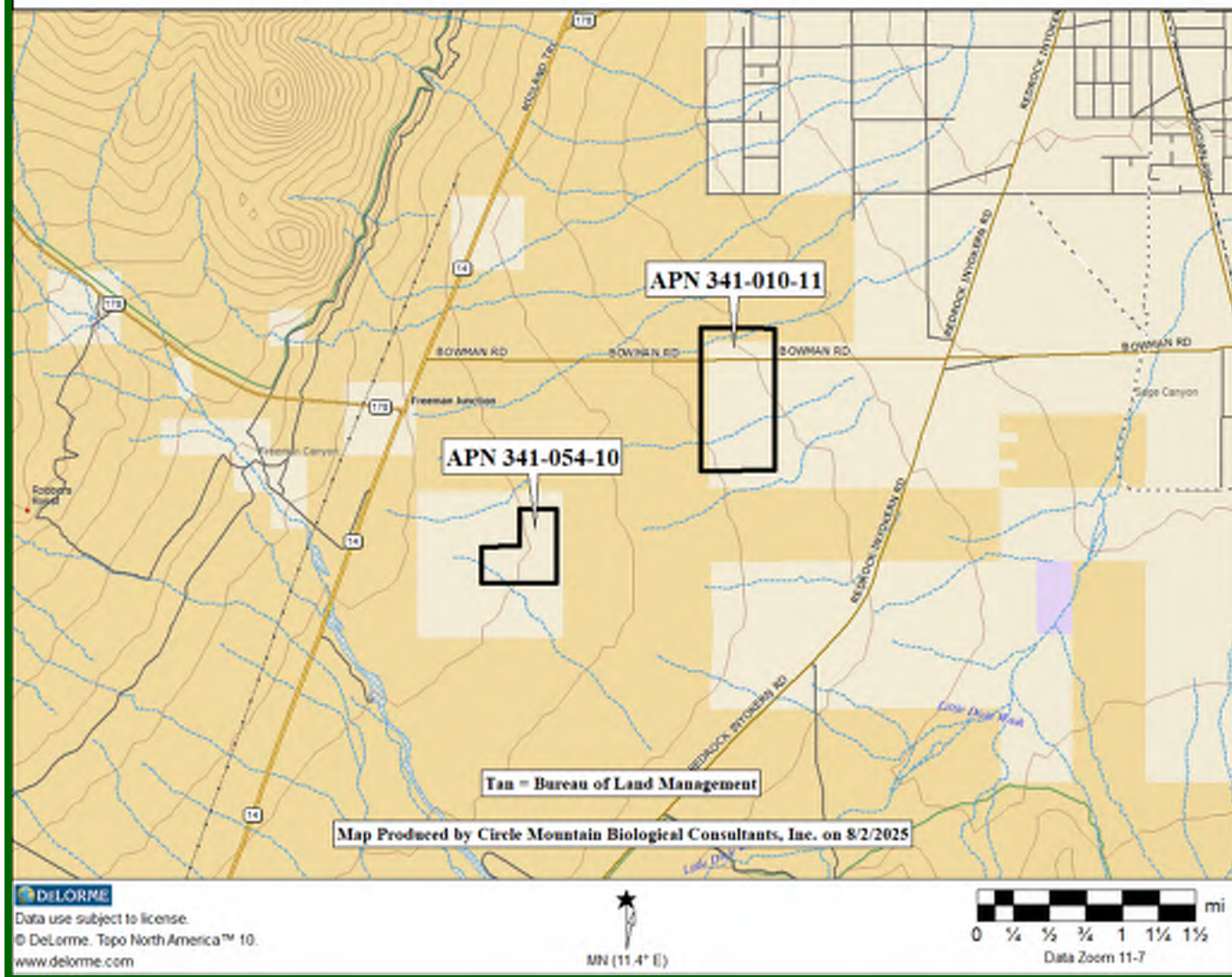
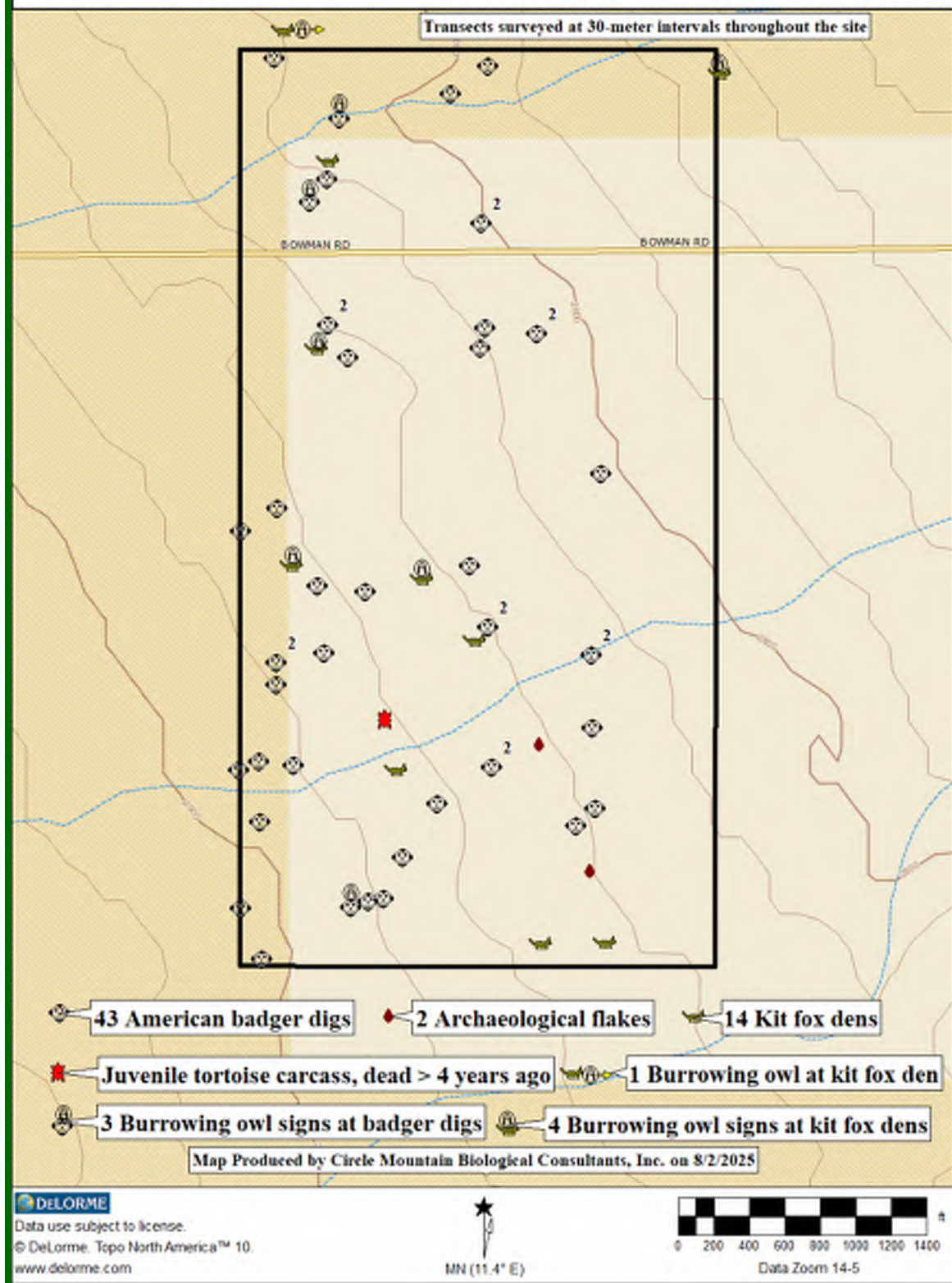


Figure 2a. APN 341-010-11: Site Map with Rare Species and Tortoise Sign Locations



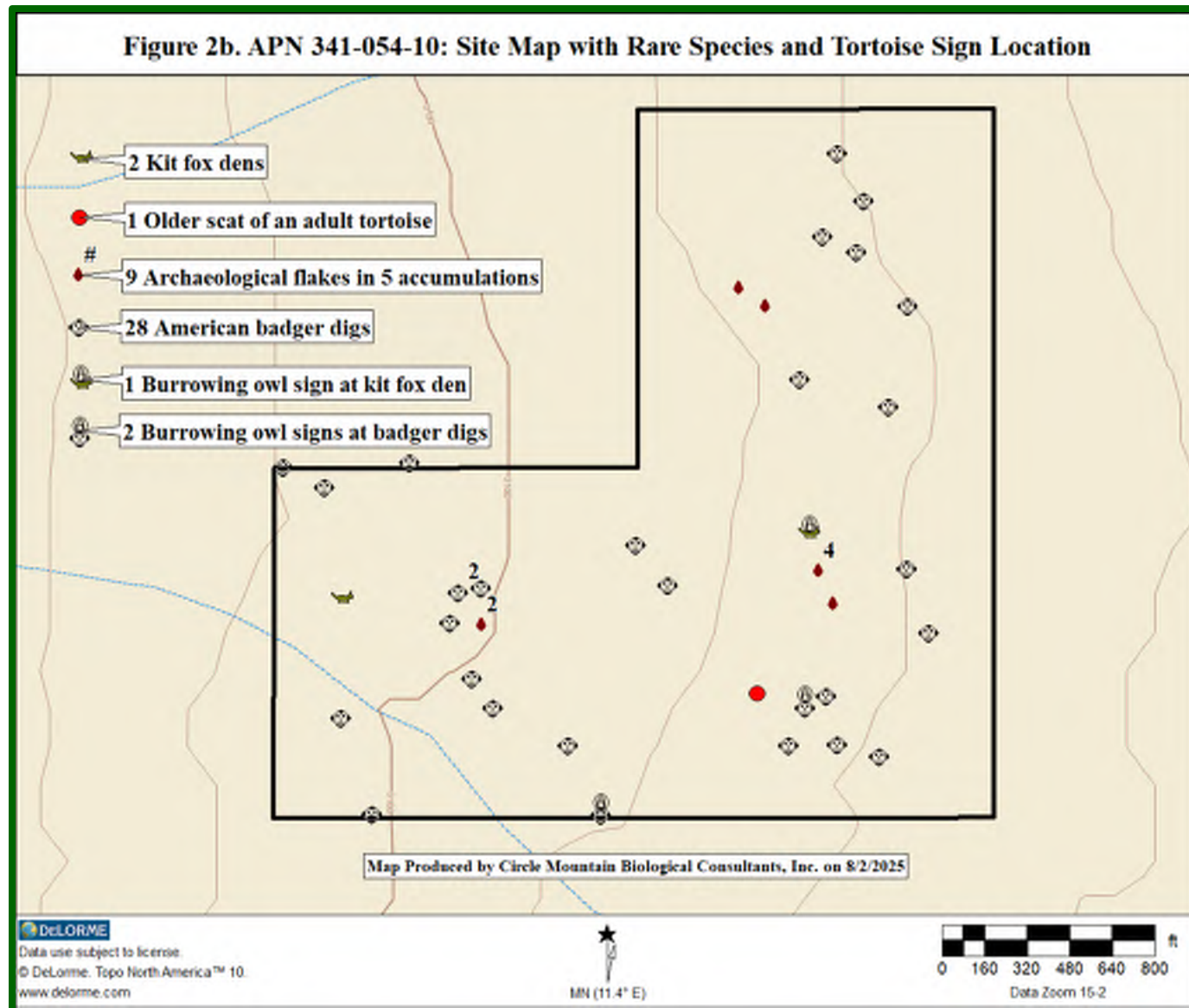


Figure 3. Regional Tortoise Survey Results between 1991 and 2025

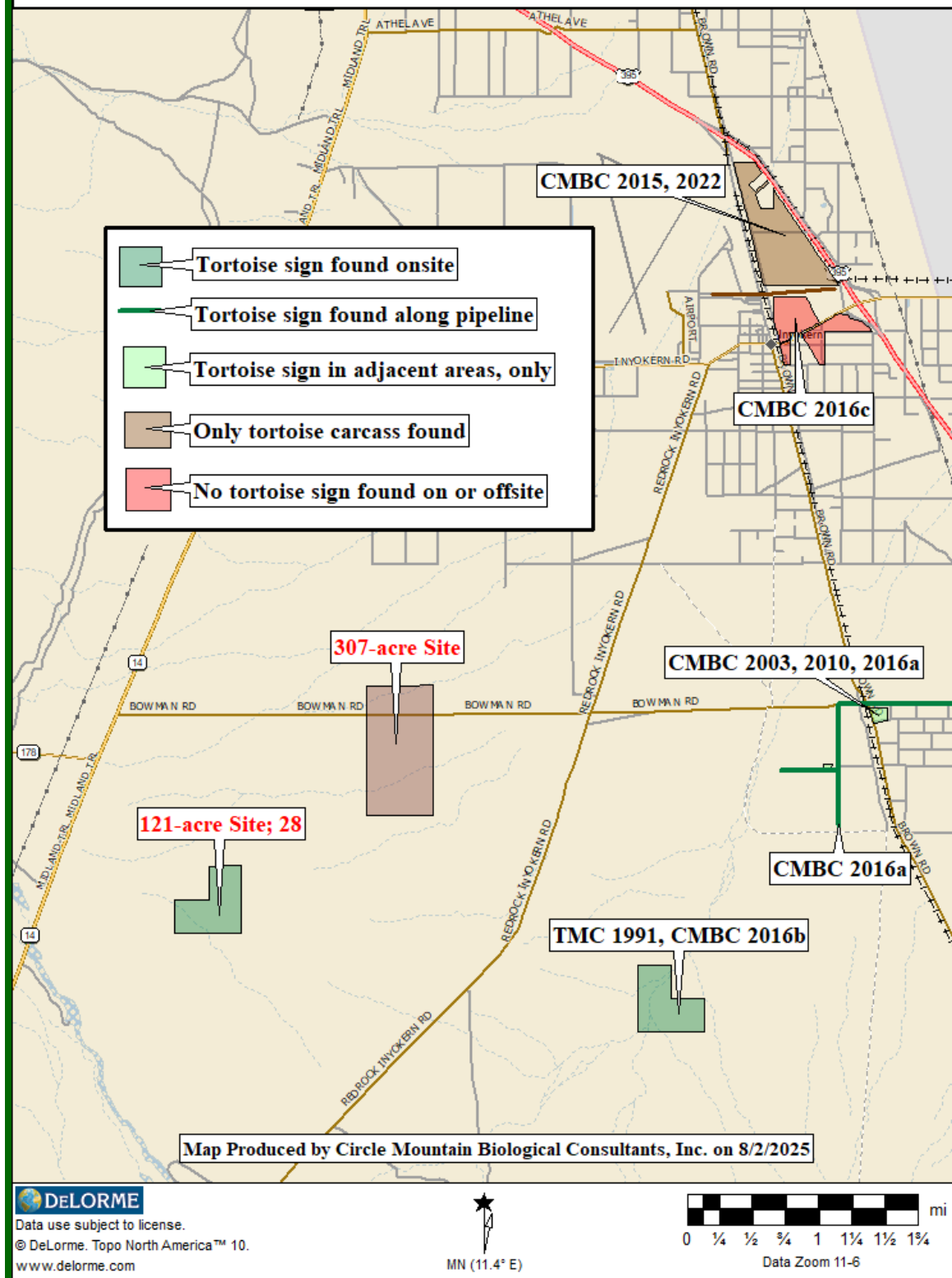
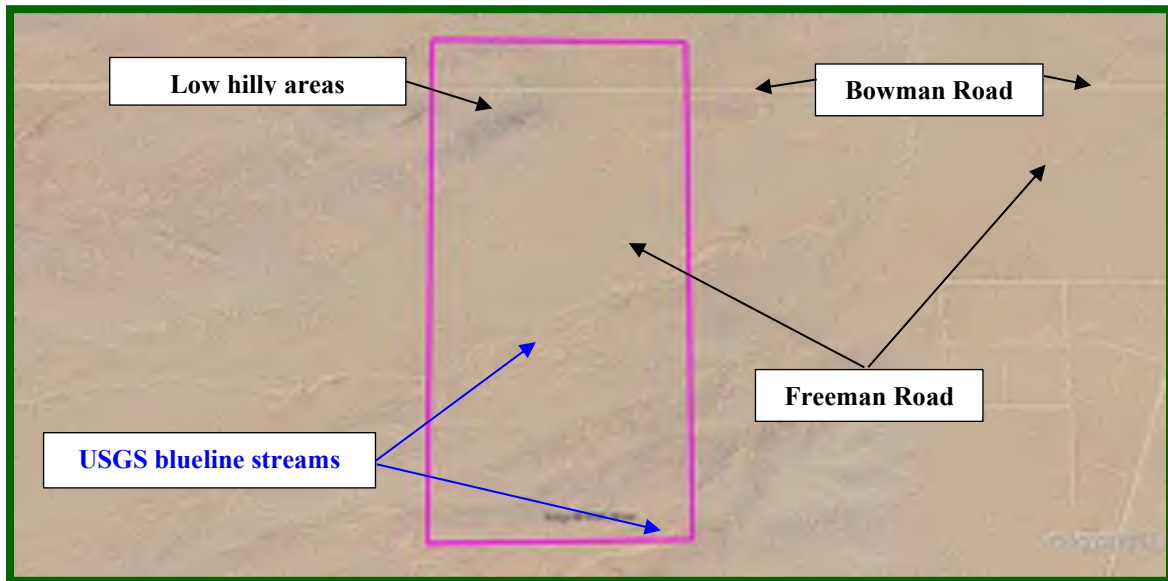


**Figure 4a. APN 341-010-11:
Aerial Photograph (©2025 Google Earth)**

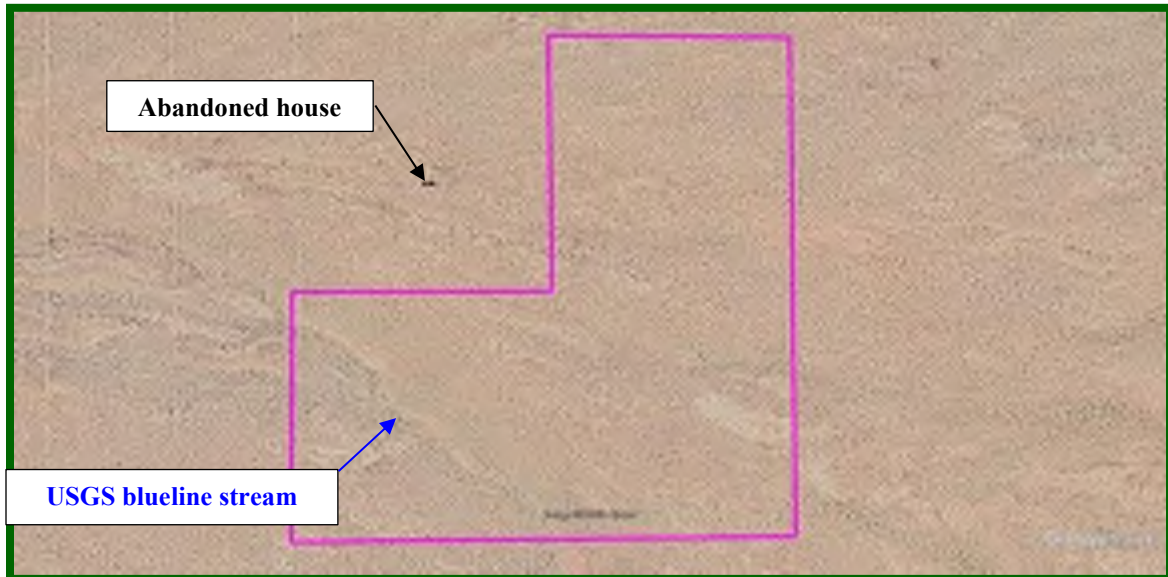


Enlarged aerial view from approximately 13,000 feet altitude (Image date: 11/23/2023)



Regional aerial view from approximately 51,000 feet altitude.

**Figure 4b. APN 341-154-10:
Aerial Photograph (©2025 Google Earth)**

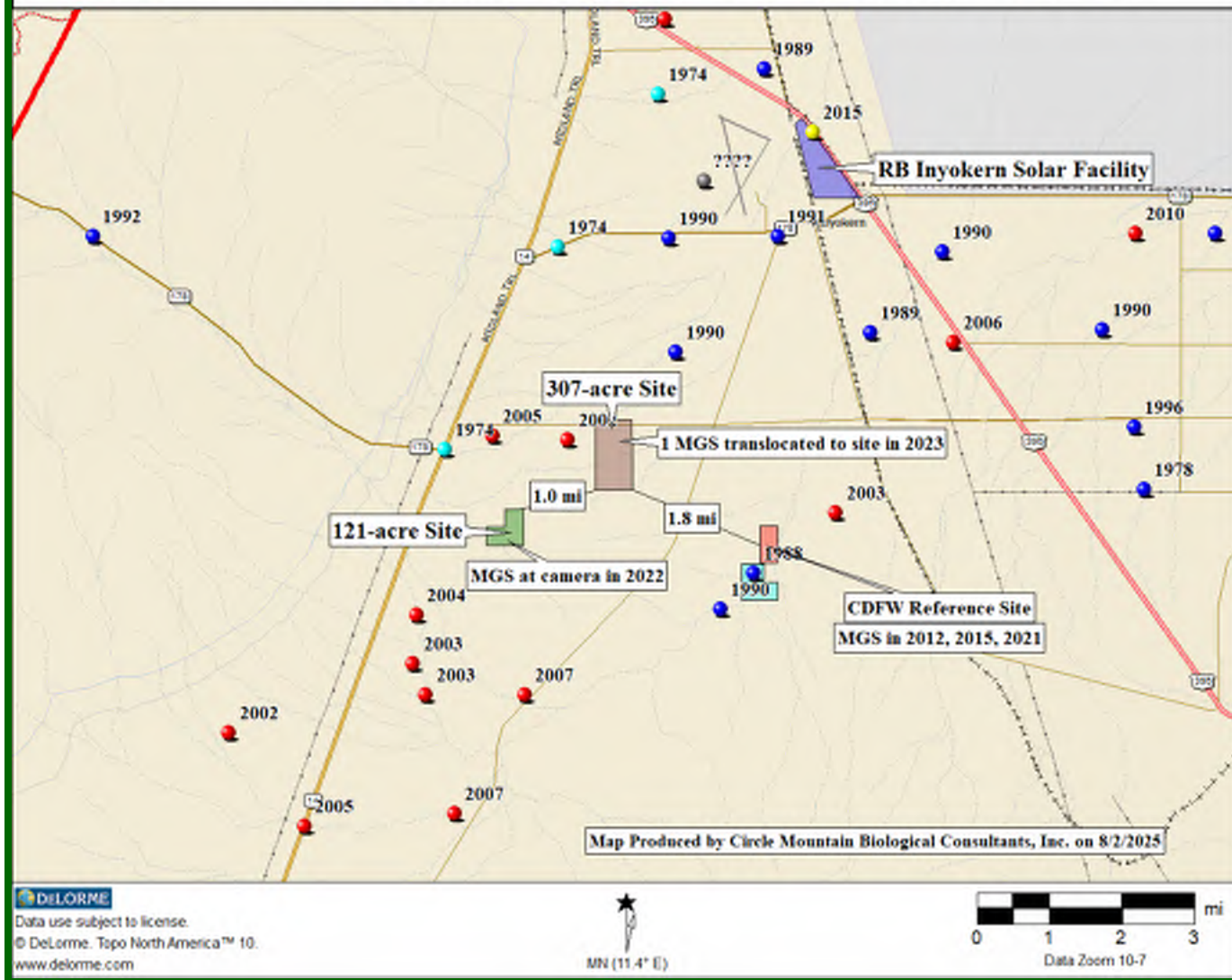


Enlarged aerial view from approximately 8,350 altitude (Image date: 11/23/2023)



Regional aerial view from approximately 10 miles altitude.

Figure 5. APNs 341-054-10 and 341-010-11: Known Mohave Ground Squirrel Locations



Executive Summary

Circle Mountain Biological Consultants, Inc. was contracted by Robbie Barker, President of R&L Capital, Inc. (Proponent) to perform a reconnaissance survey for Agassiz's desert tortoise, habitat assessment for burrowing owl, and a general biological resource and plant assessment on two properties including a 307.32-acre site (APN 341-010-11, hereafter the "307-acre site") and a 120.68-acre site (APN 341-154-10, hereafter the "121-acre site"), located in Kern County, California, southwest of the unincorporated community of Inyokern. The legal descriptions for the subject properties are U.S. Geological Survey 7.5' Freemont Junction and Inyokern Southeast quadrangles, Township 27 South, Range 38 East, portions of Sections 11 and 16, respectively, S.B.B.&M.

For approximately 22 survey hours, between 0715 and 1545 on July 29, 2025, experienced biologists surveyed the 307-acre site as described herein. This entailed a survey of 30 transects, spaced at 30-meter intervals and oriented along a north-south axis throughout the site. For approximately 14 hours on July 30, 2025, the same biologists surveyed 41 transects, spaced at 20-meter intervals and oriented along an east-west axis on the 121-acre site.

Based on DeLorme Topo USA® 10.0 software, elevations on the 121-acre site range from approximately 946 meters (3,105 feet) along the western boundary down to 926 meters (3,040 feet) at the southeast corner. Elevations on the 307-acre site range from approximately 884 meters (2,900 feet) at the southwest corner down to 837 meters (2,745 feet) at the northeast corner. According to Gaia GPS software, there is a USGS-designated intermittent blueline stream through the southwest corner of the 121-acre site with two designated streams through both the center and southeast corner of the 307-acre site. The 42 common plant species identified during the 2017 survey for the 121-acre site and 2025 surveys for both sites are listed in Appendix A. The seven reptile, seven bird, and six common mammal species identified during the surveys are listed in Appendix B.

Those Covered Species either identified during the current survey or for which suitable habitats are present include desert tortoise, Mohave ground squirrel, and western burrowing owl. The older scat of an adult tortoise was found during the 2025 survey of the 121-acre-site. For the 307-acre site, the carcass of a juvenile tortoise that died more than four years ago was found. CMBC suspects that more tortoise sign may occur on the sites and be found by protocol-level surveys. Other special status species that were detected during the 2025 surveys on both sites include American badger, desert kit fox, and larger creosote bush rings. LeConte's thrasher and loggerhead shrikes have been documented on the 121-acre site during previous surveys.

Based on 36 years of conducting similar disturbance analyses in the West Mojave Desert, CMBC concludes that none of the observed disturbances, which are considered negligible, compromise the suitability of the habitats for occupancy by Covered Species or will significantly detract from the conservation management of the sites.

CMBC concludes that desert tortoise, Mohave ground squirrel, western burrowing owl, LeConte's thrasher, loggerhead shrike, American badger, kit fox, and larger creosote rings will all benefit from conservation management of the sites. Several recommended management actions include fencing and literature removal, which are described in more detail in Section 4.0. For example, with prior consent from CDFW, the sites may be good for augmentation by placing displaced tortoises and/or Mohave ground squirrels from development sites onto them after fences are installed. The three USGS-designated blueline streams on the two sites provide resources for Covered Species and support higher plant diversity than if they were not present.

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**Reconnaissance Surveys for Agassiz's Desert Tortoise,
Habitat Assessments for Burrowing Owl and Mohave Ground Squirrel, and General
Biological Resource Assessment for a
307-acre± Site (APN 341-010-11) and a 121-acre± Site (APN 341-154-10)
near the Community of Inyokern, Kern County, California**

1.0. Introduction

1.1. Purpose and Need for Study. Circle Mountain Biological Consultants, Inc. (CMBC) was contacted by Robbie Barker, President of R&L Capital, Inc. (Proponent) on behalf of the Desert Tortoise Preserve Committee (DTPC) to perform reconnaissance surveys for Agassiz's desert tortoise (*Gopherus agassizii*), habitat assessments for burrowing owl (*Athene cunicularia*), and Mohave ground squirrel (MGS; *Xerospermophilus mohavensis*) (collectively, "Covered Species"), and a general biological resource and plant assessment on a 307.32-acre site (APN 341-010-11, hereafter "307-acre site") and 120.68-acre site (APN 341-154-10, hereafter "121-acre site") located in Kern County, California, southwest of the unincorporated community of Inyokern (see Figure 1). Given the location of the site in an unincorporated portion of the county and because Kern County does not have specific guidelines for biological reports, this report has been prepared, in part, according to County of San Bernardino's *Report Protocol for Biological Assessment Reports* (County of San Bernardino 2006).

The Proponent owns these lands and is working with the DTPC to establish Habitat Management Lands (HM Lands) acceptable to California Department of Fish and Wildlife (CDFW). The 307- and 121-acre sites, comprising a total of approximately 428 acres, are being considered by the CDFW to serve, in part, as compensation for impacts on the nearby 166-acre RB Inyokern Solar Facility (see Figure 5) that was developed in 2023 and 2024. The purpose of this report is to summarize available background information and document the findings of reconnaissance surveys performed on the two sites in July 2025.

Results of CMBC's reconnaissance-level tortoise surveys, burrowing owl and Mohave ground squirrel habitat assessments, and general biological resource and plant assessment are intended to provide sufficient baseline information for CDFW to determine suitability of these sites as HM Lands, to identify any human impacts that may affect Covered Species, and to recommend management actions to curtail those impacts.

1.2. Background Information. CMBC was contracted by Valleywide Construction Services (an affiliate of the Proponent) in 2015 to perform protocol surveys for desert tortoises on a 200-acre site encompassing the proposed solar development, during which the carcass of an adult tortoise, burrowing owls, and Swainson's hawk were observed (CMBC 2015a). Subsequently on April 13, 2015, a pregnant MGS was captured and released on the proposed solar site on one of two live-trap grids established on the site ("Site 3" in CMBC 2015b). CMBC (2020) then prepared an application for a 2081 incidental take permit that was issued 2022 (CDFW 2022). Prior to developing the solar site, CMBC (2023) conducted MGS trapping between June 2 and 11, 2023 with 192 live traps spread evenly over 177 acres. A post-lactating, adult female MGS was captured on June 6, 2023 at 10:50 am near the southwest corner of the solar site and translocated to the proposed 307-acre HM Land site at 2:50 pm later that day.

Surveys performed on the proposed HM Lands include a 2017 protocol tortoise survey on the 121-acre site where one active tortoise burrow with numerous scats, one older adult scat, and two carcass pieces from tortoises that had died more than four years prior to the finding were found (CMBC 2017). Other special status species found on that site included a loggerhead shrike, LeConte's thrasher, kit fox, American badger, and creosote rings. CMBC (2022) performed camera studies to detect MGS on both the 121-acre and 307-acre sites. The 121-acre site was surveyed by 19 motion cameras between March 11 and May 3, 2022 during which time 10 camera images of an adult MGS were captured at a single camera on April 4, 2022 and one image of a burrowing owl was photographed on April 7, 2022. The 307-acre site was surveyed by 20 motion cameras between March 24 and July 2022. Although no MGS images were captured, CMBC (2022) concluded that habitats were suitable, and that MGS had been reported throughout the region, including CDFW studies by Shari Heitkotter on nearby CDFW lands. An adult MGS was released on the site in 2023, although CDFW did not authorize radio-tracking of the animal after it was released, so we do not know if it remained onsite.

Importantly, in a letter from CDFW Regional Manager, Julie Vance to Ed LaRue of CMBC, dated January 23, 2023¹, CDFW made the following biological suitability statement concerning the 121- and 307-acre sites: "On November 9, 2022, the California Department of Fish and Wildlife (CDFW) met with Circle Mountain Biological Consultants, Inc. to discuss the proposed Habitat Management (HM) Lands for the above referenced project. Based on the information provided in the proposed mitigation document (dated March 17, 2022) it appears that the proposed properties (Table 1) [which included the two subject sites] are of suitable type and quality for the covered species – Desert tortoise (*Gopherus agassizii*) and Mohave ground squirrel (*Spermophilus mohavensis*)."

2.0. Methods

2.1. Literature Review. CMBC consulted materials included in our library to determine the nearest tortoise locations and other special status plant and animal species that have been reported from the vicinity of the subject properties (see Figure 3). Between 1991 and 2025, CMBC has completed approximately 35 focused tortoise surveys in the Indian Wells Valley Area, including Inyokern to the west, Ridgecrest to the east, and Olancho to the north. Of particular relevance, given their proximity to the subject properties, are 10 protocol and reconnaissance tortoise surveys on seven sites located between approximately 1.8 miles southeast (TMC 1991, CMBC 2016b) and 3.3 miles east of the 307-acre site (CMBC 2003, 2010, 2016a), between 1991 (TMC 1991) and 2022 (CMBC 2022), which, along with the subject properties, are mapped in Figure 3. These and other materials used in the completion of this report are listed in Section 5.0, below.

2.2. Field Survey and Habitat Assessment. In a series of emails (available upon request) among Jun Lee of the DTPC, Sharon Dougherty of CMBC, and Alya Wakeman-Hill of CDFW Region 4, between July 3 and 28, 2025, it was agreed by Ms. Wakeman-Hill that reconnaissance-level surveys would be acceptable for these studies. CMBC's scope of work is identified as follows on the next page.

¹ https://www.dropbox.com/sc/fi/clkykq3vzbkxw722mzceqx/Bio_Suitability_Letter.1-23-2023.pdf?rlkey=z28bptcj3new7zf5nj0f81in&dl=0

Field notes will include the following:

- Descriptions and locations of all tortoise sign, if any;
- A list of all sensitive species other than tortoises that are detected, if any; and
- Detectable human uses of the site to be used in a disturbance analysis.

CMBC will prepare a report documenting the results of the survey. The report will include the following elements:

- Descriptions of floral and faunal resources, including a list of detected plants and animals;
- Documentation of additional sensitive species observed during field surveys, if any;
- A discussion of habitat quality and quantification of tortoise and/or burrowing owl sign, if any;
- A vicinity map showing the location of the project area; and
- A map of the locations of any special-status species or sign detected during surveys, also indicating the area that was surveyed.

In a subsequent cell phone text from Jun Lee to Ed LaRue in early August 2025, Mr. Lee asked that CMBC provide its professional opinion as to the suitability of these two sites to function as HM Lands, identify any threats to the conservation management of the lands, and recommend pertinent management prescriptions to address documented and perceived threats.

2.2.1. Field Survey Methods. Unlike tortoise protocol surveys (USFWS 2019) that require transects to be surveyed at 10-meter intervals throughout a given site, there is no specific guidance for performing reconnaissance-level surveys. Based on past experience and in order to satisfy the scope of work given above, LaRue found it prudent to survey the larger 307-acre site along transects spaced at 30-meter (100-foot±) intervals and to survey the 121-acre site at 20-meter (65-foot±) intervals, collecting the data bulleted above.

For approximately 22 survey hours, between 0715 and 1545 on July 29, 2025, experienced biologists Ed LaRue and Sarah Teed of CMBC and subcontractor Seth Cohen surveyed the 307-acre site as described herein. This entailed a survey of 30 transects, spaced at 30-meter intervals and oriented along a north-south axis throughout the site. For approximately 14 hours on July 30, 2025, the same biologists surveyed 41 transects, spaced at 20-meter intervals and oriented along an east-west axis on the 121-acre site. Copies of CMBC's data sheets completed in the field and USFWS's (2019) pre-project survey data sheets are included in this report (see Appendix C).

As the sites were surveyed, LaRue kept tallies of observable human disturbances encountered on the 10 transects he surveyed on the 307-acre site and 14 transects he surveyed on the 121-acre site. The results of this method provide *encounter rates* for observable human disturbances. For example, two roads observed on each of 10 transects yields a tally of 20 roads (i.e., two roads encountered 10 times). Habitat quality, adjacent land uses, and this disturbance information are discussed below in Section 3.2 relative to the potential occurrence of Agassiz's desert tortoise and other special status species on and adjacent to the subject property.

Weather conditions recorded at the beginning and ending of the surveys included temperatures measured approximately 5 centimeters (2 inches) above the ground, percent cloud cover, and wind speeds measured by a hand-held Kestrel® weather and wind speed meter, as reported in Table 1.

Table 1. Weather Summary Data for the Surveys			
Date 2025	Begin to End = Total survey hours*	Weather Conditions	
		Beginning	Ending
121-acre Site			
July 30	07:15 to 15:45 = 22.5	74°F, 11 ↑ 15 mph, 0% cloud	94°F, 2 ↑ 5 mph, 0% cloud
307-acre Site			
July 29	06:30 to 11:15 = 14.25	70°F, calm, 0% cloud	105°F, 3 ↑ 8 mph, 0% cloud

*Total survey hours = The number of hours on a given day multiplied by three for the three biologists surveying the sites, minus three hours on July 29 for a one-hour lunch break.

All plant and animal species identified during the surveys were recorded in field notes. Garmin® hand-held, global positioning system (GPS) units were used to survey straight-line transects and record Universal Transverse Mercator (UTM) coordinates (North American Datum – NAD 83) for property boundaries, rare species locations, and other pertinent information (Appendix C). A digital camera was used to take representative photographs (Appendix D), with locations and directions of exhibits shown in Figure 6. ©2025 Google™ Earth was accessed to provide available aerial photographs of the subject properties and surrounding areas (Figures 4a and 4b).

3.0. Results

3.1. Common Biological Resources. The common plant and animal species identified during the survey are listed in Appendices A and B, respectively for each of the sites. Based on DeLorme Topo USA® 10.0 software, elevations on the 121-acre site range from approximately 946 meters (3,105 feet) along the western boundary down to 926 meters (3,040 feet) at the southeast corner. Elevations on the 307-acre site range from approximately 884 meters (2,900 feet) at the southwest corner down to 837 meters (2,745 feet) at the northeast corner. Terrain is relatively flat on both sites with a slight eastern slope on the 121-acre site, a slight northwestern slope on the 307-acre site, and a gently sloping hill near the western boundary of the 307-acre site south of Bowman Road (see upper portion of Figure 4a). Soils on the 121-acre site are comprised of coarse decomposed granite with boulder outcrops in places, whereas the 307-acre site is mostly sandy loam with decomposed granite in places. According to Gaia GPS software, there is a USGS-designated intermittent blueline stream through the southwest corner of the 121-acre site (see upper half of Figure 4a) two designated streams through both the center and southeast corner of the 307-acre site (see upper half of Figure 4b).

3.1.1. *Common Flora.* The 42 common plant species identified during the 2017 survey for the 121-acre site and 2025 surveys for both sites are listed in Appendix A. Both sites are comprised of creosote bush scrub with similar dominant species such as creosote bush (*Larrea tridentata*), burrobush (*Ambrosia dumosa*), desert golden-head (*Acamptopappus sphaerocephalus*), and Cooper's golden bush (*Ericameria cooperi* var. *cooperi*). Several species, including cheese bush (*Ambrosia Salsola*), peach thorn (*Lycium cooperi*), Indian ricegrass (*Stipa hymenoides*), and desert needlegrass (*Stipa speciosa*) are relatively more common in dry wash areas as compared to upland areas. The presence of these USGS-designated blueline streams lends species diversity to both sites and support beneficial resources for all Covered Species.

3.1.2. *Common Fauna*. The seven reptile, seven bird, and six common mammal species identified during the survey are listed in Appendix B. Other locally common reptile species that may occur include glossy snake (*Arizona elegans*), gopher snake (*Pituophis melanoleucus*), long-nosed snake (*Rhinocheilus lecontei*), and various rattlesnake species (*Crotalus* spp.).

With the exception of Costa's hummingbird (*Calypte costae*), which is migratory, horned larks (*Eremophila alpestris*), sage sparrows (*Amphispiza belli*), western meadowlarks (*Sturnella neglecta*), and house finches (*Carpodacus mexicanus*) are resident species that may nest onsite. Surveyors found what appeared to be a common raven (*Corvus corax*) nest in the abandoned house adjacent to the 121-acre site (see location in the upper part of Figure 4b and Figure 6b).

Small mammals detected during the surveys on one or both sites included kangaroo rats (*Dipodomys* sp.), antelope ground squirrels (*Ammospermophilus leucurus*), and Botta pocket gophers (*Thomomys bottae*). Medium-sized mammals included black-tailed hare (*Lepus californicus*). Common predators include coyote (*Canis latrans*) and bobcat (*Lynx rufus*). With the exception of striped skunk (*Mephitis mephitis*), which was photographed at night on the 121-acre site in 2022 and is mostly restricted to urbanizing areas in the desert, these are all typical mammal species for the region.

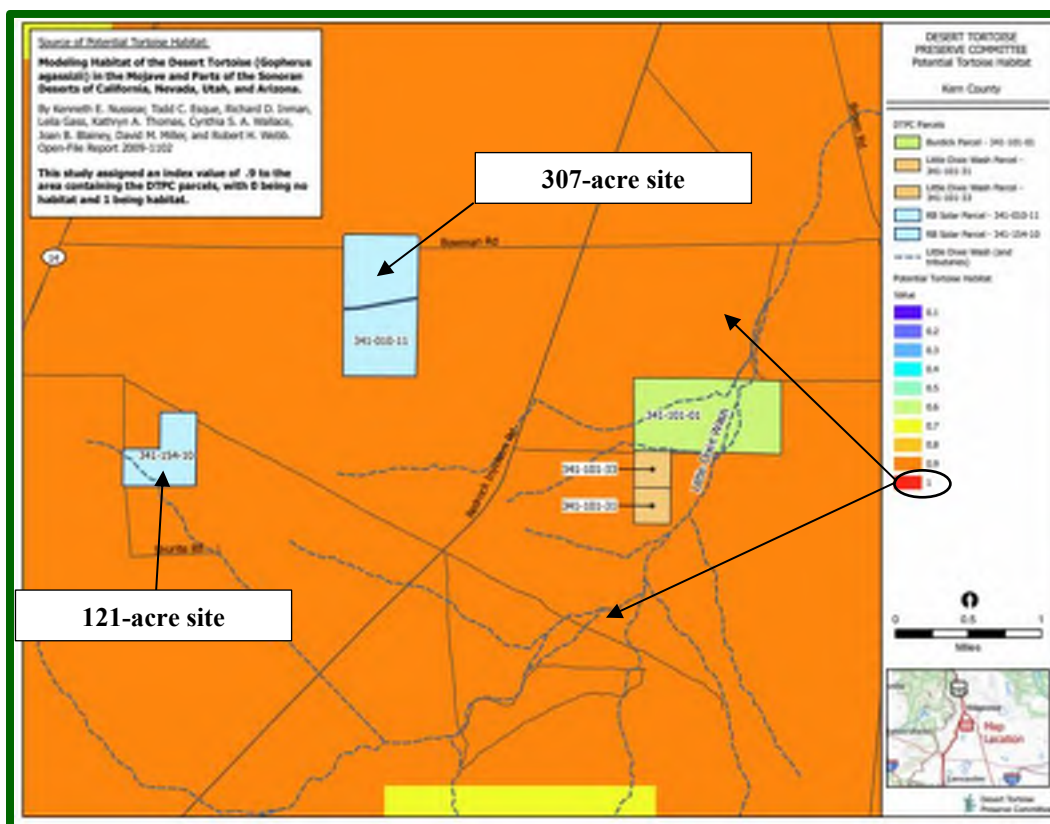
3.2. Uncommon Biological Resources.

3.2.1. *Agassiz's Desert Tortoise*. For the 121-acre site, tortoise signs found there in 2017 when protocol-level surveys were performed (CMBC 2017) included one burrow with many scats, one older scat, and two carcass pieces. The older scat of an adult tortoise was found during the 2025 recon survey of the site (see Figure 2b). For the 307-acre site, which to our knowledge has not previously been surveyed, the carcass of a juvenile tortoise that died more than four years ago was found during the recon survey (see Figure 2a). CMBC suspects that a few more pieces of tortoise sign may occur on the sites and be found by protocol-level surveys, but neither of the sites is expected to have much tortoise sign. It is pertinent that no evidence of living tortoises was found on the developed portions of the solar facility either; only the carcass of an adult tortoise was found (CMBC 2015a). These reconnaissance surveys were conducted in July 2025, at a time when desert tortoises would not typically be encountered aboveground, but the timing would not have affected the detectability of tortoise scats, burrows, and other sign.

Notably, the two sites appear suitable for desert tortoise based on a number of significant characteristics including:

- The suitability of vegetative communities that characterize desert tortoise habitats including creosote bush (*Larrea tridentata*), burrobrush (*Ambrosia dumosa*), desert golden-head (*Acamptopappus sphaerocephalus*), and Cooper's golden bush (*Ericameria cooperi* var. *cooperi*);
- Appropriate elevations on both sites and suitable soils for desert tortoise burrows on the 121-acre site, which are comprised of coarse decomposed granite with boulder outcrops in places, and mostly sandy loam with decomposed granite in places on the 307-acre site;

- Presence of streambeds on both sites, which are commonly used by desert tortoises for mobility, burrows, and forage of higher nutrient plants, including a USGS-designated intermittent blueline stream through the southwest corner of the 121-acre site (see upper half of Figure 4a) and two designated streams through both the center and southeast corner of the 307-acre site (see upper half of Figure 4b);
- Significant number of potential burrow sites created by other species that desert tortoises may utilize including 43 American badger digs and 14 kit fox dens on the 307-acre site (Figure 2a) and 28 American badger digs and 2 kit fox dens on the 121-acre site (Figure 2b), which are also indicative of suitable soils for tortoises to dig burrows; and,
- Statistical modeling of the sites, which results in an index value of 0.9 with 0 being no habitat and 1.0 being habitat, per the methodology described in Nussear et. al (2009) (as per the following figure).



Encounter rates for observable human disturbances on each of the sites are included in Table 2.

	Litter	Dirt Road	2-track	Debris	OHV tracks	Rifle shells	Skeet targets
121-acre Site	708	2	0	4	4	0	0
307-acre Site	91	20	2	6	14	2	1

Descriptions for these disturbances that are applicable to both sites include “litter,” which is generally wind-blown trash, mylar balloons, and drink containers. “Debris” is heavier materials like sheet metal that would not blow onto the sites so they were deposited there. “Dirt roads” are differentiated from the “two-track” trail observed on the 121-acre site as being wide, graded roads that have moderate to heavy vehicle traffic. Off-highway vehicle (OHV) tracks were either single-pass truck or motorcycle tracks. “Rifle shells” are nonmilitary and “skeet targets” refer to clay pigeons used for skeet or trap shooting.

Of all the disturbances, litter is definitely the most prominent. Most, if not all, of the litter on the 121-acre site can be attributed to the abandoned house mapped in Figure 6b and depicted in Exhibit 7 in Appendix D, which is expected to persist unless management actions address the issue. Litter on the 307-acre site has accumulated over the years, and consists mainly of drink cans and other trash likely associated with Bowman Road and Freeman Road. These are the only two roads found on the 307-acre site, tallied as 20 since they were each crossed 10 times. They provide access for shooting and the site is far enough from urbanizing portions of Inyokern that shooting may persist, though is currently negligible. There is an inactive two-track trail on the 121-acre site that has not been recently used. OHV tracks are not common on either site. A single truck driving cross country is responsible for most of the OHV tracks observed on the 307-acre site.

Given CMBC’s experience in conducting the same disturbance analyses methods throughout the Mojave Desert over the past 36 years, it is our conclusion that none of these disturbances, which are considered negligible, compromise the suitability of the habitats for occupancy by Covered Species or will significantly detract from the conservation management of the sites.

The main disturbance, which is perhaps the most serious and not captured by these tallies, is evidence of sheep grazing, which is very heavy in places but none of it appears to be recent, and certainly not from this year. CMBC (2017) made the following observations eight years ago: “There are both old and recent sheep scats, indicating persisting unauthorized grazing on the site. There were several locations of accumulated sheep scats indicating either bedding areas or concentrated use areas, but most of the site has relatively light concentrations of scat indicating light to moderate sheep grazing.” Except for the absence of fresh scats, this description fits conditions observed in 2025 as well.

3.2.2. Other Special Status Species. U.S. Fish and Wildlife Service (2008), California Department of Fish and Wildlife [CDFW 2025a for California Natural Diversity Data Base; 2025b for Special Plant Species list; 2025c for Special Animal Species list; and California Native Plant Society (CNPS 2025)] maintain lists of animals and/or plants considered rare, threatened, or endangered, which are herein collectively referred to as “special status species.” Section 1.2 herein reports the known occurrences of MGS on the two properties and from the surrounding region (Figure 5).

As depicted in Figures 2a (307-acre site) and 2b (121-acre site), other special status species that were detected during the 2025 surveys on both sites include burrowing owl, American badger, and desert kit fox. Burrowing owl signs were also detected on the 121-acre site in CMBC’s 2017 survey and during CMBC’s 2022 camera study. In 2017, CMBC also observed loggerhead shrike, LeConte’s thrasher, and 12 creosote rings larger than 10 feet in diameter on the 121-acre site. Five larger creosote rings, which are not mapped in Figure 2a, were observed on the 307-acre site in 2025.

3.3. Other Protected Biological Resources.

3.3.1. *Stream Courses.* Stream courses provide important resources to animals and plants. In dry years, and particularly during prolonged drought, annual plants may only germinate in the vicinity of washes where the water table is relatively near the surface. Perennial shrubs adjacent to washes are often the only plants that produce flowers and fruit, which in turn are important to insects and the avian predators that feed on them. Shrubs also tend to be somewhat taller and denser alongside washes, which provides cover for medium and larger sized animals that may use them as travel corridors. Biodiversity is generally enhanced by washes, and there are often both annual and perennial plants that are either restricted to or mostly associated with wash margins. There are both anecdotal accounts and published literature on washes being important to tortoises, which use them as travel corridors and access to nearby annual forage. Although they do not support riparian habitat, *per se*, the three USGS-designated blueline streams on the two sites do provide additional resources for Covered Species and support higher plant diversity than if they were not present.

3.3.2. *Protected Plant Species.* At the State level, the 1998 Food and Agricultural Code, Division 23: California Desert Native Plants Act, Chapter 3: Regulated Native Plants, Section 80073 states: The following native plants, or any parts thereof, may not be harvested except under a permit issued by the commissioner or the sheriff of the county in which the native plants are growing (those that occur onsite are highlighted in red in Appendix A):

- (a) All species of the family Agavaceae (century plants, nolas, yuccas).
- (b) All species of the family Cactaceae (cacti), except for the plants listed in subdivisions (b) and (c) of Section 80072 (i.e., saguaro and barrel cacti), which may be harvested under a permit obtained pursuant to that section.
- (c) All species of the family Fouquieriaceae (ocotillo, candlewood).
- (d) All species of the genus *Prosopis* (mesquites).
- (e) All species of the genus *Cercidium* (palo verdes).
- (f) *Senegalia (Acacia) greggii* (catclaw acacia).
- (g) *Atriplex hymenelytra* (desert holly).
- (h) *Dalea (Psoralea) spinosa* (smoke tree).
- (i) *Olneya tesota* (desert ironwood), including both dead and live desert ironwood.

Silver cholla and beavertail cactus are the two species given in the above list that occur on one or both properties. In the Desert Renewable Energy Conservation Plan (DRECP, BLM 2016), which pertains to public lands managed by the Bureau of Land Management (BLM), and in San Bernardino County, creosote rings larger than 10 feet in diameter are considered a special-status resource worthy of protection. Although Kern County does not have a similar ordinance, CMBC still considers them to be a noteworthy resource.

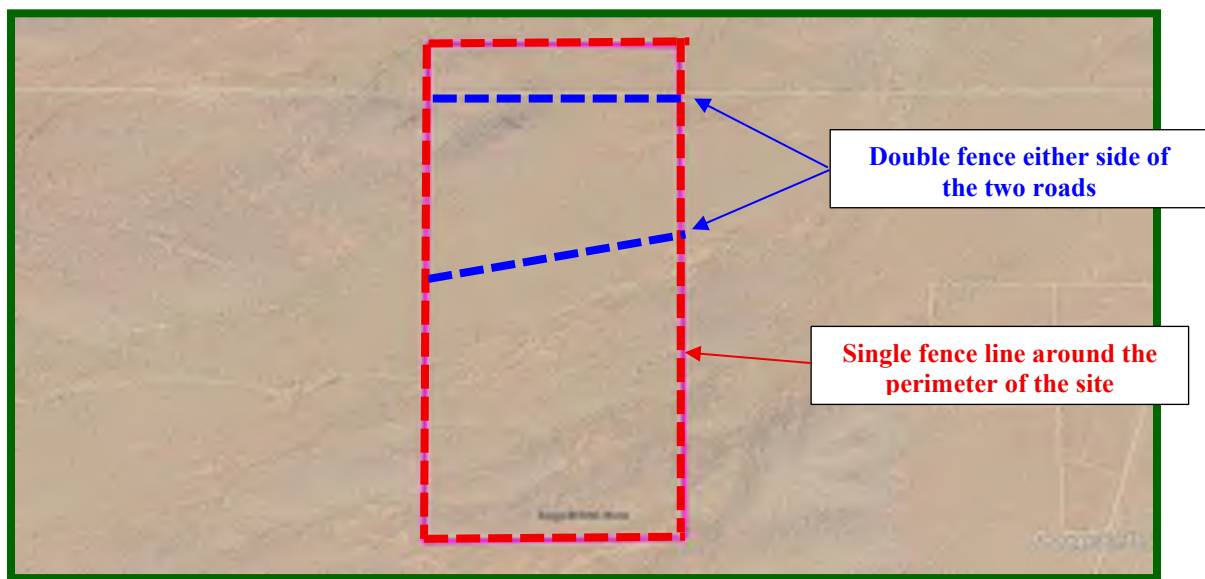
4.0. Conclusions and Recommendations

4.1. Impacts to Agassiz's Desert Tortoise and Proposed Protection. The main threat to desert tortoises and other special status plants and animals on both sites is unauthorized sheep grazing. According to Data Basin², the two sites are surrounded by the BLM's Cantil Sheep Allotment where sheep grazing is authorized, but there are no provisions or BLM enforcement to prevent sheep from grazing illegally on unfenced private lands.

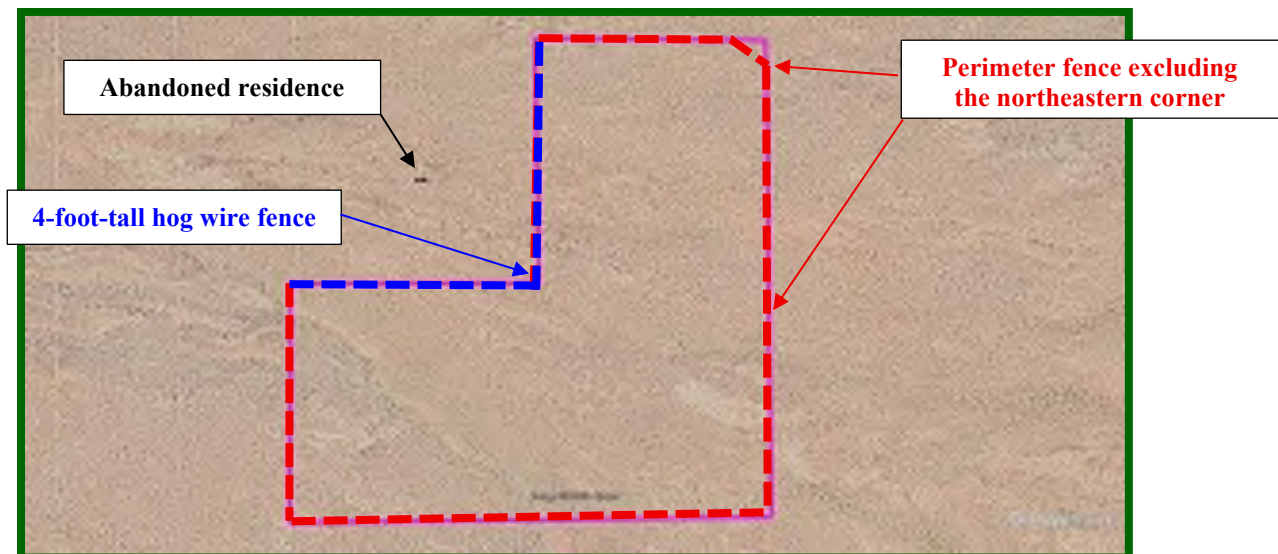
² <https://databasin.org/maps/new/#datasets=429164d821ec4fbc97db1693e867a91e>

Given the persisting vehicular use on Bowman Road, and Freeman Road to a lesser extent, CMBC recommends that the perimeter of the 307-acre site be fenced as depicted below. In the first figure, the red lines represent a single fence line around the perimeter of the site and the blue lines signify a double fence line running along the north and south shoulders of Bowman and Freeman roads. Alternatively, a single fence line could be placed along the southern shoulder of Bowman Road (coinciding with the upper blue line in the top figure), so that no fences would be installed north of this road. This would mean that a small portion of the site would be unfenced and subject to sheep grazing and OHV impacts, but the cost savings may warrant the approach. CMBC recommends three-strand, smooth-wire fence materials be used.

The 121-acre site is somewhat more straight forward due to the relative lack of dirt roads. CMBC recommends a fence line be placed around the perimeter, excluding the small triangular area at the northeast corner, which is located north of an unnamed road.



Proposed fence lines for the 307-acre site.



Proposed fence lines for the 121-acre site.

The unique issue for the 121-acre site is the prevalence of wind-blown litter from the adjacent, abandoned residence. The ideal situation would be to hold the owner accountable and require them to remove the refuse, but since that is not something the Proponent, DTPC, or CDFW is likely able to enforce, CMBC recommends that perimeter fence lines be augmented with four-foot tall 1 x 2-inch hog wire mesh fences that are attached to the perimeter fences, as depicted on the previous page.

Since 2015, CMBC has been working with several proponents to manage land banks that are associated with mitigation for project impacts for take of desert tortoises and MGS (CMBC 2024, Deto, Inc. 2024). For those banks, there are management plans (CDFW 2016, Deto, Inc. 2020) that require rotational visits to the land to implement protective measures in an adaptive management manner. Two protective measures that should be implemented for these two sites are removal of newer litter (i.e., trash that is older than about 50 years is protected by “cultural regulations”) and removal of invasive weed species. Fortunately, as of 2025 there are no invasive mustard species such as Saharan mustard (*Brassica tournefortii*), tumble mustard (*Sisymbrium altissimum*), or London rocket (*Sisymbrium irio*) on either site.

Depending on the management plan developed by DTPC, these sites may be surveyed at regular intervals for desert tortoises and other special status plant and animal resources using pedestrian surveys, during which litter would be removed and invasive plants would be monitored and removed. Similar to previous CDFW-approved management plans, DTPC may consider performing motion camera studies at specified intervals to track the prevalence of MGS on the two sites. These approaches and their results are documented in annual reports (CMBC 2024, Deto Inc. 2024) and management plans (CDFW 2016, Deto, Inc. 2020) provided in [hyperlinks](#) in the Literature Cited section of this report. Alternatively, DTPC may consider follow-up reconnaissance surveys for desert tortoise and camera trapping for MGS in conjunction with general biological and plant assessments during the third year of a three-year interim management period. With prior consent from CDFW, the sites may be good candidates for augmentation by placing displaced tortoises and/or MGS from development sites onto the HM Lands one they have been fenced.

4.2. Impacts to Other Biological Resources and Proposed Protection.

4.2.1 *Other Special Status Species.* Based on the field surveys and habitat assessments performed to date, CMBC concludes that each of the following special status species observed or detected on the sites would benefit from fencing and the other recommended management prescriptions given above: Mohave ground squirrel, western burrowing owl, American badger, kit fox, loggerhead shrike, LeConte’s thrasher, larger creosote rings, and any other special status plant and animals that may occur but have not yet been detected.

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Appendix A. Plant Species Detected

The following plant species were identified one or both sites during the focused floral inventories described in this report, where “121” in the left-hand column signifies occurrence on the 121-acre site and “307” signifies occurrence the 307-acre site. Although the 121-acre site was not surveyed at a more favorable time in 2017 (i.e., December) than the 2025 surveys (i.e., July), the following list includes all plant species observed in both 2017 and 2025 for that site. **Protected plant species are highlighted in red and signified by “(PPS)” following the common names.**

ANGIOSPERMAE: DICOTYLEDONES

DICOT FLOWERING PLANTS

Asteraceae

121, 307 *Acamptopappus sphaerocephalus*
121, 307 *Ambrosia dumosa*
121, 307 *Ambrosia salsola*
121, 307 *Ericameria cooperi* var. *cooperi*
121 *Stephanomeria exigua*
307 *Stephanomeria pauciflora*

Sunflower family

Desert goldenhead
Burrobush
Cheesebush
Cooper's goldenbush
Milk aster
Desert milk aster

Boraginaceae

121, 307 *Amsinckia tessellata*
307 *Cryptantha* c.f. *micrantha*

Borage family

Fiddleneck
Mountain red root

Brassicaceae

121 *Caulanthus lasiophyllus*
121 *Lepidium lasiocarpum*

Mustard family

California mustard
Sand peppergrass

Cactaceae

121, 307 *Cylindropuntia echinocarpa*
307 *Opuntia basilaris*

Cactus family

Silver cholla (PPS)
Beavertail cactus (PPS)

Euphorbiaceae

121, 307 *Eremocarpus setigerus*

Spurge family

Doveweed

Fabaceae

121 *Lupinus* c.f. *arizonicus*

Pea family

Arizona lupine

Geraneaceae

121, 307 **Erodium cicutarium*

Geranium family

Red-stemmed filaree

Hydrophyllaceae

121 *Phacelia crenulata*
121 *Phacelia fremontii*
121 *Phacelia tanacetifolia*

Water-leaf family

Purple phacelia
Yellow-throats
Phacelia

Lennoaceae

307 *Pholisma arenarium*

Sand food family

Sand food

Loasaceae

121 *Mentzelia albicaulis*

Stick-leaf family

Little blazing star

Nyctaginaceae121 *Mirabilis (bigelovii) laevis***Onagraceae**121 *Chylismia (Camissonia) claviformis***Polemoniaceae**121 *Eriastrum c.f. sapphirinum*121 *Gilia* sp.121, 307 *Loeseliastrum matthewsii*121 *Linanthus dichotomus***Polygonaceae**121 *Centrostegia thurberi*121 *Chorizanthe brevicornu*121 307 *Eriogonum gracile*121 *Eriogonum inflatum*121 *Eriogonum maculatum*121, 307 *Eriogonum nidularium***Ranunculaceae**121 *Delphinium parishii***Solanaceae**121, 307 *Lycium andersonii*121, 307 *Lycium cooperi***Zygophyllaceae**121, 307 *Larrea tridentata***ANGIOSPERMAE: MONOCOTYLEDONES****Amaryllidaceae**121 *Dichelostemma capitatum***Poaceae**121, 307 **Bromus madritensis* ssp. *rubens*121, 307 **Bromus tectorum*121, 307 **Schismus* sp.121 *Stipa (Achnatherum) hymenoides*121 *Stipa (Achnatherum) speciosa***Four o'clock family**

Desert wishbone plant

Evening-primrose family

Brown-eyed primrose

Phlox family

Woolly star

Gilia

Sunbonnets

Evening snow

Buckwheat family

Thurber's spineflower

Brittle spineflower

Buckwheat

Desert trumpet

Spotted buckwheat

Whiskbroom

Crowfoot larkspur

Larkspur

Nightshade family

Anderson's box-thorn

Peach thorn

Caltrop family

Creosote bush

MONOCOT FLOWERING PLANTS**Amaryllis family**

Blue dicks

Grass family

Red brome

Cheat grass

Split-grass

Indian ricegrass

Desert needlegrass

* - indicates a non-native (introduced) species.

c.f. - compares favorably to a given species when the actual species is unknown.

Some species may not have been detected because of the seasonal nature of their occurrence. Common names are taken from Beauchamp (1986), Hickman (1993), Jaeger (1969), and Munz (1974).

Appendix B. Animal Species Detected

The following animal species were detected during the general biological inventories described in this report, where the 121-acre and 307-acre sites are signified in the left-hand margin and results from 2017 are included for the 121-acre site. **Special status animal species are highlighted in red and signified by “(SSA)” following the common names.**

REPTILIA

Testudinidae

121, 307 *Gopherus agassizii*

Iguanidae

121 *Callisaurus draconoides*

121, 307 *Uta stansburiana*

121, 307 *Gambelia wislizenii*

121, 307 *Phrynosoma platyrhinos*

Teiidae

121, 307 *Cnemidophorus tigris*

Colubridae

307 *Masticophis flagellum piceus*

Viperidae

307 *Crotalus cerastes*

AVES

Falconidae

121 *Falco sparverius*

Strigidae

121, 307 *Athene cunicularia*

Trochilidae

307 *Calypte costae*

Alaudidae

121, 307 *Eremophila alpestris*

Corvidae

121, 307 *Corvus corax*

Mimidae

121 *Toxostoma lecontei*

REPTILES

Land tortoises

Agassiz's desert tortoise (SSA)

Iguanids

Zebra-tailed lizard

Common side-blotched lizard

Long-nosed leopard lizard

Desert horned lizard

Whiptails

Western whiptail

Colubrids

Red racer

Vipers

Sidewinder

BIRDS

Falcons

American kestrel

Typical owls

Burrowing owl (SSA)

Hummingbirds

Costa's hummingbird

Larks

Horned lark

Crows and jays

Common raven

Mockingbirds and thrashers

LeConte's thrasher (SSA)

Laniidae121 *Lanius ludovicianus***Emberizidae**121 *Amphispiza belli*121 *Sturnella neglecta***Fringillidae**121 *Carpodacus mexicanus***MAMMALIA****Leporidae**121, 307 *Lepus californicus***Sciuridae**121, 307 *Xerospermophilus mohavensis*121, 307 *Ammospermophilus leucurus***Geomyidae**121, 307 *Thomomys bottae***Heteromyidae**121, 307 *Dipodomys* sp.**Canidae**121, 307 *Canis latrans*121, 307 *Vulpes macrotis***Mustelidae**121, 307 *Taxidea taxus*121 *Mephitis***Felidae**121, 307 *Lynx rufus***Shrikes**

Loggerhead shrike (SSA)

Sparrows, warblers, tanagers

Sage sparrow

Western meadowlark

Finches

House finch

MAMMALS**Hares and rabbits**

Black-tailed hare

Squirrels

*Mohave ground squirrel (SSA)

Antelope ground squirrel

Pocket gophers

Botta pocket gopher

Pocket mice

Kangaroo rat

Foxes, wolves and coyotes

Coyote

Kit fox (SSA)

Weasels and skunks

American badger (SSA)

Striped skunk (camera image in 2022)

Cats

Bobcat

Nomenclature follows Stebbins, *A Field Guide to Western Reptiles and Amphibians* (2003), third edition; Sibley, National Audubon Society, the Sibley Guide to Birds (2000), first edition; and Ingles, *Mammals of the Pacific States* (1965), second edition.

*MGS were detected on the 121-acre site in 2022 and an adult post-lactating female was released onto the 307-acre site in 2023.

Appendix C. Field Data Sheets Completed on July 29 and 30, 2025

The USFWS recommends that consultants include copies of field data sheets from which the results and conclusions given in their reports are derived. As such, copies of the data sheets completed by Ed LaRue on July 29 and 30, 2025 follow.

Version: October 8, 2018

760.969.0012

Date of survey: 29-7-2025 Survey biologist(s): Ed LaRue, Sarah Tied, Seth Cohen
(date, month, year) (name, email, and phone number)

Site description: Bob Acres, South of Inverness, CA, Kern County
(project name and site, general location)

County: Kern Quad: _____ Location: N 3 422 581 394 0000
(state, county, and site, general location) (UTM coordinates, listing state FIPS, zone letter)

Circle one: 320m transect at Sanity Area size to be surveyed: 320m Transect # 30 Transect length: 1610m
(100m, 200m, 300m, 400m, 500m, 600m, 700m, 800m, 900m, 1000m, 1100m, 1200m, 1300m, 1400m, 1500m, 1600m, 1700m, 1800m, 1900m, 2000m)

GPS Start point: N 3 422 381 394 0000 Start time: 07:15 am
(listing, including, elevation if relevant) (listing, including, elevation if relevant)

GPS End point: N 3 421 566 393 9220 End time: 16:45 am
(listing, including, elevation if relevant) (listing, including, elevation if relevant)

Start Temp: 21.1°C 70°F End Temp: 40.5°C 105°F

Live Tortoises

Detection number	GPS location Easting Northing	Time	Tortoise location (in terms of all tortoise through points of known spacing, or not in terms)	Approx. MCL 1140 mm? (Yes, No, unknown)	Existing tag # and color, if present
1					
2					
3					
4					
5					
6					
7					
8					

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing	Type of sign (burrow, scat, carcass, etc)	Description and comments
1	421811 3939648	carcass pieces	Species, 74 years old
2			
3			
4			
5			
6			
7			
8			

22 of 22

Preparing for any action that may occur within the range of the Western desert tortoise (Diapause species)

Date of survey: 30-7-2025 Survey biologist: Ed LaRue, S. Teed, S. Cohen 760-964-0012
(date, month, year) (name, email, and phone number)
 Site description: 1120 acres, South of Inupkern, east Hwy 4, Kern County CA.
(project name and site, general location)
 County: Kern Quad: 11S 419545 3938420
(USGS quadrangle, section, and/or T14N, R10E, S14E)
 Circle one: 100% coverage Circle one Area size to be surveyed: 1120 acres Transect # 41 Transect length:
 GPS Start-point: 419130, 3938015 SW Start time: 0630 AM
(bearing, reading, elevation, & datum) (time, morning, afternoon, & season)
 GPS End-point: 11S 419130, 3938420 End time: 11:15 PM
(bearing, reading, elevation, & datum)
 Start Temp: 23.3°C 74°F End Temp: 34.4°C 94°F Survey transects completed @ 20 meter

Live Tortoises

Detection number	GPS location (Easting Northing)		Time	Tortoise location (in burrow, at or inside beneath place of burrow opening, or not in burrow)	Approx. MCL (≥180 mm?) (tick, No or uncertain)	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location (Easting Northing)		Type of sign (burrow, scat, carcass, etc)	Description and comments
1	<u>419631</u>	<u>3938059</u>	<u>1- Scat</u>	<u>Not this year, older, adult scat</u>
2				
3				
4				
5				
6				
7				
8				

- 17 mm

[illegible]

[illegible]

Appendix D. Photographic Exhibits

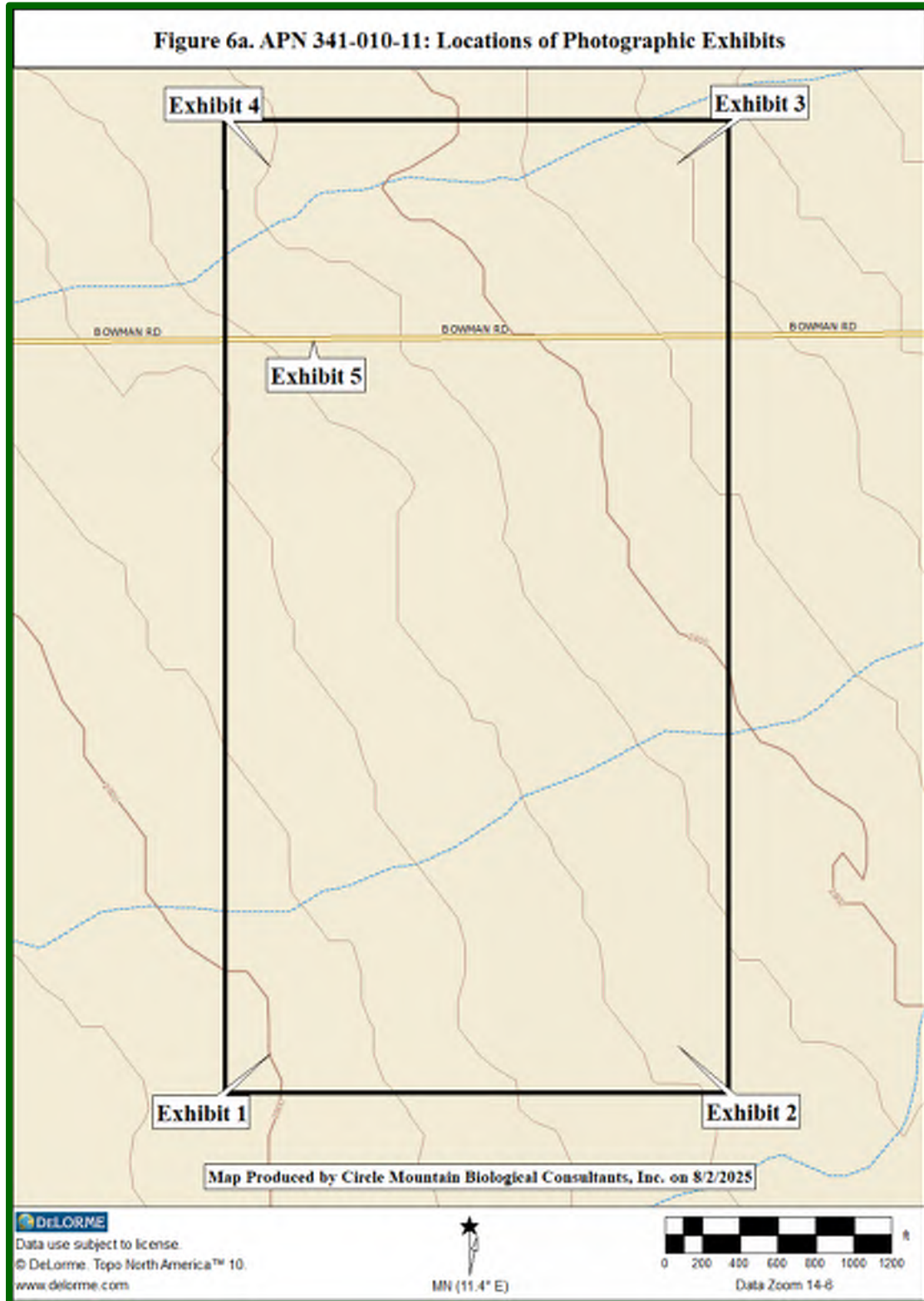


Figure 6a. Locations of the photographic exhibits for APN 341-010-11, 321± acre site.

Exhibit 1. View from the southwest corner of the site, facing northeast (see Figure 6a for locations and directions of photographs).



Exhibit 2. View from the southeast corner of the site, facing northeast.



Exhibit 3. View from the northeast corner of the site, facing southwest.



Exhibit 4. View from the northwest corner of the site, facing southeast.



Exhibit 5. Recent dumpsite along Bowman Road (approximate location in Figure 6a).



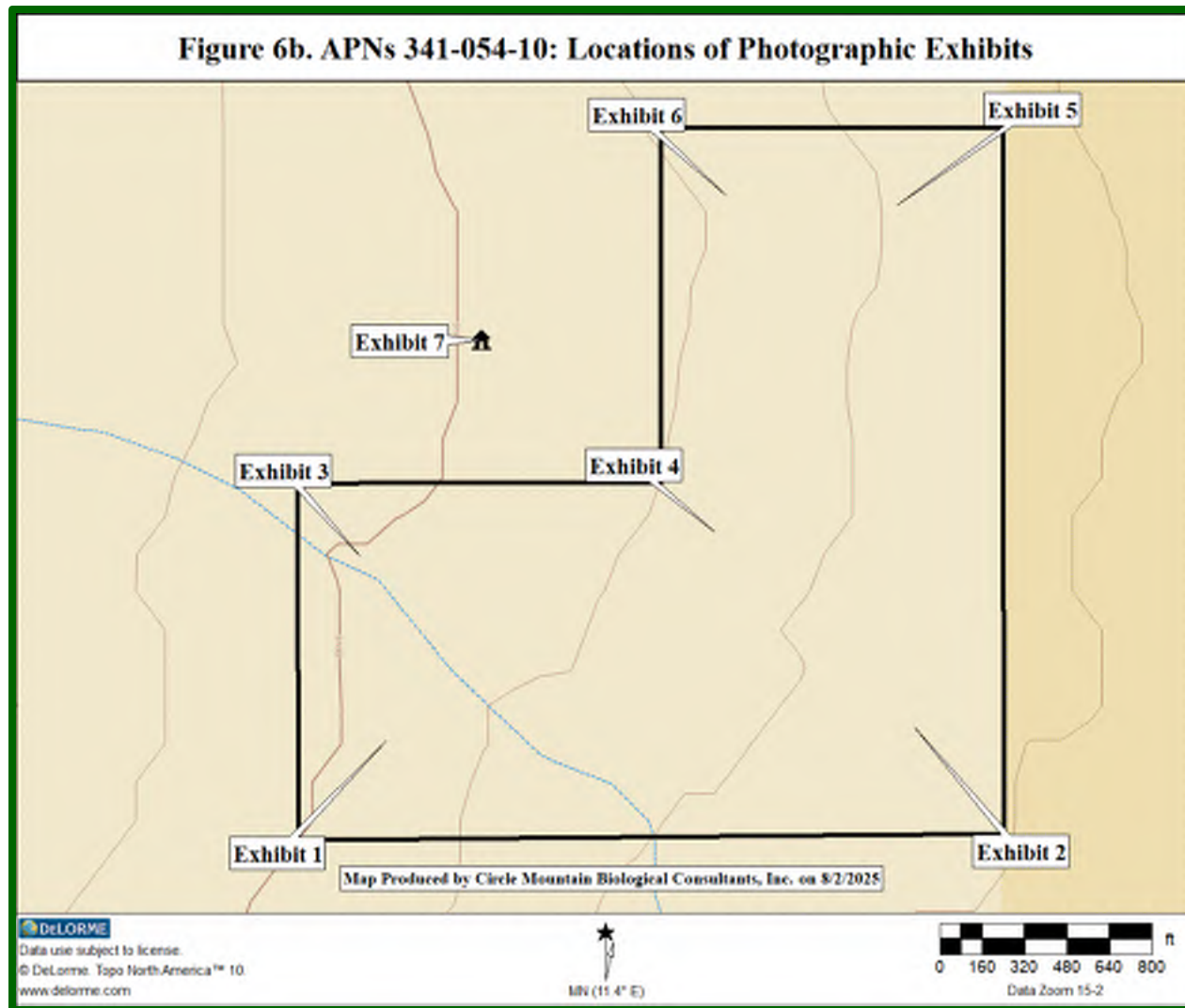


Figure 6b. Locations of the photographic exhibits for APN 341-054-10, 121± acre site.

Exhibit 1. View from the southwest corner of the site, facing northeast (see Figure 6b for locations and directions of photographs).



Exhibit 2. View from the southeast corner of the site, facing northeast.



Exhibit 3. View from the mid-northwest corner of the site, facing southeast.



Exhibit 4. View from the center of the site, facing southeast.



Exhibit 5. View from the upper-northwest corner of the site, facing southeast.



Exhibit 6. View from the northeast corner of the site, facing southwest.



Exhibits 7. Abandoned residence occurring adjacent to the site.





DEPARTMENT OF FISH AND WILDLIFE

Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



January 23, 2023

Ed LaRue
Circle Mountain Biological Consultants, Inc.
Post Office Box 3197
Wrightwood, California 92397
ed.larue@verizon.net

Subject: Biological Suitability of Habitat Management Lands Associated for RB Inyokern Solar Project (2081-2020-001-04)

Dear Mr. LaRue:

On November 9, 2022, the California Department of Fish and Wildlife (CDFW) met with Circle Mountain Biological Consultants, Inc. to discuss the proposed Habitat Management (HM) Lands for the above referenced project. Based on the information provided in the proposed mitigation document (dated March 17, 2022) it appears that the proposed properties (Table 1) are of suitable type and quality for the covered species – Desert tortoise (*Gopherus agassizii*) and Mohave ground squirrel (*Spermophilus mohavensis*).

Table 1. Proposed RB Inyokern Solar Project HM Lands		
APN	Parcel Acreage	Easement Acreage
341-010-11	307	213
341-154-10	120	120
TOTAL	427	333

This letter is intended to serve as the conditional approval of HM Lands based on their biological suitability. Further review of all required documentation (including legal descriptions, vested ownership, preliminary title report, exceptions to the preliminary title report, proforma, access easements, Phase 1 environmental study) and a site visit will be required prior to a formal approval of the HM Lands Package pursuant to Incidental Take Permit Condition of Approval 7.3.

In the proposal to which CDFW is responding, we observed that the proposed lands were referred to frequently as “banks” rather than HM Lands. Please note that the process for setting up a mitigation bank is vastly different than the process to provide HM Lands associated with a permit and that the proposed properties are only being reviewed and approved as biologically suitable as HM Lands for the RB Inyokern Solar Project ITP (2081-2020-001-04). CDFW typically does not allow the reservation of additional HM Lands to be banked for future use. If

EU Larkue

2081-2020-001-04

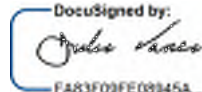
January 23, 2023

Page 2 of 2

the intent of these lands is to create a mitigation bank, please contact us as soon as possible to discuss the differences and obtain guidance relative to the establishment of a mitigation bank.

If you have questions regarding this biological suitability letter, please contact Kari Daniska, Senior Environmental Scientist (Specialist) at kari.daniska@wildlife.ca.gov.

Sincerely,

DocuSigned by:


FA83F03FE08945A
Julie A. Vance, Regional Manager
Central Region
California Department of Fish and Wildlife

From: Jun Lee
Sent: Wednesday, June 17, 2026 3:08 PM
To: Kyle
Subject: Fwd: MGS Assumed Presence

Kyle, correction to my comment in response to DR Bio 12. See below regarding very preliminary CDFW correspondence regarding RB Data

Jun Y. Lee

=====

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----- Forwarded message -----

From: Wakeman-Hill, Alya@Wildlife <Alya.Wakeman-Hill@wildlife.ca.gov>
Date: Wed, Sep 3, 2025 at 10:31 AM
Subject: RE: MGS Assumed Presence
To: Jun Lee <junylee@gmail.com>

Hi Jun,

That sounds good. We're looking forward to reviewing the maps.

Please let me know if you have any questions.

Thank you,

Alya Wakeman-Hill (she/her)

Senior Environmental Scientist (Specialist)

California Department of Fish and Wildlife

Region 4 / Central / Habitat Conservation

1234 E. Shaw Ave, Fresno, CA 93710

(559) 317-7335 (c)

From: Jun Lee

Sent: Wednesday, September 3, 2025 10:24 AM

To: Wakeman-Hill, Alya@Wildlife <Alya.Wakeman-Hill@Wildlife.ca.gov>

Subject: Re: MGS Assumed Presence

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Understood. I may stand corrected the area apparently is not where I thought. I ordered maps and will provide

Jun Y. Lee

=====

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On Wed, Sep 3, 2025 at 7:31 AM Wakeman-Hill, Alya@Wildlife <Alya.Wakeman-Hill@wildlife.ca.gov> wrote:

Sorry, Jun. Slight amendment below.

=====

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On Tue, Sep 2, 2025 at 4:54 PM Wakeman-Hill, Alya@Wildlife <Alya.Wakeman-Hill@wildlife.ca.gov> wrote:

Hi Jun,

Thank you for letting us know that this Project will be proposed. Short answer: It would probably be higher than 1:1 without additional information. Do you have a KMZ or other map?

We don't have a set ratio for mitigation. It depends on the amount of details we know about the Project Area. More details showing that the species is **not** likely to occur would allow for a smaller mitigation ratio. I'm guessing at the location, but, because the area south of the airport looks undeveloped, we are likely to require a more conservative ratio higher than 1:1. Also, this may be near a core area per Phil Leitner's 2021 paper on MGS status from 2013-2020.

Please let us know if you have any questions. I cc'd Carrie and Craig (CESA supervisor) since this will be for a data center.

Thanks,

Alya Wakeman-Hill
Senior Environmental Scientist (Specialist)
California Department of Fish and Wildlife
Region 4 / Central / Habitat Conservation
[1234 E. Shaw Ave, Fresno, CA 93710](https://www.cdffw.ca.gov/locations/central/)
(559) 317-7335

From: Jun Lee <junylee@gmail.com>
Sent: Tuesday, September 2, 2025 3:44 PM
To: Wakeman-Hill, Alya@Wildlife <Alya.Wakeman-Hill@Wildlife.ca.gov>
Subject: MGS Assumed Presence

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Alya, I'm working on a data center project south of the Inyokern Airport in Kern County zoned industrial. Property is 50 acres and the developer (associated with RB Solar) wants to assume presence for ITP purposes and use the 90 +/- acres in Surplus property for mitigation. In this case, does CDFW assign a 1:1 mitigation ratio? I'm assuming that if the developer assumes presence camera trapping on the development site could be avoided?

Jun Y. Lee

=====

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