APPENDIX B: BIOLOGICAL RESOURCES TECHNICAL REPORT

Biological Resources Technical Report

Version: Final

Pacific Gas & Electric Company

S-238 Hinkley Compressor Station Electrical Upgrades Project
San Bernardino County, California
February 2025

Biological Resources Technical Report

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Jacobs Engineering Group Inc.

4 Embarcadero Center
Suite 3800
San Francisco, CA 94111
United States

T +1.415.356.2040
F +1.415.356.2055
www.jacobs.com

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Acronyms and Abbreviations

ACEC	Area of Critical Environmental Concern
BLM	Bureau of Land Management
BSA	biological survey area
BUOW	burrowing owl
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CMBC	Circle Mountain Biological Consultants
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
DETO	desert tortoise
EFH	essential fish habitat
ESA	Endangered Species Act
HCP	habitat conservation plan
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
MCC	motor control center
MGS	Mohave ground squirrel
NRCS	Natural Resources Conservation Service
PG&E	Pacific Gas and Electric Company
RTGS	round-tailed ground squirrel
SSC	species of special concern
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Service

1. Introduction

Pacific Gas and Electric Company's (PG&E's) S-238 Hinkley Compressor Station Electrical Upgrades Project (project) will upgrade and replace the station's electrical distribution equipment that has reached the end of its useful life or requires change for safety, reliability, or maintainability. All construction will occur within the boundaries of the fenced station. The project is scheduled to mobilize in approximately April 2025 and be completed in approximately February 2027. Ground disturbing activities are expected to occur over approximately 60 work days in May 2025 to July 2025.

The station's existing electrical power switchgear and motor control centers (MCCs, or load center) will be replaced or modified and connecting conduit and cable will be installed between the switchgear and MCC locations (Figure 1a). Most of the work will not require ground disturbance; equipment modification will occur within buildings, on existing infrastructure, or cable will be replaced in pre-existing conduit. Other equipment replacement, modification or installation will not be ground disturbing. A portion of the station's existing staging area will be used for project staging. Temporary generators on trailers will power the station during construction when electric equipment connecting with the permanent generators is deenergized during specific construction activities. After the upgrade is complete, the temporary generator equipment will be removed.

Ground-disturbing work will be the excavations for replacement of 4 outdoor MCC foundations and one load center removal that will be replaced with a new MCC. Four trenches will be made in the work area to install approximately 200 feet of new conduit (Figure 1b). The footprint for each of the MCCs will average approximately 150 square feet. The Auxiliary Load Center No. 1 will be removed or retired in place as part of the project. Approximately 0.055 acre of ground disturbance will occur from construction of the proposed project in the highly disturbed areas within the station (Table 1).

Table 1. Estimated Ground Disturbance

Project Component	Ground Disturbing Construction Activity	Approximate Disturbance
MCC-2	Excavate existing equipment foundation and replace.	319 ft^2 (0.0073 acre)
MCC-3	Excavate existing equipment foundation and replace.	319 ft^2 (0.0073 acre)
MCC-6	Excavate existing equipment foundation and replace.	319 ft^2 (0.0073 acre)
MCC-9	Excavate existing equipment foundation and replace.	319 ft^2 (0.0073 acre)
Auxiliary Load Center No.1	Remove existing foundation, or retire in place.	319 ft^2 (0.0073 acre)
MCC-5 Conduit	Trench for conduit installation.	48 ft^2 (0.0011 acre)
MCC-6 Conduit	Trench for conduit installation.	252 ft^2 (0.0058 acre)
MCC-7 and MCC-8 Conduit	Trench for conduit installation.	168 ft^2 (0.0039 acre)
MCC-9 Conduit	Trench for conduit installation.	332 ft^2 (0.0076 acre)
	Total	2,395 ft^2 (0.055 acre)

ft^2 = square foot (feet)

The purpose of this Biological Resources Technical Report is to provide the results of a background review and reconnaissance-level and species-specific surveys of the project area. This report includes a review of relevant databases and literature, presents the results of reconnaissance-level and protocol-level field surveys, and analyzes potential project impacts on biological resources at this project location.

2. Project Location

Hinkley Compressor Station is a staffed facility located at 35863 Fairview Road in the community of Hinkley, California, in San Bernardino County. The main station entrance on Fairview Road is approximately 1 mile south of State Route 58 (refer to Figure 2). The station is approximately 1 mile west of the city limits of the City of Barstow. The fenced station occupies approximately 64 acres on an approximately 160-acre parcel adjacent to Community Boulevard at Fairview Road.

3. Methods

3.1 Survey Areas

Prior to conducting field surveys, a biological survey area (BSA) was identified. The BSA is defined as the area where biological surveys were conducted and includes the project area, the entire station, and adjacent areas to the station where vegetation exists. The project area is defined as the area that may be directly affected by the proposed project, including temporary and permanent impacts, and includes the work area, the staging area, and the internal paved station access road. The entire station and the area outside of the station are included in the BSA to determine if any special-status species occur there and for potential indirect effects. The BSA covers the approximately 64-acre station and includes a 600-foot-wide buffer[1] around the project area (Figure 3). The work area represents the maximum extent of construction activities. Ground-disturbing activities are only anticipated to occur at locations within the work area as identified on Figure 3 and detailed in Table 1. The 1,000-foot area beyond the project work area and staging area was analyzed for land cover types and vegetation communities as shown in Section 4.1.

3.2 Preliminary Agency Consultation

Prior to conducting surveys for special-status species, PG&E consulted with the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) to provide the proposed methodology for conducting protocol surveys for the desert tortoise (DETO) (*Gopherus agassizii*) (CDFW and USFWS), Mohave ground squirrel (MGS) (*Xerospermophilus mohavensis*) (CDFW), and burrowing owl (BUOW) (*Athene cunicularia*) (CDFW). Copies of these communications, described in the following list, are included in Appendix A.

- A description of the project was sent to Brandy Woods/CDFW from Virginia Strohl/PG&E via email on March 22, 2024. On March 28, 2024, Brandy Woods facilitated a Teams call to discuss PG&E's proposed protocol-level surveys for DETO, MGS and BUOW for the project. Participants included Brandy Woods/CDFW, Virginia Strohl/PG&E, Julia Karo/CDFW, Marlee Poff/CDFW, Sharon Dougherty/Circle Mountain Biological, and Marjorie Eisert/Jacobs. The results of the call confirmed that DETO surveys will be conducted following the USFWS 2019 protocol, including zone-of-influence surveys. MGS trapping was modified because the project area is located within an established compression station that has been active for many decades and little suitable habitat is present for MGS. Trapping within the station was confined to an area less than 2 acres along the western edge of the facility with potentially suitable habitat for MGS. Most of the trapping effort would occur in vegetated areas to the west, south, northwest, northeast, and east of the facility. Burrowing owl surveys would consist of a focused habitat evaluation, surveys at 100-foot intervals throughout the site and within a 500-foot buffer area, along with four breeding season surveys.
- Virginia Strohl/PG&E provided the proposed survey methodology that was discussed during the March 28, 2024, Teams call for protocol surveys for the DETO, MGS, and BUOW to Julia Karo and Brandy Wood at CDFW via email dated April 10, 2024. Julia Karo/CDFW replied via email on April 10, 2024, approving the survey methodology for DETO, MGS, and BUOW.
- On April 10, 2024, Virginia Strohl/PG&E provided the proposed survey methodology for protocol surveys for DETO via email to Brooke Su at USFWS. Brooke Su/USFWS replied via email on April 11, 2024, approving the survey methodology for DETO.

[1] The 600-foot buffer around the project area was used for the desert tortoise, burrowing owl, and Mohave ground squirrel surveys. Botanical surveys used a 100-foot buffer around the project area because plants are sessile.

3.3 Literature and Database Review

Literature and database reviews were conducted to investigate the potential presence of sensitive biological resources, special-status species, and critical habitat within the study area and to inform field surveys. The resources considered within this report include the following:

- Sensitive Vegetation Communities and Habitats
  - Sensitive vegetation communities/habitats identified in local or regional plans, policies, or regulations, or designated by CDFW or USFWS
  - Areas that provide habitat for locally unique biotic species/communities (for example, desert washes, dunes, sand flats)
  - Habitat that contains or supports rare, endangered, or threatened wildlife or plant species as defined by CDFW and USFWS
  - Habitat that supports CDFW Species of Special Concern (SSC)
  - Areas that provide habitat for rare or endangered species and that meet the definition in California Environmental Quality Act (CEQA) Guidelines Section 15380
  - Existing game and wildlife refuges and reserves
  - Wetlands and streams
- Special-Status Species
  - Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA) (50 Code of Federal Regulations [CFR] Section 17.12 [listed plants], 17.11 [listed animals], and various notices in the *Federal Register* [proposed species])
  - Species that are candidates for possible future listing as threatened or endangered under the federal ESA (61 *Federal Register* Section 40, February 28, 1996)
  - Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 California Code of Regulations Section 670.5)
  - Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq.)
  - Species that meet the definitions of rare and endangered under CEQA; CEQA Guidelines Section 15380 provides that a plant or animal species may be treated as "rare or endangered" even if not on one of the official lists
  - Plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (California Rare Plant Rank 1A, 1B, 2A, and 2B), as well as California Rare Plant Rank 3 and 4 plant species
  - Species designated by CDFW as Fully Protected or as SSC
  - Species protected under the federal Bald and Golden Eagle Protection Act
  - Birds of Conservation Concern or Watch List species
  - Bats considered by the Western Bat Working Group to be "high" or "medium" priority (Western Bat Working Group 2024)

- Migratory Birds
  - Most birds without a status designation are protected under the Migratory Bird Treaty Act (MBTA), which implements a series of international treaties that provides migratory bird protection; the MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds, and the act provides that it is unlawful, except as permitted by regulations, "to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird" (16 United States Code Section 703).

To determine the potential occurrence of special-status species within the study area, a search was conducted using the California Natural Diversity Database (CNDDB) for documented occurrences within 5 miles of the project area (CDFW 2024a). All occurrences identified from the search are included in Table 2 with locations identified on Figure 4.

In addition, the following databases and other sources were used to compile information on the potential biological resources present within the BSA:

- The USFWS Information on Planning and Consultation (IPaC) (USFWS 2024a) species list tool was queried for the study area identifying potentially occurring federally listed species and critical habitats.
- CNPS's Inventory of Rare and Endangered Plants of California database was searched for special-status plant species within the Hinkley U.S. Geological Survey (USGS) 7.5-minute quadrangle, which encompasses the study area (CNPS 2024).
- The National Wetlands Inventory database (USFWS 2024b) was reviewed for the presence of waters and wetlands and to identify suitable habitat for special-status amphibians.
- CDFW VegCAMP program was searched for sensitive habitats mapped in the BSA within 1,000 feet of the project area (CDFW 2024b).
- National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) West Coast Region Protected Resource App mapping tool (NOAA Fisheries 2024aN) was reviewed.
- NOAA Fisheries Essential Fish Habitat (EFH) mapper (NOAA Fisheries 2024b) was reviewed.
- Aquatic habitats within a 3-mile radius were identified using NWI maps, topographic maps, and aerial imagery (Google Earth Pro, National Agriculture Imagery Program, and ESRI World Imagery, and USGS 7.5-minute quadrangle maps of the area) to evaluate the potential for special-status amphibians and fish to occur in the study area.

The CNDDB and CNPS search for special-status species typically includes nine USGS 7.5-minute quadrangle maps for a project located within a single quadrangle: the quadrangle that covers the project footprint and the eight quadrangles that surround the project quadrangle. The nine 7.5-minute USGS quadrangle maps in the project vicinity include: Hinkley, Barstow, Barstow SE, Twelve Gauge Lake, Lockhart, Water Valley, Bird Spring, Mud Hills, Wild Crossing, and Hodge. The CNDDB search was further refined to a 5-mile buffer around the project footprint. The USFWS IPaC species list was generated for the project study area. The National Marine Fisheries Service species were generated using the NOAA Fisheries West Coast Region Protected Resource App mapping tool and NOAA Fisheries EFH mapper.

Other information sources consulted to determine which special-status species or sensitive habitats could potentially occur in the project footprint included the following:

- Natural Resources Conservation Service (NRCS) Web Soil Survey, to obtain information about soils in the BSA (NRCS 2024)
- Hinkley Groundwater Remediation Project Habitat Conservation Plan (HCP), to obtain information about covered species, covered activities, and conservation measures that are implemented during groundwater remediation activities at the site (PG&E 2017)
- Observations made during biological surveys and monitoring conducted while implementing groundwater remediation activities at the site (V. Strohl, personal communication, August 7, 2024)

- U.S. Bureau of Land Management (BLM) Areas of Critical Environmental Concern (ACEC),to determine if they are present in the project area and BSA
- Desert Renewable Energy Conservation Plan Land Use Plan Amendment, to obtain information regarding unique landscape features, rare vegetation types, and special-status species and habitats within the BSA (BLM 2016)
- Aerial photographs

Table 2. California Natural Diversity Database Occurrences within 5 Miles of the Study Area

Occ #	Presence	Date (YYYYMMDD)	Location	Description
Arroyo Toad (Anaxyrus californicus)				
130	Presumed Extant	19490416	Along Mojave River, about 4 miles southeast of Hinkley Post Office, and 6 mi west of Barstow Post Office	Digging site for American badger.
Mojave fringe-toed lizard (*Uma scoparia*)				
38	Presumed Extant	20100816	South of Mojave River, 1 mi north of Depue Airport, 1 mi west of Lenwood, 7 mi west-southwest of Barstow, San Bernardino County	Mapped to UTM coordinates.
39	Presumed Extant	20100610	Vicinity of Mojave River, 2 mi north-northwest of Depue Airport, 3 mi west-northwest of Lenwood, 9 mi west of Barstow, San Bernardino County	Mapped to UTM coordinates.
Desert Tortoise (*Gopherus agassizii*)				
1	Presumed Extant	20070412	Fremont-Stoddard; Fremont Valley south to the vicinity of Adelanto and Hwy 14 east to Calico Mountains, west Mojave Desert	Largest of 4 primary populations in Calif. In 1977, estimated densities were 20 to >250 tortoises/square mi. As of 1987, evidence suggests major declines in estimated density in most areas.
97	Presumed Extant	20070518	Within 1 mi northwest of the junction of Yellowstone Road and Hwy 58, Hinkley	2 adults observed.
98	Presumed Extant	20070518	Within 1 mi northwest of the junction of Yellowstone Road and Hwy 58, Hinkley	1 adult observed.
99	Presumed Extant	20070320	Within 1 mi west-southwest of the junction of Yellowstone Road and Hwy 58, Hinkley	1 adult observed.
100	Presumed Extant	20070320	Within 1 mi southwest of the junction of Yellowstone Road and Hwy 58, Hinkley	1 adult observed at a burrow site.
103	Presumed Extant	20070505	Within1 mi southwest of the junction of Old Hinkley Road and Frontier Road, Hinkley	2 adults observed, 1 near a burrow site.
104	Presumed Extant	20070521	Within 1 mi southeast of the intersection of Valley View Road and Alcudia Road, Hinkley	1 adult observed at a burrow site.

Occ #	Presence	Date (YYYYMMDD)	Location	Description
105	Presumed Extant	20070417	Within 1 mi northeast of the intersection of Indian Wells Road and Hwy 58, Hinkley	1 adult observed.
187	Presumed Extant	20070415	Southwest side of Mt General	1 adult observed.
Burrowing Owl (Athene cunicularia)				
888	Presumed Extant	20070315	North side of Woods Avenue, within 1 mi east of the intersection of Lenwood Road and Sun Valley Drive, Lenwood	2 adults observed at the burrow site.
1037	Presumed Extant	20070323	Southwest of Hinkley, within 1 mi southwest of the Junction of Valley View Road & Frontier Road	Description not available.
1038	Presumed Extant	20070320	Southwest of Hinkley, within1 mi west-northwest of the junction of Valley View Road & Frontier Road	1 adult seen at an old tortoise burrow and flushed from site.
1039	Presumed Extant	20070518	Within 1 mi east-northeast of Barstow-Bakersfield, Hwy 58 at Wagner Road, about 3 mi west-southwest of Hinkley PO	Burrow site with recent sign (whitewash and pellets).
1040	Presumed Extant	20070326	West of Hinkley, along Cook Road, south of Hwy 58; within 1 mi west of the junction of Valley View Road and Frontier Road	2 adults observed at burrow site.
1660	Presumed Extant	20100607	Within1 mi northwest of Green Desert Drive at Rock Springs Avenue, Barstow	1 adult and a burrow (opening due west).
1661	Presumed Extant	20100930	Within 1 mi southwest of Green Desert Drive at Rock Springs Avenue, Barstow	1 adult and a burrow.
American Badger (*Taxidea taxus*)				
419	Presumed Extant	20070509	Along Hwy 58, about Within 1 mi west of Hwy 58 at Valley View Road, about 3 mi west of Hinkley	Description not available.
Mohave Ground Squirrel (Xerospermophilus mohavensis)				
277	Presumed Extant	19900430	At junction of Lenwood Road and Community Boulevard, Hinkley Valley	Description not available.
456	Presumed Extant	19490614	East of Depue Airport, about 1 mi south-southwest of Lenwood, 5 mi east-northeast of Hodge	1 female collected.
493	Presumed Extant	20120223	Mountain View Road about 1 mi north of the Community Boulevard intersection in Hinkley	1 adult observed foraging and resting near and inside burrow.
Chaparral Sand-Verbena (*Abronia villosa* var. *aurita*)				
31	Presumed Extant	19761021	About 4 mi west-northwest of Barstow, north of Hwy 58 on Lenwood Road	Description not available.

Occ #	Presence	Date (YYYYMMDD)	Location	Description
Beaver Dam Breadroot (*Pediomelum castoreum*)				
19	Presumed Extant	19370502	6 mi west of Barstow	Description not available.
20	Presumed Extant	19220512	On Victorville Road, 3 mi southwest of Barstow	Description not available.
Mojave Monkeyflower (*Diplacus mohavensis*)				
46	Presumed Extant	19410427	About 6 mi west of Barstow	Description not available.

Hwy = Highway (State Route)
LSU = Louisiana State University Museum of Natural History
mi = mile(s)
PO = Post Office
UTM = Universal Transverse Mercator

3.4 Field Survey

A reconnaissance-level field survey was conducted on April 12, 2024, to assess habitats present within the BSA to determine suitability for special-status species and/or sensitive and regulated habitats.

Habitat variables assessed incorporated the presence of nearby habitats, including potential for breeding and non-breeding habitats for special-status amphibians and reptiles; underground refugia in the form of burrows; potential nesting and foraging habitat for avian species; and vegetation communities, including those commonly associated with special-status plants. All habitat features associated with the presence of special-status species were recorded within the BSA. During biological surveys, incidental species observations were noted and are discussed in Section 5.1.1.

Based on the results of the reconnaissance survey, protocol-level surveys for DETO, MGS, and BUOW were planned for the study area as described below by species. A rare plant survey and habitat assessment to determine the potential for bat species occurring in the project area also were identified for this project.

3.4.1 Desert Tortoise

DETO surveys were conducted according to the USFWS protocol for presence-absence surveys (USFWS 2019). On March 12 and March 13, 2024, previously approved desert tortoise Authorized Biologists Sharon Dougherty and Susan Seville from Circle Mountain Biological Consultants (CMBC) conducted a protocol-level survey for DETO of all areas with unpaved surfaces inside the station fence line (except in the area to the east occupied by buildings) (CMBC 2024a). The survey consisted of transects spaced at 10-meter (30-foot) intervals per the USFWS (2019) protocol for DETO presence-absence surveys. In addition, at the request of the CDFW, six zone-of-influence transects 100 feet apart from the project area to the east, north, west, and south were surveyed where possible (Figure 5). The area north of Community Boulevard was not considered appropriate habitat because it is agricultural, and a parcel of private property to the west was excluded because it was not possible to get the owner's permission to access. Refer to Appendix B for additional information.

3.4.2 Mohave Ground Squirrel

Because the project area is located within a station that has been active for many decades, little suitable habitat was present for MGS. The only potentially suitable area comprising less than 2 acres was located along the western edge of the project area. Given the small size of the area, the area for live trapping was limited within the station. Protocol trapping surveys were conducted between April 16, 2024, and June 7, 2024 (CMBC 2024b) for the BSA. CDFW *Mohave Ground Squirrel Survey Guidelines* (January 2003;

revised July 2010, October 2023) were followed and required that visual surveys of the project site be carried out between March 15 and April 15. Visual surveys were carried out concurrent with focused surveys for desert tortoise and habitat assessment for burrowing owl on April 12, 2024. A trapping grid including 100 Sherman live traps was designed based on the best available habitat surrounding the project area. This modification to the protocol was approved by CDFW. Ten trail cameras were placed around the trapping grid (Figure 6).

Three trapping sessions were conducted per the protocol by previously approved MGS Authorized Biologists Sharon Dougherty and Sarah Teed from CMBC and ran for 5 consecutive days during each of the three trapping periods: (1) March 15 through April 30; (2) May 1 through May 31; and (3) June 1 through July 15. The trapping sessions were conducted with at least two weeks apart between them from April 16, 2024 to April 20, 2024, May 3 to 7, 2024, and June 3 to 7, 2024. Captured MGSs were marked using a non-toxic permanent marking pen, as directed by the protocol. All measures to ensure the health and welfare of MGS provided in the survey guidelines were followed. Refer to Appendix C for additional information.

3.4.3 Rare Plants

A protocol-level floristic survey was conducted within the 83-acre botanical survey area on April 15, 2024 and April 16, 2024 (Figure 8). The survey conformed to the guidelines of the CDFW (2009), the USFWS (2011a), and the CNPS (2001) survey protocols. The survey was conducted by Balk Biological botanist Michelle Balk. Refer to Appendix D for additional information.

3.4.4 Burrowing Owl

Burrowing Owl Consortium guidelines (1993) outline survey methods to assess the presence of BUOW habitat, including a 500-foot buffer zone around the project site. Pedestrian surveys were conducted within this project buffer, spaced to provide 100 percent visual coverage of the ground surface, with transects spaced no more than 30 meters (100 feet) apart. The project site and BSA were searched for burrows as well as human-made structures, such as culverts, debris piles, or openings beneath cement or asphalt pavement, that could support BUOW. A habitat assessment for BUOW was conducted on March 12, 2024, by CMBC biologists Sharon Dougherty and Susan Seville concurrent with the DETO survey (CMBC 2024a). The transects followed for the DETO survey were narrower (10-meter or 33-foot transects) than the 30-meter (100-foot) transect lines required by the BUOW protocol (Burrowing Owl Consortium 1993) and transects within the 150-meter (500-foot) buffer coincided with the zone-of-influence transects for desert tortoise (Figure 7). BUOW transects were extended to include the 600-foot buffer zone to be concurrent with DETO survey area. No suitable burrows or habitat were identified during the habitat assessment. Although no suitable habitat was identified, CDFW recommended continuing the BUOW survey protocol with breeding season surveys, which were conducted during the BUOW breeding season.

Four survey visits were conducted approximately 3 weeks apart during the peak of the breeding season from April 15 to July 15 (May 15, 2024; June 5, 2024; June 26, 2024; and July 15, 2024) by CMBC biologists Karyn Sernka and Susan Seville. The surveys concentrated on three burrows with the most potential for supporting BUOW but which did not contain signs of active use during the habitat assessment (Figure 7). BUOW surveys were conducted either from 2 hours before to 1 hour after sunset, or 1 hour before to 2 hours after sunrise. All owl sightings and territories were mapped if identified during the survey. All breeding behavior and nest information were noted. Refer to Appendix E for additional information.

3.4.5 Bat Species

An assessment of suitability for bat roosting and maternity colonies for structures within the station was completed. On July 10, 2024, a site visit was conducted to assess the potential for bats to roost at the site

and to look for any maternity colonies that may be present. Bat biologist Kay Nicholson of Jacobs walked through all buildings at the station and examined the walls, ceilings, and internal structures for potential locations that could be used by roosting bats. All electrical cabinets, sheds, towers, and trees were examined for bats and potential roosting locations. The biologist searched for evidence (staining, guano) that bats roost in any of these locations. Refer to Appendix F for additional information.

4. Environmental Setting

4.1 Vegetation Communities and Land Cover

The project area is located within the station, occupied by numerous buildings, housing natural gas generators, offices, and associated infrastructure. The entire project area is disturbed from previous work activities associated with the station. The project area is almost completely denuded of any vegetation except for ornamental landscape plantings along the access road and within the staging area where large ornamental trees (athel [*Tamarix aphylla*], ornamental elm [*Ulmus* sp.], and ornamental pine [*Pinus* sp.]) and shrubs exist around an employee recreation area. Within the station, there is an approximately 2-acre area on the western fenceline that has native vegetation consisting of Allscale Scrub with occasional creosote bushes (*Larrea tridentata*).

Outside of the station, the BSA consists of a mixture of developed areas and degraded Creosote Brush Scrub and degraded Allscale Scrub vegetation communities. The land within the BSA is owned by PG&E and other private property owners and includes a rural residence, a gun club, PG&E office buildings and PG&E groundwater remediation facilities.

Land use in the vicinity of the BSA is limited primarily to agricultural field crops to the east and undeveloped and disturbed habitat surrounding the station. Developed areas consisted of scattered rural residential areas, farm buildings, county and private paved roadways, and private unpaved roadways within the vicinity of the study area.

Prior to field surveys, the CDFW VegCAMP database for the California Deserts and Biogeographic Information and Observation System as part of the CNDDB (CDFW 2024a; 2024b) was reviewed to determine potential habitat occurrence within the BSA. During the field survey, these data were further refined to better characterize habitat within the BSA and to evaluate suitable special-status species habitat. The project site is located within the highly developed station, with little native habitat present. Allscale Scrub habitat dominated by allscale (*Atriplex polycarpa*) is found within the study area but outside of the project area, including a 2-acre area on the western fenceline of the facility, south of the entrance, as well as in adjacent areas outside of the station. The 2-acre area in the western section of the station appears to have been a borrow pit and is low-lying compared to the rest of the site, with some seasonal flooding. Adjacent lands are a mix of Allscale Scrub and Creosote Bush Scrub vegetation communities, with more creosote bush (*Larrea tridentata*) at slightly higher elevations.

The vegetation communities and land cover types within a 1,000-foot buffer of the project area consist of developed areas, degraded Creosote Brush Scrub and degraded Allscale Scrub vegetation communities., and a small area of Desert Dune vegetation community to the southeast most then 700 feet from the project area. Refer to Figure 8.

The following subsections present a discussion of each of these land cover types within 1000 feet, with specific species information gathered during rare plant surveys within 100 feet of the station.

4.1.1 Developed Areas

Developed Areas refer to areas that have been built on or otherwise physically altered to an extent that native vegetation communities are no longer supported. This land cover type generally consists of semipermanent structures, homes, parking lots, pavement or hardscape, and sometimes landscaped areas that require maintenance and irrigation (for example, ornamental greenbelts). Developed areas on the outside of the station within the botanical survey buffer include the PG&E administrative offices, residences, and a gun club, as mentioned previously.

4.1.2 Allscale Scrub

The majority of the vegetation in the area outside of the station can be classified as Allscale Scrub. This vegetation community is common in low-lying, sandy-soil areas of the Mojave Desert, particularly the western Mojave. It is common on low-lying areas such as alluvial fans, edges of playas, and along washes. This community type is dominated by allscale (allscale comprises at least 2 percent of the absolute cover) but may contain other species of shrubs for up to 50 percent of the relative cover (Sawyer et al. 2009). Allscale Scrub within the 100-foot rare plant survey buffer around the station is dominated by allscale, with almost no other shrub species present. In openings between shrubs, annual species may be present. These annual species were uncommon but included gilias (*Gilia* spp.), buckwheat (*Eriogonum* spp.), comb seed (*Pectocarya* spp.), fiddleneck (*Amsinckia* spp.), annual bursage (*Ambrosia acanthicarpa*), and snakehead (*Atriplex coulteri*). This Allscale Scrub habitat varies from moderately high quality south and west of the station, to low quality north and northeast of the station, including the 2-acre parcel west of the project site within the station, where disturbance was more recent and weeds such as London rocket (*Sisymbrium irio*), brome grasses (*Bromus* spp.), and prickly lettuce (*Lactuca serriola*) were common.

4.1.3 Creosote Bush Scrub

Creosote Bush Scrub is also present adjacent to the station in the 100-foot survey buffer. It is most accurately keyed to the Creosote Bush-White Bursage-Allscale Scrub Association (of the Creosote Bush-White Bursage Alliance) (Sawyer et al. 2009). The Creosote Bush-White Bursage vegetation alliance must contain at least 1 percent absolute cover of creosote bush and 1 percent absolute cover of white bursage, with these two species exceeding twice the cover of other shrub species (with a few exceptions). This scrub alliance is common throughout a variety of mainly upland habitats but also may be common in minor washes and rills. Around the station project site in the 100-foot buffer, allscale also is common in this community, allowing a further classification of this community into the Creosote Bush-White Bursage-Allscale Scrub Association. Adjacent to the project site outside of the station, this scrub association is disturbed, with red-stemmed filaree (*Erodium cicutarium*) and Mediterranean schismus (*Schismus barbatus*), although native species also are present in high quantities and diversity. Common native species included evening primroses (*Eremothera/Oenothera* spp.), blue dicks (*Dichelostemma capitatum* ssp. *pauciflorus*), tick-seed (*Coreopsis* spp.), rigid spiny-herb (*Chorizanthe rigida*), and desert plantain (*Plantago ovata*).

4.1.4 Desert Dunes

Desert Dunes are located approximately 0.16 mile south of the station, north of the Mojave River where aeolian (wind-blown) sands have accumulated. Aeolian sand formations in this area range from sparsely to moderately vegetated.

Dominant plant species characteristics of this community include four-wing saltbush (*Atriplex canescens*), allscale, white bursage, California jointfir (*Ephedra californica*), mormon tea (Ephedra viridis), and desert dandelion (*Malacothrix glabrata*). However, vegetative cover within this community varies substantially from year to year, generally reflecting disturbances from major flood and wind events (California Regional Water Quality Board 2013).

Soils within the study area are variable, but generally include sands, loamy sands, and loams (NRCS 2024).

The site is relatively flat, with elevations on the subject property ranging from approximately 681 meters (2,233 feet) at the southwest corner to approximately 670 meters (2,200 feet) at the northeast corner, and the general slope is less than 2 percent.

4.2 Aquatic Resources

There are no wetlands or aquatic resources present within the project area (USFWS 2024b) except for man-made lined evaporation ponds within the station and north of the project area. There are no watercourse crossings associated with the proposed project and no watercourse crossings will be affected by construction activities. Surface waters in the project area flow approximately 1 mile south to the Mojave River.

Historic agricultural pumping resulted in a drop in groundwater levels in the Hinkley Valley. The depth to groundwater under the compressor station is approximately 80 feet below ground surface (Alisto 2014), which is too deep to support wetlands or other surface vegetation.

4.3 Native Wildlife Corridors and Nursery Sites

The BSA and project area are located within an area designated as Fremont-Kramer to Ord-Rodman Linkage for desert tortoise (USFWS 2011b; Figure 9). Desert tortoise linkages are areas that connect conservation areas where desert tortoises can live and reproduce.

Other than the DETO linkage, there are no native wildlife corridors or nursery sites present within the 5-mile buffer outside of the BSA or within the BSA. The station, including the project area, is enclosed with fencing and has inhibited almost all movement through the area. Species that might move across the project include small-sized mammals, such as California ground squirrel, and reptiles such as lizards. The project area is surrounded by disturbed habitat and existing agricultural uses that do not connect to any local wildlife corridors. In addition, the project area is subject to a high level of ongoing human disturbance and the surrounding area consists of public roadways that act as inhibitors to wildlife movement.

5. Results

5.1 Wildlife Habitat Within the BSA

There is no natural habitat within the fenced area of the station except for the approximately 2-acre Allscale Scrub community on the west side of the station, south of the entrance. Construction and ongoing operation of the station results in continued disturbance and prohibits the development of natural habitat within the fenced station. Outside of the fenced area of the station, some natural habitat exists within the BSA; areas of Creosote Bush Scrub and Allscale Scrub are located to the west and east of the station, and a desert dune area is found approximately 700 feet to the southeast of the station fenceline; however, even these areas surrounding the station have been subject to development and disturbance throughout the years.

Common wildlife species identified during the survey are listed in Table 3. Most are common desert species or species typically associated with developed areas, but several waterbirds were present in the vicinity of the evaporation ponds on the north part of the facility. During the survey, active common raven (*Corvus corax*) nests were observed on the station and within the BSA, and European starlings (*Sturnus vulgaris*) were observed actively nesting on the station. Active California ground squirrel burrows were identified in the BSA northwest and southeast of the station.

Table 3. Common Wildlife Species Observed during Surveys

Scientific Name	Common Name	Location Observed
Reptiles		
Uta stansburiana	Common side-blotched lizard	Station; BSA
Cnemidophorus tigris	Western whiptail	BSA
Dipsosaurus dorsalis	Desert iguana	Station; BSA
Gambelia wislizenii	Long-nosed leopard lizard	Station; BSA
Sceloporus magister uniformis	Desert spiny lizard	BSA
Birds		
Egretta thula	Snowy egret	Station
Anas cyanoptera	Cinnamon teal	Station
Anas strepera	Gadwall	Station
Himantopus mexicanus	Black-necked stilt	Station
Recurvirostra americana	American avocet	Station
Streptopelia decaocto	Eurasian collared dove	Station; BSA
Zenaida macroura	Mourning dove	Station; BSA
Sayornis saya	Black phoebe	Station; BSA
Corvus corax	Common raven	Station; BSA
Mimus polyglottos	Northern mockingbird	BSA
Anthus rubescens	American pipit	Station; BSA
Sturnus vulgaris	European starling	Station; BSA
Spizella breweri	Brewer's sparrow	BSA
Zonotrichia leucophrys	White-crowned sparrow	BSA
Sturnella neglecta	Western meadowlark	BSA
Falco sparverius	American kestrel	BSA

Scientific Name	Common Name	Location Observed
Accipter cooperii	Cooper's hawk	Station; BSA
Buteo jamaicensis	Red-tailed hawk	Station; BSA (flyover)
Mammals		
Lepus californicus	Black-tailed hare	Station; BSA
Otospermophilus beecheyi	California ground squirrel	BSA
Ammerspermophilus leucurus	Antelope ground squirrel	Station; BSA
Dipodomys sp.	Kangaroo rat	BSA
Neotoma lepida	Desert wood rat	Station; BSA
Vulpes macrotis	Desert kit fox	BSA (camera)

5.2 Special-Status Species Habitat Assessment

Special-status species identified during the database and literature review were evaluated to determine their potential to occur within the BSA based on known or expected geographic range, nearby occurrence records, and the presence of known or expected habitat within or near the study area. A full summary of the special-status species identified, along with a potential to occur in the BSA and in the project area is provided in Table 4.

A species was considered special status if it met at least one of the following criteria:

- Species that are listed, proposed for listing, or candidates for listing as threatened or endangered under the federal ESA (50 CFR 17.11, 76 *Federal Register* 66370)
- Species that are listed or proposed for listing by the state of California as threatened or endangered under CESA (Fish and Game Code Sections 2050 et seq., 2062, 2067, and 2068)
- Species listed by CDFW as SSC
- Species listed by CNPS as lists 1 through 4 in the current online version of its Inventory of Rare and Endangered Plants of California (CNPS 2024) or because they meet the definition of "rare" or "endangered" under CEQA Guidelines Section15125 (c) and Section 15380.

An analysis of the likelihood for each species to occur in the BSA was conducted based on species ranges, historic observations, contemporary sightings, and presence of suitable habitat elements. The BSA may be outside of the known range of some species or it may be within the geographic range for a certain species but suitable habitat is absent from the BSA. For this analysis, potential special-status species that occur in the general vicinity of the project, and for which the BSA may provide habitat, were determined to have a moderate or higher potential to occur and are discussed in greater detail. Those species with a low likelihood of occurrence are not discussed further but are included in Table 4.

5.2.1 Special-Status Plants

Special-status plants (endangered, threatened, rare, or California Rare Plant Rank [CRPR]) occurring or potentially occurring within the station and the 100-foot buffer are discussed in Table 4. The CNDDB database query identified three extant special-status plants within 5 miles of the study area (Figure 4). These are Beaver Dam breadroot (P*ediomelum castoreum*), chaparral sand-verbena (*Abronia villosa* var. *aurita*), and Mojave monkeyflower (*Diplacus mohavensis*).

Table 4. Special-Status Species with Potential to Occur in the Study Area

Common Name/ Scientific Name	Status	Habitat	Blooming Period	Potential for Occurrence within the Study Area
Plants				
Chaparral sand-verbena *Abronia villosa* var. *aurita*	Federal: None State: None CRPR: 1B.1 BLM: S[a]	Annual herb. Coastal scrub and mostly broad alluvial fans and benches. Sandy soils. Elevations from 260 to 5,250 feet.	January–August	**Unlikely to Occur.** No suitable habitat is present within the biological survey area (BSA). There is one reported CNDDB occurrence within 5-miles of the BSA. The occurrence reports a single collection recorded in 1976 (CDFW 2024). However, this occurrence is thought to be misidentified as the remaining collections for this species are from the coastal plain and low desert areas. Additionally, no species were observed during the 2024 floristic survey. Therefore, it was determined the species is unlikely to occur within the BSA.
Lane Mountain milk-vetch *Astragalus jaegerianus*	Federal: Endangered State: None CRPR: 1B.1 BLM: None	Perennial herb. Joshua Tree woodland and Mojavean Desert scrub. Shallow sandy soils within areas of exposed or partially exposed granitic bedrock. Elevations from 2,952 to 3,936 feet (ft)	April–June	**Unlikely to Occur.** The entire site is below the known elevational range of the species and there is no suitable habitat present within the survey area. Additionally, the species is not known to occur within 5 miles of the BSA (CDFW 2024). No species were observed during the 2024 floristic survey. Therefore, it was determined the species is unlikely to occur within the BSA.
Desert cymopterus *Cymopterus deserticola*	Federal: None State: None CRPR: 1B.2 BLM: S[a]	Perennial herb. Joshua Tree woodland and Mojavean Desert scrub with sandy substrates. From 2,066 to 4,920 feet.	March-May	**Unlikely to Occur**. Moderately suitable habitat is present within the western portion of the BSA. No plants were observed during the 2024 floristic survey. Additionally, the species is not known to occur within 5 miles of the BSA (CDFW 2024). Therefore, the species is unlikely to occur within the BSA.
Mojave monkeyflower *Diplacus mohavensis*	Federal: None State: None CRPR: 1B.2 BLM: S[a]	Annual herb. Joshua Tree woodland, Mojavean Desert scrub and sandy or gravelly places such as washes. From 1,968 to 3,936 feet.	April-June	**Unlikely to Occur.** No suitable habitat is present within the BSA. There is one reported CNDDB occurrence within 5-miles of the BSA. The occurrence reports a single individual collected in 1941 (CDFW 2024). Following the observation there has been significant urban development between the project site and reported occurrence, creating a potential dispersal barrier. Additionally, no species were observed during the 2024 floristic survey. Therefore, it was determined the species is unlikely to occur within the BSA.

Common Name/ Scientific Name	Status	Habitat	Blooming Period	Potential for Occurrence within the Study Area
Barstow woolly sunflower *Eriophyllum mohavense*	Federal: None State: None CRPR: 1B.2 BLM: S[a]	Annual herb. Saltbush scrub, Mojave Desert scrub and playas. From 1,650 to 3,148 feet.	March-May	**Potential to Occur.** The undeveloped western portion of the BSA outside of the Hinkley Compressor Station contains suitable scrub habitat for this species. No species were observed during the 2024 floristic surveys. This species has potential to occur outside of the project area but is absent from the project area.
Mojave menodora *Menodora spinescens* var. *mohavensis*	Federal: None State: None CRPR: 1B.2 BLM: S[a]	Perennial deciduous shrub. Mojavean desert scrub, and in areas with Andesite gravel on rocky hillsides and in canyons. From 2,263 to 6,560 feet.	April-May	**Unlikely to Occur.** No suitable habitat is present within the BSA. The species is not known to occur within 5 miles of the BSA (CDFW 2024). Additionally, no species were observed during the 2024 floristic survey. Therefore, the species is determined unlikely to occur within the BSA.
Spiny-hair blazing star *Mentzelia tricuspis*	Federal: None State: None CRPR: 2B.1 BLM: None	Annual herb. Sandy and or gravelly Mojavean desert scrub and desert washes. From 490 to 4,200 feet.	March-May	**Unlikely to Occur.** No suitable habitat is present within the BSA. The species is not known to occur within 5 miles of the BSA (CDFW 2024). Additionally, no species were observed during the 2024 floristic survey. Therefore, the species is determined unlikely to occur within the BSA.
Creamy blazing star *Mentzelia tridentata*	Federal: None State: None CRPR: 1B.3 BLM: None	Annual herb. Mojavean desert scrub in association with gravelly, rocky or sandy substrates. From 2,296 to 3,805 feet.	March-May	**Unlikely to Occur.** No suitable habitat is present within the BSA. The species is not known to occur within 5 miles of the BSA (CDFW 2024). Additionally, no species were observed during the 2024 floristic survey. Therefore, the species is determined unlikely to occur within the BSA.
Beaver Dam breadroot *Pediomelum castoreum*	Federal: None State: None CRPR: 1B.2 BLM: S[a]	Perennial herb. Joshua Tree woodland and Mojavean desert scrub within sandy washes and road cuts. From 2,000 to 5,002 feet.	April-May	**Unlikely to Occur**. No suitable habitat is present within the BSA. There are 2 reported CNDDB occurrences of the species within 5-miles of the BSA. The most recent occurrence reports specimens collected in 1937 (CDFW 2024). Following the observation significant urban/suburban development has created barriers between the project site and reported occurrence. No species were observed during the 2024 floristic survey. Therefore, it was determined the species is unlikely to occur within the BSA.

Common Name/ Scientific Name	Status	Habitat	Blooming Period	Potential for Occurrence within the Study Area
Parish's phacelia *Phacelia parishii*	Federal: None State: None CRPR: 1B.1 BLM: S	Annual herb. Mojavean desert scrub and clay or alkaline playas. From 1,771 to 3,936 feet.	April-May (June-July)	**Unlikely to Occur.** No suitable habitat is present within the BSA. The species is not known to occur within 5 miles of the BSA (CDFW 2024). Additionally, no species were observed during the 2024 floristic survey. Therefore, the species is determined unlikely to occur within the BSA.
California alkali grass *Puccinellia simplex*	Federal: None State: None CRPR: 1B.2 BLM: S[a]	Chenopod scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools. Elevations 5 to 3050 ft.	March-May	**Absent.** No suitable habitat is present within the BSA. The species is not known to occur within 5 miles of the BSA (CDFW 2024). Additionally, no species were observed during the 2024 floristic survey. Therefore, the species is determined unlikely to occur within the BSA.
Western Joshua tree *Yucca brevifolia*	Federal: None State: SC CRPR: None BLM: None	Perennial tree. Native to the southwestern United States (Arizona, California, Nevada, and Utah) and northwestern Mexico confined mostly to the Mojave Desert between 1,300 and 5,900 ft elevation.	March - June	**Absent**. No Joshua trees were observed during the 2024 floristic survey within the BSA.
Insects				
Monarch butterfly *Danaus plexippus*	Federal: FC State: None CDFW: None BLM: None	In spring and summer, habitat is open fields and meadows with milkweed. In winter, this species can be found on the coast of southern California and at high altitudes in central Mexico. Whether it is a field, roadside area, open area, wet area, or urban garden, milkweed and flowering plants are needed for monarch habitat. Adult monarchs feed on the nectar of many flowers, but they breed only where milkweeds are found.	NA	**Absent.** While the BSA is within range of the monarch butterfly, no suitable milkweed species were observed within the BSA during the field surveys and there are no documented occurrences within 5 miles of the BSA (CDFW 2024). They may be seen migrating through the BSA, but it is unlikely they would remain for foraging or breeding. Therefore, this species is determined absent from the BSA.

Common Name/ Scientific Name	Status	Habitat	Blooming Period	Potential for Occurrence within the Study Area
Amphibians				
Arroyo toad *Anaxyrus californicus*	Federal: E State: None CDFW: SSC BLM: None	This species is currently thought to be restricted to the headwaters of large streams that have persistent water from March to mid-June and also have shallow, gravely pools less than 18 inches deep adjacent sandy terraces. Breeding pools must be open and shallow with minimal current, and with a sand or pea gravel substrate overlain with sand or flocculent silt (Sweet 1989). Adjacent banks must provide open, sandy or gravely terraces with very little herbaceous cover for adult and juvenile foraging areas, within a moderate riparian canopy of cottonwood, willow, or oak. Heavily shaded pools are unsuitable for larvae and juvenile toads due to lower water and soil temperatures and poor algal mat development (Sweet 1992). Juveniles favor areas which remain damp and contain less than 10 percent cover (Sweet 1992). Adults use terraces in the 100-year flood zone, which may extend up to 100 m from the stream (Campbell et.al. 1996), Adults excavate shallow burrows on the terraces where they shelter during the day when the surface is damp or during longer intervals in the dry season.	NA	**Absent**. No suitable habitat is present within the BSA. Suitable habitat is present within the Mojave River, located approximately 1.3 miles south of the BSA. Despite the presence of evaporation ponds within the BSA, they do not support viable habitat for the species. There is one reported CNDDB occurrence approximately 1 mile southeast of the BSA. The occurrence reports one individual collected in 1949 (CDFW 2024). Following the 1949 observation, agricultural development and transportation corridors have created potential dispersal barriers between the project site and the Mojave River. Due to the absence of suitable habitat, this species is determined to be absent from the BSA.

Common Name/ Scientific Name	Status	Habitat	Blooming Period	Potential for Occurrence within the Study Area
Reptiles				
Southwestern pond turtle *Actinemys pallida*	Federal: PT State: None CDFW: SSC BLM: S[a]	Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater.	NA	**Absent.** No suitable habitat is present within the BSA. While the agricultural fields may provide marginally suitable upland habitat, there are no irrigation canals present within the BSA. Despite the presence of evaporation ponds within the BSA, they do not support viable habitat for the species. There are no reported CNDDB occurrences within 5-miles of the BSA (CDFW 2024). Due to the absence of suitable habitat this species is determined to be absent from the BSA.
desert tortoise *Gopherus agassizii*	Federal: T State: T CDFW: T BLM: None	Mojave and Sonoran deserts in southwestern Utah, southern Nevada, southeastern California, and western Arizona in the United States. Habitat includes creosote/cactus/shadscale scrub from sandy flats to rocky foothills, including alluvial fans, washes, and canyons where suitable soils for den construction might be found. It is found from near sea level to around 3,500 feet in elevation.	NA	**Unlikely to Occur**. There is no suitable habitat present within the project area. The entire project area consists of developed/disturbed habitat and is surrounded by a chain link fence. The unfenced and undeveloped western portion of the BSA, outside the Hinkley Compressor Station, potentially contains low quality habitat. There are nine reported CNDDB occurrences within 5-miles of the BSA (CDFW 2024). Protocol desert tortoise surveys performed during 2024 found no evidence of species within the BSA. Although desert tortoise are known to occur in the BSA, the project site is enclosed by fencing and precludes tortoise from entering. Therefore, this species is unlikely to occur within the project area.
Mojave fringe-toed lizard *Uma scoparia*	Federal: None State: None CDFW: SSC BLM: S[a]	Restricted to areas with fine, loose, windblown BSAnd including dunes, dry lakebeds, desert washes, riverbanks, sparse desert scrub habitats, and isolated pockets against hillsides.	NA	**Absent.** No suitable habitat is present within the BSA. Suitable habitat is present within the Mojave River, approximately 1.3 miles southeast of the BSA. There are two reported CNDDB occurrences of the species within 5 miles of the BSA. The closest occurrence reports multiple adults in 2010I (CDFW 2024). During the 2024 field surveys it was confirmed no aeolian sand deposits are present within the BSA. Due to the confirmed lack of suitable habitat the species is determined absent from the BSA.

Common Name/ Scientific Name	Status	Habitat	Blooming Period	Potential for Occurrence within the Study Area
Fish				
Mohave tui chub *Siphateles bicolor mohavensis*	Federal: E State: E CDFW: FP BLM: None	Endemic to the Mojave River basin. Prefers lake habitats, always associated with deep pools and slough-like areas, and do poorly in fast-flowing streams. Is adapted for harsh water qualities including alkaline waters and extreme temperatures.	NA	**Absent.** No suitable aquatic habitat is present within the BSA. CNDDB reports the species has been extirpated from the area as of 1992 (CDFW 2024). Therefore, it is determined this species is absent from the BSA.
Birds				
Golden eagle *Aquila chrysaetos*	Federal: None State: None CDFW: FP BLM: S[a]	Golden eagles can be found from the tundra, through grasslands, intermittent forested habitat and woodland-brushlands, and south to arid deserts and canyonlands. They're typically found in open country in the vicinity of hills, cliffs and bluffs. Golden eagles are known to be sensitive to human activity and are known to avoid developed areas.	NA	**Unlikely to Occur.** Marginal foraging habitat is present in the undeveloped scrub within outer portions of the BSA, though not preferred by the species. No suitable nesting habitat is present within the BSA. Due to the developed nature of the project site and lack of preferred suitable foraging habitat the species may be seen migrating through the BSA, but it is unlikely they would remain for foraging or breeding. Therefore, this species is unlikely to occur within the BSA.
Burrowing owl *Athene cunicularia*	Federal: None State: SC CDFW: SSC BLM: S[a]	Inhabits open, dry, nearly or quite level, grassland; prairie; desert floor; shrubland should be considered potential habitat if shrub cover is below 30%. In coastal Southern California, a substantial fraction of birds are found in microhabitats highly altered by humans, including flood control and irrigation basins, dikes, and banks, abandoned fields surrounded by agriculture, and road cuts and margins. In the western United States burrowing owls are only rarely known to construct their own burrows; strong association between burrowing owls and burrowing mammals, especially ground squirrels (Spermophilus spp.); however burrowing owls will also occupy human-made niches such as banks and ditches, piles of broken concrete, and even abandoned structure	NA	**Unlikely to Occur.** No suitable habitat is present within the project area. There is suitable foraging habitat adjacent to the BSA. There are 7 CNDDB-reported occurrences within 5-miles of the BSA. The 2 most recent occurrences each reported 1 adult and an active burrow in 2010(CDFW 2024). Protocol burrowing owl surveys were conducted in 2024 and reported a lack of evidence for the species within the BSA and surrounding area. No owls were observed during breeding season surveys conducted in 2024. Therefore, the species is unlikely to occur within the BSA.

Common Name/ Scientific Name	Status	Habitat	Blooming Period	Potential for Occurrence within the Study Area
Mountain plover *Charadrius montanus*	Federal: None State: None CDFW: SSC BLM: S[a]	Nest in shortgrass prairie, especially where blue grama, buffalo grass, and western wheat grass are dominant; and in grassy semidesert with scattered saltbush, sage, prickly pear, and yucca, at elevations ranging from 2,100 to 10,663 feet. They also nest in fallow or recently plowed agricultural fields and in overgrazed landscapes that mimic their natural shortgrass habitat. Mountain Plovers often nest around prairie-dog towns. During migration they may appear in almost any shortgrass habitat, including sod farms, playas, or tilled fields. Wintering birds also gather in tilled or burned farm fields, harvested alfalfa fields, alkaline flats, and coastal prairies in South Texas.	NA	**Unlikely to Occur**. No suitable habitat is present within the BSA. Despite the presence of evaporation ponds within the BSA, the banks of the ponds are lined with black plastic and the remainder of the area, around the complex of ponds, is covered in aggregate gravel and devoid of any vegetation. There are no CNDDB-recorded occurrences within 5 miles of the BSA (CDFW 2024). The species may be seen migrating through the BSA, but it is unlikely they would remain for foraging or breeding. Therefore, this species is unlikely to occur within the BSA.
Western snowy plover *Charadrius nivosus nivosus*	Federal: T State: None CDFW: SSC BLM: None	Found on sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting. Breeds primarily on coastal beaches above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. Wintering snowy plovers are found on many of the beaches used for nesting as well as in human-made salt ponds, and on estuarine sand and mudflats.	NA	**Absent**. No suitable habitat is present within the BSA. Despite the presence of evaporation ponds within the BSA, the banks of the ponds are lined with black plastic and the remainder of the area, around the complex of ponds, is covered in aggregate gravel and devoid of any vegetation. There are no CNDDB-recorded occurrences within 5 miles of the BSA (CDFW 2024). Due to the lack of suitable habitat and developed nature of the project area the species is determined to be absent from the BSA.

Common Name/ Scientific Name	Status	Habitat	Blooming Period	Potential for Occurrence within the Study Area
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	Federal: T State: E CDFW: None BLM: S[a]	Inhabitant of extensive, mature, riparian forests; has declined from a fairly common, local breeder in much of California 60 years ago, to virtual extirpation with only a handful of tiny populations remaining in all of California today. Losses are tied to obvious loss of nearly all suitable habitat, but other factors may also be involved. Relatively broad, well-shaded riparian forests are utilized, although it tolerates some disturbance. A specialist to some degree on tent caterpillars, with remarkably fast development of young covering only 18–21 days from incubation to fledging	NA	**Absent.** No suitable habitat is present within or adjacent to the BSA. There are no CNDDB-recorded occurrences within 5 miles of the BSA (CDFW 2024). The species may be seen migrating through the BSA, but it is unlikely they would remain for foraging or breeding due the absence of riparian habitat. Therefore, this species is determined to be absent the BSA.
Loggerhead shrike *Lanius ludovicianus*	Federal: None State: None CDFW: SSC BLM: None	Forages in open country of many types (including non-intensive agricultural areas) and nests in small trees and large shrubs, often at the edges of such open areas. Like most birds of prey, generally occurs at low densities. The species is widely distributed in Southern California with some seasonal movements evident.	NA	**Unlikely to Occur**. Marginal foraging habitat is present within the creosote bush scrub/allscale scrub habitat of the BSA. There is no suitable nesting or foraging habitat present within the project area. There are no CNDDB-recorded nests within 5 miles of the BSA (CDFW 2024). The species may be seen migrating and foraging through the BSA, but it is unlikely they would remain for breeding due the lack of nesting habitat. Therefore, this species is unlikely to occur.
Yuma Ridgway's rail *Rallus obsoletus yumanensis*	Federal: E State: T CDFW: FP BLM: None	Found in freshwater and alkali marshes dominated by stands of emergent vegetation interspersed with areas of open water and drier, upland benches. Prefers mature marsh stands along margins of shallow ponds with stable water levels. Nest sites selected by near upland areas in shallow sites dominated by mature vegetation, often in the base of a shrub.	NA	**Absent.** No suitable aquatic habitat is present within the BSA. Despite the presence of evaporation ponds within the BSA, the banks of the ponds are lined with black plastic and the remainder of the area, around the complex of ponds, is covered in aggregate gravel and devoid of any vegetation. There are no CNDDB-recorded occurrences within 5-miles of the BSA (CDFW 2024). Due to the lack of suitable habitat and developed nature of the project area the species is determined to be absent from the BSA.

Common Name/ Scientific Name	Status	Habitat	Blooming Period	Potential for Occurrence within the Study Area
Le Conte's thrasher *Toxostoma lecontei*	Federal: None State: None CDFW: SSC BLM: S[a]	Found in low, sandy, open deserts that are home to few other bird species. Over most of their range, saltbush, shadscale, cholla cactus, creosote, yucca, mesquite, and ocotillo are common plants, but they are usually sparsely distributed in these mostly flat or rolling landscapes. Generally do not inhabit steep-sided canyons, preferring small arroyos, open flats, or dunes.	NA	**Unlikely to Occur**. Marginal foraging habitat is present within the creosote bush scrub/allscale scrub of the BSA. No suitable breeding habitat is present within the project area. There are no CNDDB-recorded occurrences within 5-miles of the BSA (CDFW 2024). The species may be seen migrating through the BSA, but it is unlikely they would remain for breeding due the lack of habitat in the project site. Therefore, this species is unlikely to occur within the BSA.
Mammals				
Pallid Bat *Antrozous pallidus*	Federal: None State: None CDFW: SSC BLM: S[a]	Roosts in caves, crevices, mines, and occasionally hollow trees and buildings in a wide variety of habitats, including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forest. Most common in open, dry habitats with rocky areas for roosting.	NA	**Absent.** Suitable roosting habitat occurs within the BSA; however, a habitat assessment conducted in July 2024 did not identify evidence of bat use within the project site and BSA. Therefore, this species is considered absent from the project site.
Townsend's big-eared bat *Corynorhinus townsendii*	Federal: None State: None CDFW: SSC BLM: S[a]	Roosts in caves, tunnels, mines, & buildings in all habitats found in California except subalpine and alpine.	NA	**Absent.** Suitable roosting habitat occurs within the BSA; however, a habitat assessment conducted in July 2024 did not identify evidence of bat use within the project site and BSA. Therefore, this species is considered absent from the project site.
Spotted bat *Euderma maculatum*	Federal: None State: None CDFW: SSC BLM: S[a]	Roosts mostly in rock crevices, also occasionally in caves and buildings in arid deserts, grasslands and mixed conifer forests at elevations up to and sometimes higher than10,000 feet.	NA	**Absent.** Suitable roosting habitat occurs within the BSA; however, a habitat assessment conducted in July 2024 did not identify evidence of bat use within the project site and BSA. Therefore, this species is considered absent from the project site.
Western mastiff bat *Eumops perotis californicus*	Federal: None State: None CDFW: SSC BLM: S[a]	Roosts in crevices in cliff faces, high buildings, trees, and tunnels in open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban areas.	NA	**Absent.** Suitable roosting habitat occurs within the BSA; however, a habitat assessment conducted in July 2024 did not identify evidence of bat use within the project site and BSA. Therefore, this species is considered absent from the project site.

Common Name/ Scientific Name	Status	Habitat	Blooming Period	Potential for Occurrence within the Study Area
Silver-haired bat *Lasionycteris noctivagans*	Federal: None State: None CDFW: SSC BLM: S[a]	Roosts in hollow trees, snags, buildings, rock crevices, caves, and under exfoliating bark. Maternity roosts are typically in dense foliage or hollow trees. Habitat types include coastal and montane coniferous forests, valley foothill woodlands, pinyon-juniper woodlands, and valley foothill and montane riparian habitats, generally below 9,000 feet.	NA	**Absent.** Suitable roosting habitat occurs within the BSA; however, a habitat assessment conducted in July 2024 did not identify evidence of bat use within the project site and BSA. Therefore, this species is considered absent from the project site.
Mohave river vole *Microtus californicus mohavensis*	Federal: None State: None CDFW: SSC BLM: None	Occurs in moist habitats including meadows, freshwater marshes, and irrigated pastures in the vicinity of the Mojave River. Suitable habitat is associated with ponds and irrigation canals along with the Mojave River. Burrows into soft soils. Elevations of known localities range between 2,325–2,700 feet.	NA	**Absent.** No suitable habitat is present within the BSA. While the adjacent agricultural fields may provide marginally suitable habitat there are no irrigation canals present within the BSA. Despite the presence of evaporation ponds within the BSA, they do not support viable habitat for the species. There are no reported CNDDB occurrences within 5-miles of the BSA. With the lack of suitable habitat, potential dispersal barriers, and relatively long distances between the nearest presumed extant records and the project site, the species is determined to be absent from the BSA.
American badger *Taxidea taxus*	Federal: None State: None CDFW: SSC BLM: None	Found in open, drier stages of many shrub, herbaceous, and woodland communities where soils are dry and suitable for burrowing. Sensitive to fragmentation of open spaces. Generally, requires good diversity and abundance of rodent prey.	NA	**Unlikely to Occur.** The entire project area consists of developed/disturbed habitat and is surrounded by a chain link fence. Habitat within and surrounding the BSA has been fragmented due to agricultural development and transportation corridors. There is one CNDDB reported occurrence within 5-miles of the BSA. The occurrence reported a potential badger digging area in May 2007(CDFW 2024). Potential barriers to movement such as active agricultural fields, urban development and infrastructure corridors exist between the reported CNDDB occurrence and the BSA. Therefore, the potential for this species to occur within the BSA is unlikely.

Common Name/ Scientific Name	Status	Habitat	Blooming Period	Potential for Occurrence within the Study Area
Mohave ground squirrel *Xerospermophilus mohavensis*	Federal: None State: T CDFW: None BLM: S[a]	Restricted to the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo Counties. Optimal habitats are open desert scrub, alkali desert scrub, and Joshua tree woodland. Feeds in annual grasslands. Prefers sandy to gravelly soils, avoids rocky areas. Uses burrows at base of shrubs for cover	NA	**Unlikely to Occur.** Potential suitable habitat is present within the BSA. The entire project area is developed and does not contain suitable habitat. There are 3 CNDDB reported occurrences within 5-miles of the BSA. The most recent CNDDB recorded occurrence reports 1 individual within 5-miles of the BSA (CDFW 2024). Protocol live-trapping and camera stations completed during the 2024 field surveys found no individuals in the BSA.

Sources:

Consortium of California Herbaria 2024.

California Department of Fish and Wildlife (CDFW). 2024. CNDDB Maps and Data. California Natural Diversity Database. Accessed May 2024. https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data.

[a] Bureau of Land Management (BLM)

S = sensitive (plants found on BLM lands whose survival is of concern due to: 1) their limited distribution; 2) low number of individuals and/or populations; and 3) potential threats to habitat.

BLM -S: A BLM sensitive animal, defined as (1) under status review by the FWS/NMFS; or (2) whose numbers are declining so rapidly that Federal listing may become necessary, or (3) with typically small and widely dispersed populations; or (4) those inhabiting ecological refugia or other specialized or unique habitats. Existing California-BLM policy concerning the designation of sensitive species identifies two conditions that must be met before a species may be considered as BLM sensitive: (1) a significant population of the species must occur on BLM-administered lands, and (2) the potential must exist for improvement of the species' condition through BLM management.

BSA = biological survey area
CNDDB = California Natural Diversity Database
CRPR = California Rare Plant Rank (CRPR)
E= Endangered
FC= Federal Candidate
FP= Fully Protected
NA = not applicable
PT = proposed Threatened
SC = State Candidate
SSC= State Species of Special Concern
T= Threatened
WL = Watch List

California Rare Plant Rank (CRPR)

List 1A (Presumed extinct in California)
List 1B (Rare, threatened or endangered in California and elsewhere)
List 1B.1 (Seriously endangered in California)
List 1B.2 (Fairly endangered in California)
List 1B.3 (Not very endangered in California)
List 2 (Presumed extinct in California, but more common elsewhere)

The CNPS database (which is queried by U.S. Geological Survey 7.5-minute quadrangles and thus is not synonymous with the CNDDB 5-mile-radius query) identified an additional 18 plants in the eight quadrangles encompassing the project location. The blooming periods for these species are identified in Table 5.

Table 5. Blooming Period for Special-Status Plant Species

Common Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Beaver Dam breadroot				X	X							
Chaparral sand-verbena			X	X	X	X	X	X	X			
Mojave monkeyflower				X	X	X						
Lane Mountain milk-vetch				X	X	X						
Borrego milk-vetch		X	X	X	X							
White pygmy-poppy			X	X	X	X						
Mojave spineflower			X	X	X	X	X					
Desert cymopterus			X	X	X							
Colorado Desert larkspur			X	X	X							
Barstow woolly sunflower			X	X	X							
Joshua Tree poppy		X	X	X	X							
Torrey's box-thorn			X	X	X							
Mojave menodora				X	X							
Spiny-hair blazing star			X	X	X							
Creamy blazing star			X	X	X							
Crowned muilla			X	X								
Slender nemacladus			X	X	X							
Parish's phacelia			X	X	X							
Mojave indigo-bush			X	X	X							
California alkali grass			X	X	X							
Mojave fish-hook cactus				X	X	X	X					

Sources:

California Natural Diversity Database (CDFW 2024a)

Online Inventory of Rare and Endangered Plants (CNPS 2024)

Based on vegetation communities observed in the station, soil types reported in the station, and the locations and soil preferences of documented rare plant occurrences within 5 miles of the study area, only one special-status plant species, Barstow woolly sunflower (*Eriophyllum mohavense*), has potential to occur in the unfenced and undeveloped western portion of the BSA, outside Hinkley Compressor Station.

Refer to the description in the following subsection.

Suitable habitat for the remaining plant species does not exist in the station. A discussion about habitat suitability for the remaining species can be viewed in Table 4.

5.2.1.1 Barstow Woolly Sunflower

Barstow woolly sunflower is a CRPR 1B.2 species and BLM Sensitive species but is not state or federally listed. It is an annual herb in the Asteraceae family associated with creosote bush scrub, saltbush scrub, and playas. This plant is endemic and found only in the Mojave Desert of California.

Several collections of this species have been made east and west of the project area, with the closest CNDDB-reported occurrence approximately 6 miles northwest of the study area.

Prior to completing surveys, several reference population areas for Barstow woolly sunflower were visited on April 15, 2024, to confirm that the plant was blooming in the area. The reference populations were within approximately 10 to 20 miles west of the project area. No Barstow woolly sunflower was observed blooming in any of the reference population areas on the April 15 visit. No remnants of the species were observed, suggesting that the species did not germinate this year, or that it germinated so early that no remnants of the species were visible by the time of the reference population checks. Outreach to several additional botanists regarding this species did not reveal any observations of this species by these botanists at any location in 2024. A protocol-level floristic survey then was conducted on April 16,2024, of the station and 100-foot buffer. The survey was completed by walking transects in suitable habitat (the Creosote Bush-White Bursage-Allscale Scrub plant community on the west of the station project site). Based on the extremely small size of the target species, transects were walked approximately 5 feet apart to maximize probability of detection of the species if present.

No special-status plant species, including Barstow woolly sunflower, were observed during the 2024 floristic survey of the project area and station, including the approximately 2-acre area with native vegetation on the west of the project area. A complete list of plants observed during the survey is located in the botanical report (Balk Biological 2024) in Appendix D.

5.2.2 Special-Status Wildlife

Special-status wildlife species (endangered, threatened, rare, or other special-status species) generated by database reviews and occurrence data are listed in Table 4. These literature reviews and database queries identified nine special-status wildlife species that are known to occur within 5 miles of the BSA. Of these, suitable habitat within the BSA was identified for DETO, MGS, and BUOW. Based on both proximal occurrence data and the presence of suitable, but disturbed, habitat outside of the station, these species have a low potential to occur and are discussed further in the following subsections. Those species that are unlikely to occur in the BSA are discussed in Table 4.

The following discussion provides a brief description and ecology of the special-status species that were determined to have a low potential to occur in the BSA.

5.2.2.1 Desert Tortoise

The Mojave population of DETO was listed as threatened under the federal ESA on April 2, 1990 (USFWS 1990) and was listed as threatened under CESA in 1989. In the west Mojave Desert, where most annual precipitation falls in winter, DETO are active in May and June when annual spring vegetation is present and they also may be active in September and October. During active periods, DETO typically spend nights and hot days in burrows. During inactive periods, DETO spend approximately 98 percent of the time in burrows. Activity patterns are primarily controlled by temperature and precipitation.

DETO home range sizes were reported by USFWS (1994b; 2011b) at 10 to 450 acres and varied by sex (female ranges are smaller), age, season, density, and resource availability (smaller ranges during drought years). DETO have been known to move 7 miles in a single foray.

DETO primarily forage on annual forbs but also will eat perennials such as grasses and cacti (Boarman 2002). In the West Mojave, DETO eat dwarf white milk-vetch (*Astragalus didymocarpus*), widow's milk-vetch (*A. layneae*), Booth's evening primrose (*Camissonia boothii*), whitemargin sandmat

(*Chamaesyce albomarginata*), foothill deervetch (*Lotus humistratus*), and wish-bone bush (*Mirabilis bigelovii*). DETO prefer native forage species but will eat nonnative species such as red brome (*Bromus rubens*) and red-stem filaree (*Erodium cicutarium*).

Typical habitat for DETO includes creosote bush (*Larrea tridentata*) scrub below 5,500 feet in elevation, annual precipitation of 2 to 8 inches, with diverse, abundant annual and perennial forbs (USFWS 2011a). Tortoises most commonly associate with sandy-gravel soils on alluvial fans and mountain slopes with sparse, low-growing shrubs.

Critical habitat for the DETO was designated in 1994. This critical habitat consists of the following primary constituent elements: (1) sufficient space to support viable populations and provide for movements, dispersal, and gene flow; (2) sufficient quantity and quality of forage species and the proper soil conditions to provide for the growth of such species; (3) suitable substrates for burrowing, nesting, and overwintering; (4) burrows, caliche caves, and other shelter sites; (5) sufficient vegetation for shelter from temperature extremes and predators; and (6) habitat protected from disturbance and human-caused mortality. Designated critical habitat for DETO encompasses portions of the Mojave and Colorado Deserts (59 *Federal Register* 5,820, 5,822 [Feb. 8, 1994]). Based on a review of USFWS critical habitat maps and documentation, critical habitat for the desert tortoise is mapped outside of the study area approximately 2.6 miles northeast of the project area (Figure 9) (USFWS 2024c).

The project area is designated as Fremont-Kramer to Ord-Rodman Linkage for DETO and the habitat value is described as “non-habitat” and “lost or severely disturbed habitat.” In addition, the project area does not overlap with any portions of the Superior-Cronese Desert Wildlife Management Area, which is designated by BLM as an ACEC and is wholly located within the western Mojave recovery unit for desert tortoise (USFWS 2011b).

There are nine CNDDB-reported occurrences of DETO within 5 miles of the project. Most of the occurrences report individuals and active burrows observed within a 3- to 5-mile radius of the BSA in 2007. The occurrence closest to the project area reported one adult approximately 3 miles west of the project area (Figure 9). Observations made as part of the desert tortoise surveys conducted from 2011 to 2013 to support the development of the HCP that are not reflected in the CNDDB are also shown on Figure 9. As part of its ongoing groundwater remedy activities for the station, PG&E submits CNDDB reports to CDFW of any DETO observations made during routine biological surveys; however, these data have not been added by CDFW to the database. Two live occurrences of DETO to the west outside of the station fenceline were reported by Transcon between 2011 and 2013 and were noted as observations along Fairview Road and Highcrest Road. Between 2021 and 2023, four DETO occurrences were reported. One carcass was found in 2021 approximately 1 mile west of the station and a live female DETO was observed approximately 1.9 miles west of the station. In 2023, a live female and a live male DETO were observed on Hinkley Road approximately 5 miles (4.5 miles and 5 miles, respectively) north of the station. It is noted that some of the DETO observations could be domesticated individuals (not wild) based on the history of residents keeping DETO as pets. The most recent observation, reported in March 2024, recorded one severely injured adult (appeared to have been hit by a passing vehicle) approximately 1.6 miles northwest of the study area (Figure 9).

The only DETO signs found either in the station or in adjacent areas during this focused protocol-level survey for the species were two small fragments of an old carcass near the southern fence line. The carcass fragments were identified to be “greater than 4 years old,” which is the oldest estimate a biologist can provide based on the 2019 USFWS protocol. It is likely that these fragments were present as early as 2017 before the station expanded the fence line to the south and vegetation in that area was removed (W. Rhodehamel, personal communication, August 8, 2024). Based on the absence of any other tortoise sign in the station and the BSA, DETO is currently considered absent from the station and project area. Also, there is little likelihood of wild tortoises entering the site from adjacent areas, either to pass through the project area or establish residency, because the station perimeter is enclosed with chain link security fencing and no suitable habitat is present within the fenced facility.

5.2.2.2 Mohave Ground Squirrel

The MGS is listed as state threatened under CESA. There is currently no federal listing for this species. The MGS occurs within an approximately 5.4-million-acre (approximately 22,000 square kilometer) area of the northwestern Mojave Desert at elevations of 2,000 to 5,900 feet (610 to 1,800 meters) above sea level, within Inyo, Kern, Los Angeles, and San Bernardino counties (Best 1995). The study area is near the eastern boundary of the species range.

The MGS is one of two species within the genus *Xerospermophilus*, the second being the round-tailed ground squirrel (RTGS) (*X. tereticaudus*). Interbreeding between the two species was documented in the Hinkley Valley 3.3 miles north of the station (Leitner and Matocq 2015). The two species look similar in appearance but are distinguishable by tail morphology. The Mohave ground squirrel tail is shorter and flatter, with a white-colored undersurface (PG&E2017).

MGS can live up to 5 or more years and breeding occurs in February and March. Young (litters range from 4 to 9, average 6) are born in natal home burrows from late March to early April after a gestation period of approximately 30 days. Young appear above ground from late April to mid-May (Harris and Leitner 2004). Reproductive success is highly dependent on winter rainfall. Following winters with less than 3 inches of rainfall, MGS appear to forego reproductive activities and concentrate instead on gaining weight and storing fat to survive the long dormant period (USFWS 2011b).

MGS are dormant within their burrows for much of the year. Dormancy typically spans July or August through January and is an adaptation to avoid periods of the year when food is scarce, rather than avoidance of cold temperatures. Dormancy may begin earlier if food resources are restricted. During the active season, home burrows are used for shelter at night with burrow entrances typically plugged with soil while occupied.

MGS are territorial and established home ranges rarely overlap. During the mating season, female home ranges (median 1.8 acres) are much smaller than male home ranges (median 16.6 acres) (Harris and Leitner 2004). Following the mating season, home range sizes range from 4 to 27 acres for males and 1 to 5 acres for females. Home ranges may change within and among years during active periods, depending largely on the availability of food resources.

Juvenile MGS disperse over relatively long distances during their first active season (typically, during summer), with juvenile males moving greater distances than juvenile females. Harris and Leitner (2005) suggested that these long-distance movements were potentially critical for connecting populations and recolonizing sites after localized extirpations.

The diet of the MGS consists of plant leaves, flowers, fruits, and seeds, but also includes fungi and caterpillars. In the spring, MGS feed mostly on tender new plant growth. Foraging occurs both on the ground and within the branches of shrubs. MGS obtain water from dietary items. Specific dietary items vary within and among seasons and depend on climate and precipitation.

MGS occur in major Mojave Desert plant communities. Suitable habitat includes Mojave creosote bush scrub, Mojave mixed woody scrub, desert saltbush scrub, blackbrush scrub, Mojave Desert wash scrub, Joshua-tree woodland, and shadscale scrub. Specifically, suitable habitat consists of fine- to medium-textured soils on flat to gently sloping topography with native shrubs, including creosote bush, white bursage, and saltbushes (*Atriplex* spp.). Friable soils are necessary to allow burrow excavation. Rocky soils rarely support Mohave ground squirrels, and they do not occur on lakebeds or playas.

Anthropogenic stressors and sources of mortality responsible for declining populations of MGS include the cumulative effects of urban and rural development, off-highway vehicle recreation, military operations, energy development, transportation infrastructure, grazing, agriculture, mining, and climate change. USFWS (2011b) concluded that while these stressors are important, in 2011, they did not constitute a significant threat to the MGS. In contrast, Inman et al. (2013) reported that the current

abundance of wind and solar development projects and project proposals within the Mojave Desert has a significant potential to adversely affect the species.

Dr. Phil Leitner and Marjorie Matocq conducted research on the range of MGS and authored a report titled, *Status of the Mohave Ground Squirrel in the Hinkley Area, San Bernardino County, California* (Leitner and Matocq 2015). In that report, they discussed how recent data strongly indicate that the eastern boundary of the MGS range lies to the west of the Mojave River, instead of passing through Barstow, which is the understood eastern boundary. From trapping data and genetic analysis, they found that it was clear "that the dominant *Xerospermophilus* species in the Hinkley Valley is the round-tailed ground squirrel." To the west of Hinkley Valley, in relatively undisturbed habitat, MGS were more dominant. When PG&E completed protocol-level live trapping for MGS for the Hinkley Groundwater Remediation HCP, no MGS were identified. Two 2nd and 3rd generation hybrids of MGS/RTGS were trapped in the northern part of the Hinkley HCP (3.2 miles north of the station), indicating that MGS likely still exist in that area. Overall, MGS are mostly considered to be extirpated from the Hinkley Valley.

Genetically pure MGS were most frequently associated with undisturbed desert land cover types, while RTGS were most frequently associated with developed land cover types such as agricultural fields. The relative abundance of agricultural fields in the southern portions of the Hinkley Groundwater Remediation HCP likely explained the absence of MGS and presence of RTGS in this region (PG&E 2017). Leitner and Matocq (2015) concluded that the presence of MGS/RTGS hybrids in the Hinkley Groundwater Remediation HCP suggests the presence of genetically pure Mohave ground squirrels in portions of the Hinkley Groundwater Remediation HCP not dominated by agricultural land use.

There are three CNDDB-reported occurrences within 5 miles of the BSA. One record, dated 1949, detected one female MGS approximately 3 miles southeast of the study area. The second report, dated 1990, recorded an unknown number of individuals occurring within approximately 2 miles east of the BSA. The third, and most recent, record, dated 2012, is located approximately 1 mile northwest of the BSA. The 2012 record states one adult was observed foraging and resting near and inside a burrow (Figure 10). Because of the similar appearance between MGS and RTGS, live trapping or photo trapping yield more reliable MGS sitings. The 1990 reported occurrence was an observation siting and was found to be questionable by Leitner and Matocq. The 2012 observation also was a visual observation.

No MGS were captured during this protocol-level trapping effort nor during operation of 10 cameras in use for 28 days (CMBC 2024b). The entire project area is developed and does not contain suitable habitat for the species. MGS are not anticipated to occur within the project area.

5.2.2.3 Burrowing Owl

The BUOW is considered a California SSC by CDFW, Bird of Conservation Concern by the USFWS, and a BLM Sensitive species and it has been listed as a Candidate for listing under CESA (CDFW 2024a; Shuford and Gardali 2008).

The BUOW requires habitat with three basic soil and vegetal attributes: open, well-drained terrain; short, sparse vegetation; and underground burrows or burrow-like openings. Throughout their range, most BUOW rely on burrows excavated by ground squirrels, badgers, foxes, desert tortoise, and coyotes.

There are seven CNDDB-reported occurrences of BUOW within 5 miles of the study area. The two most recent occurrences each reported one adult and an active burrow in 2010, approximately 3 miles southeast of the study area (Figure 4). The additional occurrences report individuals approximately 4 miles west and south of the study area in 2007.

There was no suitable foraging or nesting habitat present within the station or project area, and no BUOW were detected during the breeding season surveys (CMBC 2024a). Surrounding agricultural operations may provide suitable foraging habitat (alfalfa fields, dairy farms); however, these areas are located outside of the project area and the station. BUOW is not likely to occur in the project area.

5.2.2.4 Bats

There are nine species of bats whose known range overlaps the project area. Table 6 lists these species and provides a brief description of habitat requirements for each.

Table 6. Bat Species Potentially Present in the Project Vicinity

Species	Habitat Requirements
Pallid bat *Antrozous pallidus*	Roosts in caves, crevices, mines, and occasionally hollow trees and buildings in a wide variety of habitats, including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forest. Most common in open, dry habitats with rocky areas for roosting.
Townsend's big-eared bat *Corynorhinus townsendii*	Roosts in caves, tunnels, mines, and buildings in all habitats found in California except subalpine and alpine.
Big brown bat *Eptesicus fuscus*	Roosts mostly in buildings and other human structures, though sometimes caves, mines, and trees are used. Found in all habitat types except the highest alpine meadows and talus slopes and is uncommon in hot deserts.
Spotted bat *Euderma maculatum*	Roosts mostly in rock crevices, also occasionally in caves and buildings in arid deserts, grasslands, and mixed conifer forests at elevations up to and sometimes higher than10,000 feet.
Western mastiff bat *Eumops perotis*	Roosts in crevices in cliff faces, high buildings, trees, and tunnels in open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban areas.
Silver-haired bat *Lasionycteris noctivagans*	Roosts in hollow trees, snags, buildings, rock crevices, caves, and under exfoliating bark. Maternity roosts typically are in dense foliage or hollow trees. Habitat types include coastal and montane coniferous forests, valley foothill woodlands, pinyon-juniper woodlands, and valley foothill and montane riparian habitats, generally below 9,000 feet.
California myotis *Myotis californicus*	Roosts in crevices in buildings, under bark, and in caves and mines mostly in desert, chaparral, woodland, and forest habitats from sea level up through mixed conifer and Jeffrey pine.
Canyon bat *Parastrellus hesperus*	Roosts in rock crevices mostly, occasionally mines and caves, and rarely buildings in deserts, arid grasslands, and woodlands at elevations up through mixed conifer forests.
Mexican free-tailed bat *Tadarida brasiliensis*	Roosts in caves, mine tunnels, crevices, and buildings found in all habitats up through mixed conifer forest, though woodlands, shrublands, and grasslands are preferred.

During the bat habitat assessment, all buildings and structures were searched and most buildings had some crevices in the ceiling or at the juncture of the wall and ceiling. These were all examined for use by bats. No body oils or other evidence of bats using these crevices was observed during the survey. The floor below all crevices in which bats could be roosting was examined for guano and none was detected. Trees at the park on the south side of the station had dense branches and foliage all the way to the ground, which does not provide potential roosting habitat for bats (bats need a few feet clear of branches or other obstructions to drop from the roosting site when taking flight). No bats or evidence of roosting bats were detected in any of the buildings, other structures, or trees and, therefore, these species are considered absent from the project site.

6. Impacts on Biological Resources

There will be no temporary or permanent impacts to any habitat for DETO, MGS, BUOW, or rare plants. Ground-disturbing activities to developed areas resulting from temporary impacts associated with the proposed project, including excavation of trenches for conduit and installation/replacement of MCCs, will total approximately 0.055 acre.

The project is within the mapped range of DETO, MGS, and BUOW and contains suitable habitat for these species within the BSA. Results from protocol-level surveys determined that these three species are absent from the station and project area and there is a lack of proximal occurrences of the species within the BSA buffer.

Migratory birds, such as the common raven, are protected under the MBTA and appropriate buffers provided by PG&E's management plan, *Nesting Birds: Species-Specific Buffers for PG&E Activities* (PG&E 2015) would be implemented. Birds not covered under the MBTA, such as the European starling would not be subject to protective measures.

The following measures would be implemented to minimize impacts to migratory birds and common wildlife species during project construction:

BIO-1: Protect nesting birds. If construction is to occur during the avian nesting season (March 1 through August 15), a preconstruction migratory bird and raptor nesting survey will be performed by a qualified biologist who is familiar with local avian species and nesting birds. Surveys will occur only in publicly accessible areas and areas where PG&E has existing access; private property will not be accessed and will instead be observed from adjacent accessible areas.

Preconstruction nesting bird surveys will be performed in accordance with PG&E's Nesting Birds management plan. The preconstruction survey will cover a radius of 200 feet for non-listed raptors and 100 feet for non-listed passerines from project locations that will be actively worked at in the near term. The survey will cover all affected areas where ground disturbance is required. If any active nests containing eggs or young are found, an appropriate nest exclusion zone will be established by the PG&E biologist in accordance with PG&E's Nesting Bird Management Plan. No heavy equipment will be operated in this exclusion zone until the biologist has determined that the nest is no longer active, and the young have fledged. If it is not practicable to avoid work in an exclusion zone around an active nest, work activities will be modified to minimize disturbance of nesting birds but may proceed in these zones at the discretion of the biologist. As appropriate, the biologist will monitor work activities in these zones daily or periodically when construction is occurring and assess their effect on the nesting birds. If the biologist determines that specific activities pose a high risk of disturbing an active nest, the biologist will recommend additional, feasible measures to minimize the risk of nest disturbance. If work cannot proceed without disturbing the nesting birds, or signs of disturbance are observed by the monitor, work may need to be halted or redirected to other areas until the nesting and fledging is completed or the nest has otherwise failed for reasons not related to construction.

BIO-2: Protect wildlife trapped in trenches or steep-walled holes. Field crews will fit open trenches or steep-walled holes with escape ramps of plywood boards or sloped earthen ramps at each end if left open overnight. Field crews will search open trenches or steep-walled holes every morning prior to initiating daily activities to ensure wildlife is not trapped. If any wildlife is found, work will stop, and the PG&E biologist will be contacted to move the animal out of harm's way.

BIO-3: Preconstruction surveys. Preconstruction biological clearance surveys will be completed by a qualified biologist prior to construction activities beginning and will occur throughout the project site to minimize impacts on wildlife.

BIO-4: Worker Environmental Awareness Program – Biological Resources Portion. A worker environmental awareness program (WEAP) will be prepared for the project to communicate environmental issues and

appropriate work practices specific to the project to all construction field personnel before they begin work on the project. A PG&E biologist or designee familiar with resources in the area will deliver the WEAP biological resources portion. Training will include a discussion of the potential for nesting birds and possible buffers, along with the requirement to protect wildlife from becoming trapped in trenches or steep-walled holes. Training will include information about federal laws protecting nesting birds. A copy of the training sign-in sheets documenting participation in the training will be provided to the CPUC.

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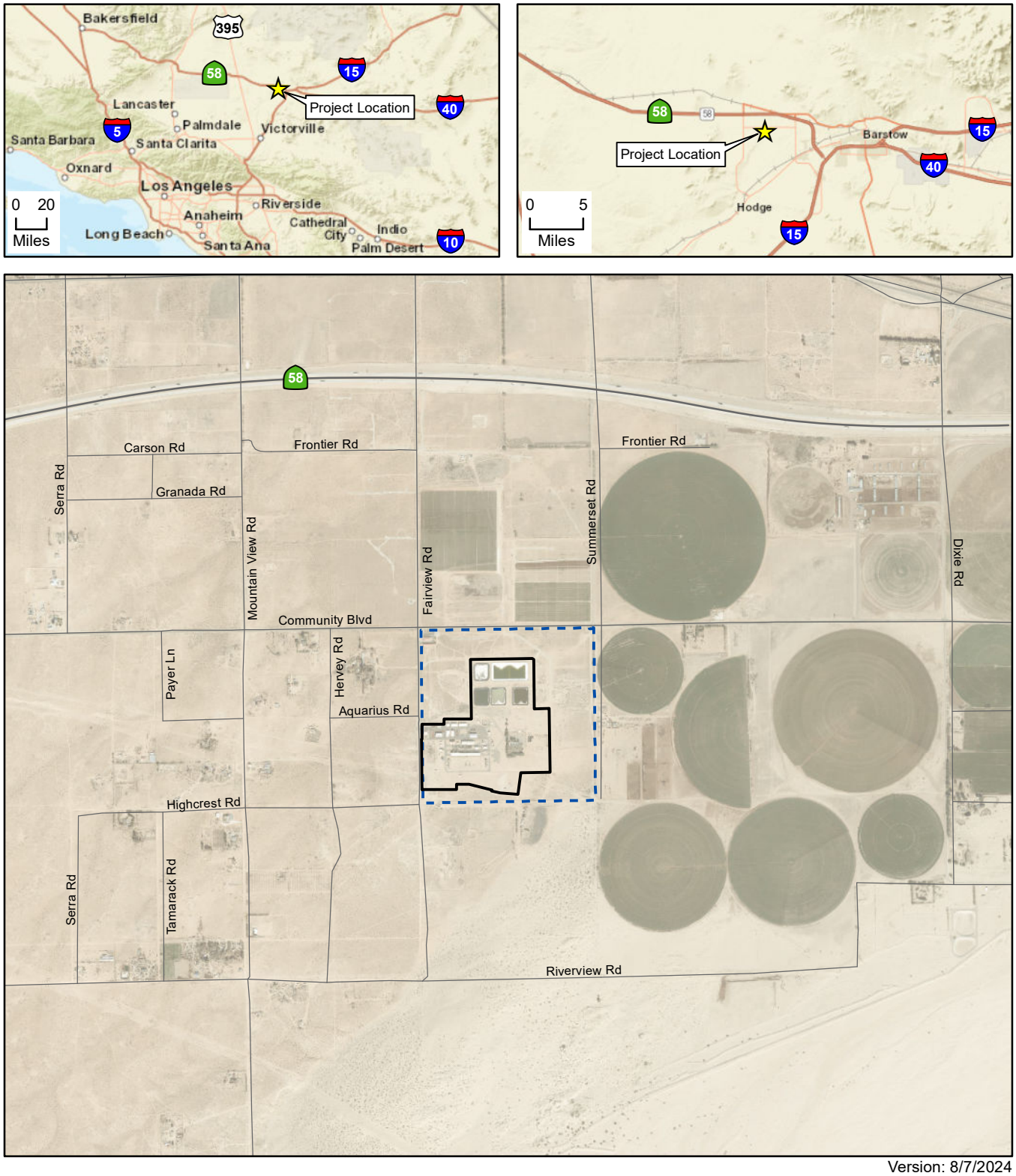
Figures

The following figures contain confidential information pursuant to the Confidentiality Declaration dated March 4, 2025:

- Figure 1a
- Figure 1b
- Figure 3
- Figure 4
- Figure 9
- Figure 10

Confidential figures are provided under separate cover to the CPUC.



Version: 8/7/2024

Legend

- Hinkley Compressor Station Perimeter Fence Line
- Property Boundary

Note: No settled areas, parks, recreational areas, scenic areas, or existing electrical transmission lines are within one mile of the property boundary of the facility.

N

0 0.25 0.5

Miles

Figure 2
Project Location
S-238 Hinkley Electrical Upgrades
Pacific Gas & Electric Company

Preliminary and Subject to Change Based on CPUC Requirements, Final Engineering, and Other Factors

Jacobs

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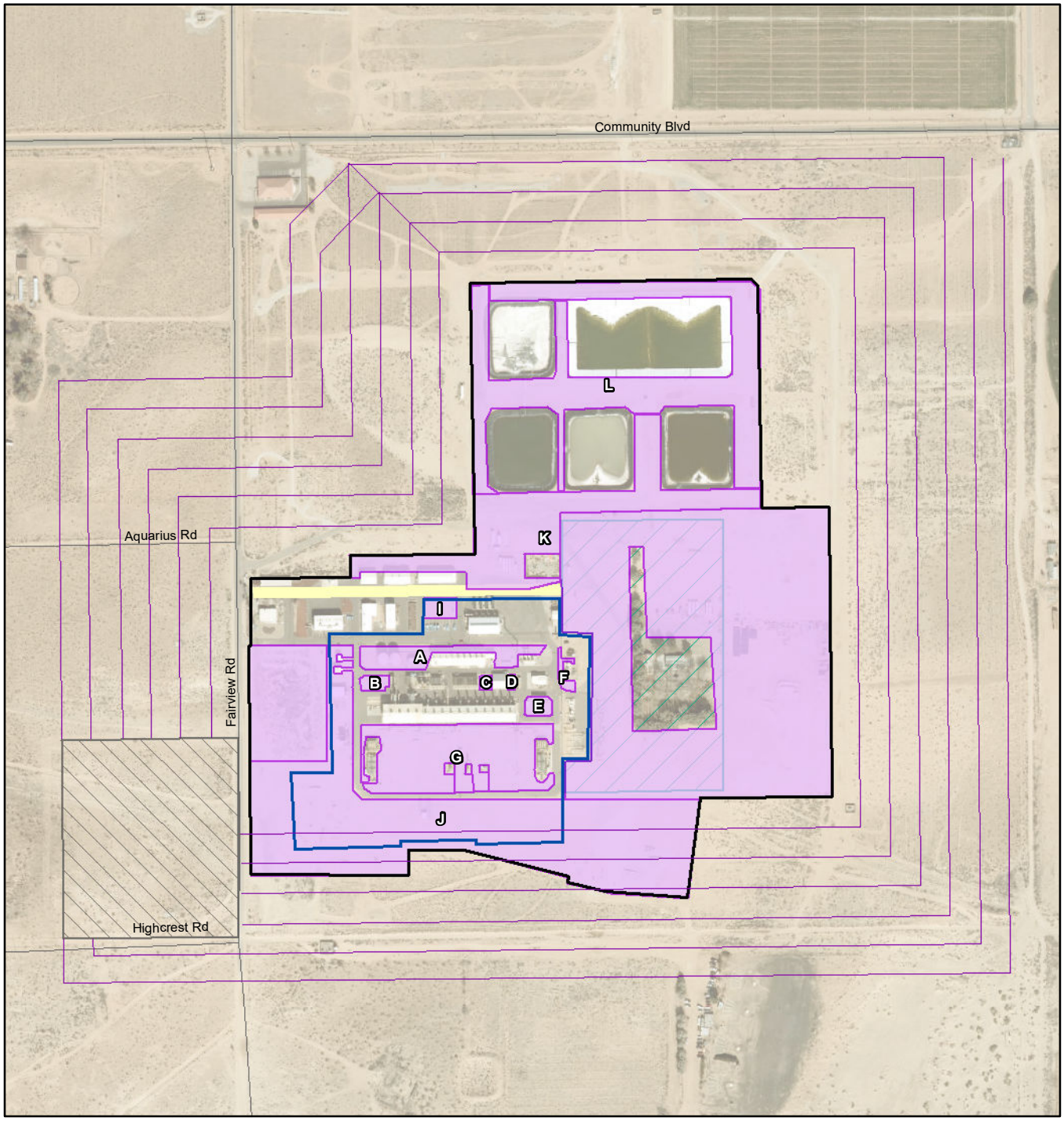

Version: 9/26/2024

Legend

- Hinkley Compressor Station Perimeter Fence Line
- Existing Access Road (Paved)
- Staging Area
- Work Area
- Survey Transect
- Survey Area
- Private Property - No Access Granted for Survey

N

0 250 500

Feet

Figure 5
Desert Tortoise Survey Limits
S-238 Hinkley Electrical Upgrades
Pacific Gas & Electric Company

Preliminary and Subject to Change Based on CPUC Requirements, Final Engineering, and Other Factors

Jacobs

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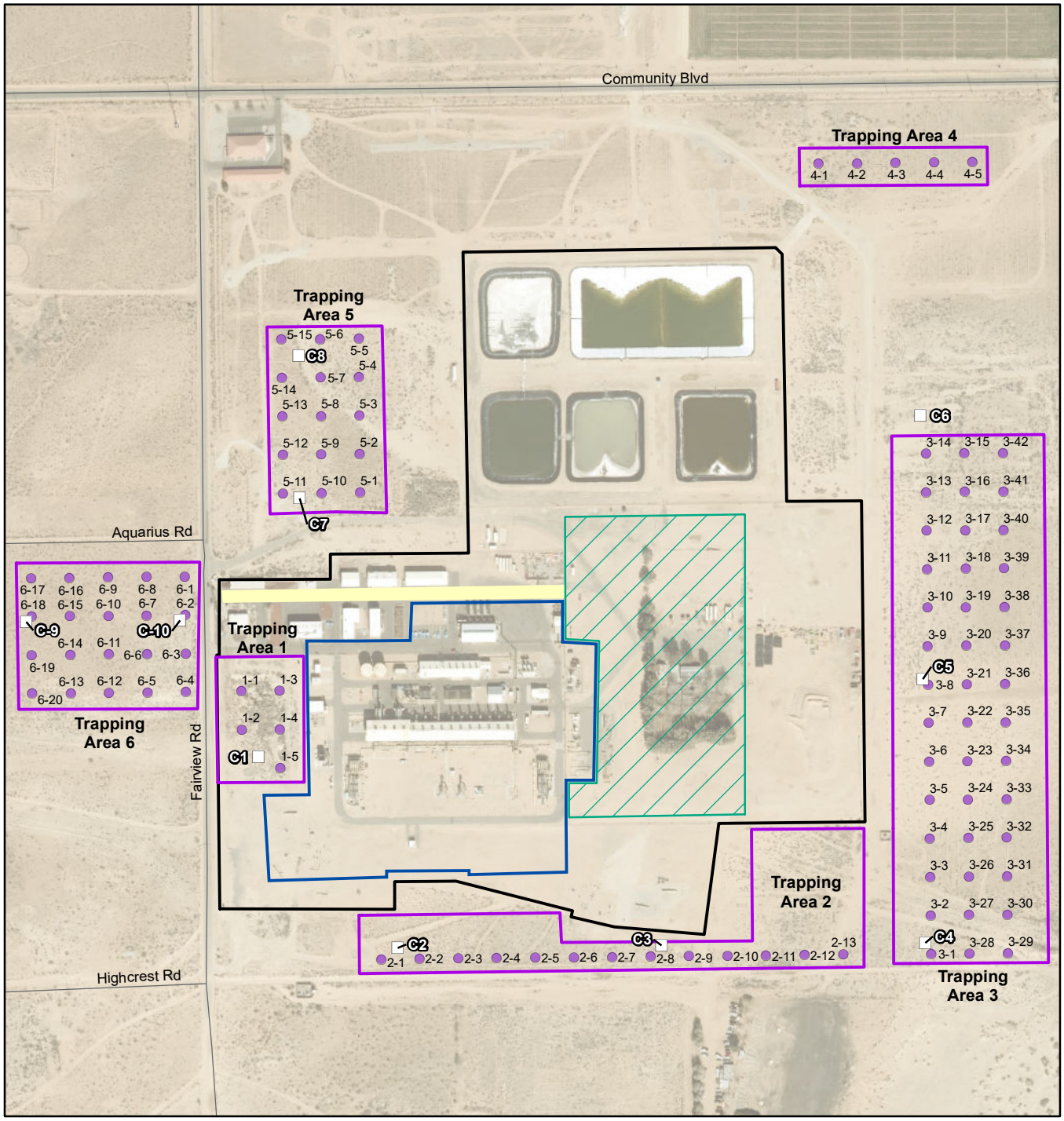

Version: 8/19/2024

Legend

- Hinkley Compressor Station Perimeter Fence Line
- Existing Access Road (Paved)
- Staging Area
- Work Area
- Mohave Ground Squirrel Trapping Area
- Trap Location
- Camera Location

N

0 225 450

Feet

Figure 6
Mohave Ground Squirrel
Trapping and Camera Grid Locations
S-238 Hinkley Electrical Upgrades
Pacific Gas & Electric Company

Preliminary and Subject to Change Based on CPUC Requirements, Final Engineering, and Other Factors

Jacobs

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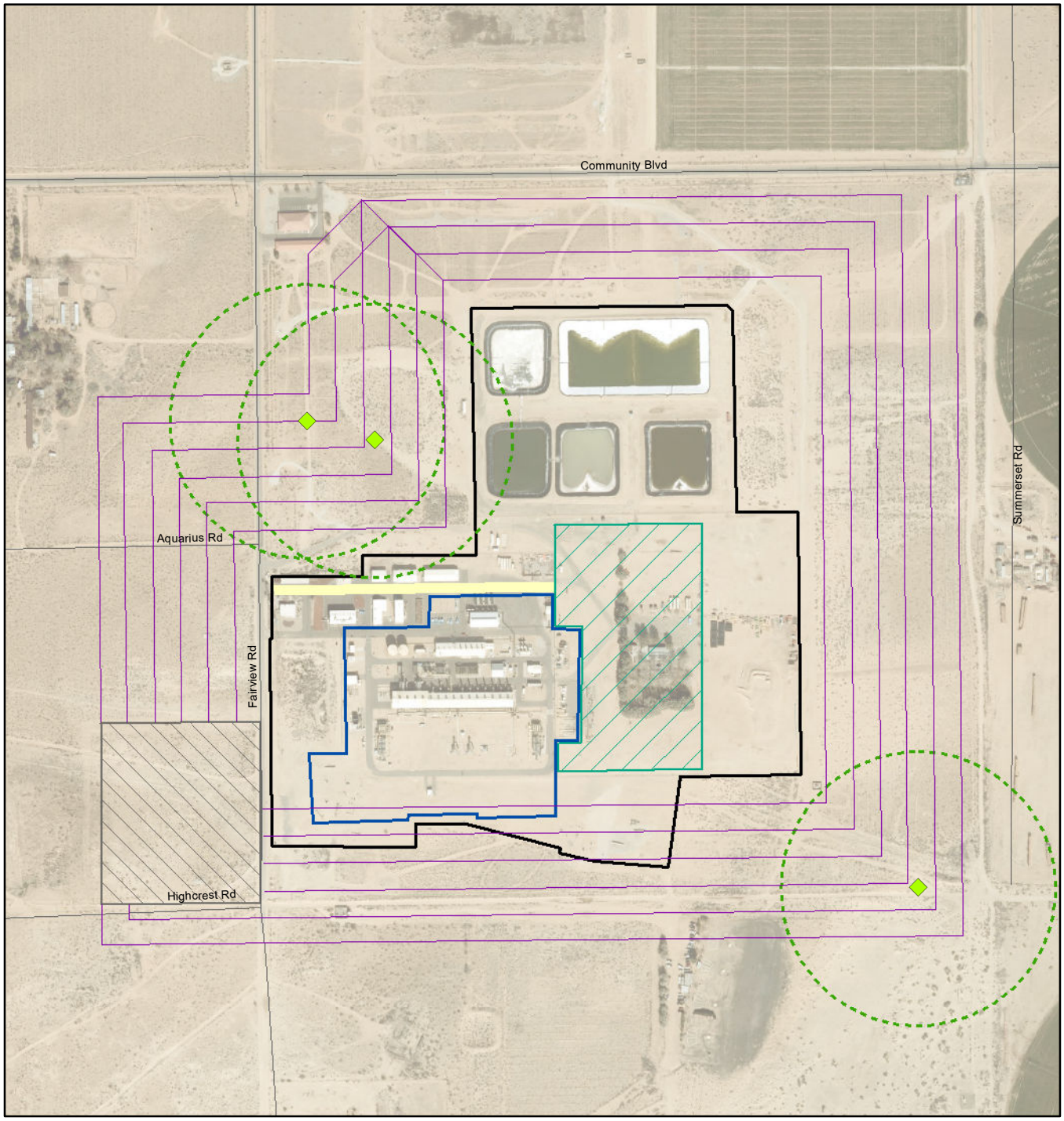

Version: 9/26/2024

Legend

- Hinkley Compressor Station Perimeter Fence Line
- Existing Access Road (Paved)
- Staging Area
- Work Area
- Survey Transect
- Private Property - No Access Granted for Survey
- Breeding Owl Survey Location
- 500-foot Radius of Breeding Owl Survey Location

N

0 275 550

Feet

Figure 7
Burrowing Owl Survey Transects
S-238 Hinkley Electrical Upgrades
Pacific Gas & Electric Company

Preliminary and Subject to Change Based on CPUC Requirements, Final Engineering, and Other Factors

Jacobs

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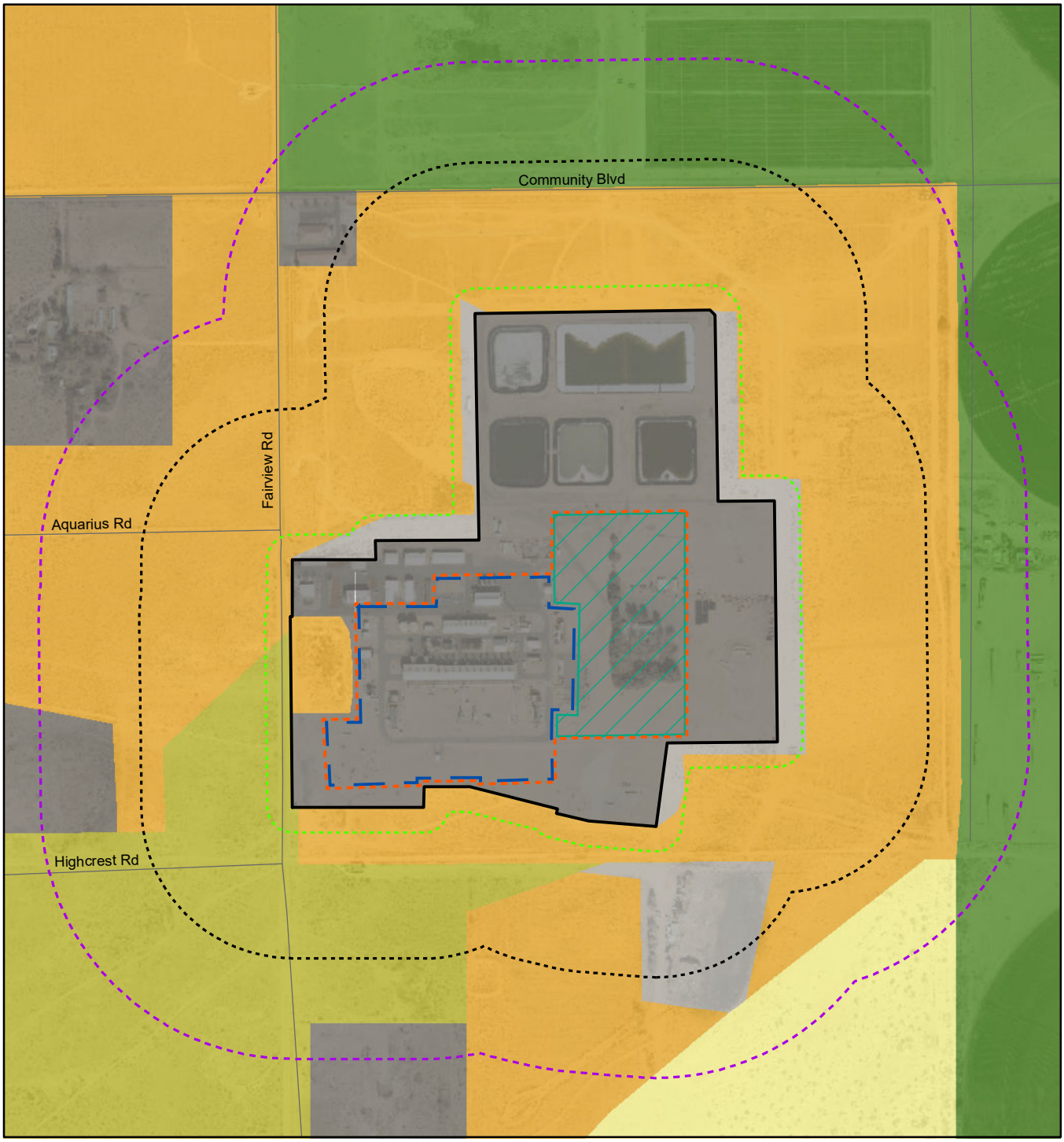

Version: 10/2/2024

Legend

- Hinkley Compressor Station Perimeter Fence Line
- Botanical Survey Limit
- Biological Survey Area (BSA)
- Area Analyzed for Vegetation and Land Cover Types
- Staging Area
- Work Area
- Project Area

Land Cover Types

- Active Agriculture
- Allscale Scrub
- Creosote Brush Scrub
- Desert Dunes
- Disturbed
- Urban/Developed

0 600
Feet

N

Figure 8
Botanical Survey Limit, Vegetation and Land Cover Types
S-238 Hinkley Electrical Upgrades
Pacific Gas & Electric Company

Preliminary and Subject to Change Based on CPUC Requirements, Final Engineering, and Other Factors

Jacobs

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Appendix A
Agency Consultation

From: Strohl, Virginia
To: "Wood, Brandy@Wildlife"
Cc: "Ellsworth, Alisa@Wildlife"
Subject: FW: PG&E Hinkley Compressor Station Electrical Upgrade
Attachments: image001.png

Hi Brandy,
I wanted to provide some preliminary project information with you, so you have some context of the project before we meet to discuss it and our proposed surveys. Please find attached a location map, a site map, and a summary of the project below. I look forward to hearing from you, -Virginia

Hinkley Compressor Station Electrical Upgrade Summary

To maintain gas transmission system reliability, Pacific Gas & Electric Company ("PG&E") is proposing to complete electrical upgrades at the Hinkley Compressor Station (HCS), located in Hinkley, CA approximately 8 miles west of Barstow, CA. HCS is a major compressor station on PG&E's Baja Path gas transmission system, which transports natural gas to millions of customers in pipelines L-300A and L-300B from the Arizona border to the San Francisco Bay Area. The station has no connection to utility power, generating all electricity needed on site with natural gas generators.

The electrical system at HCS has encountered a number of issues related to the equipment's age, reliability, maintainability and safety, and inefficient design. The Hinkley Electrical Upgrades project will increase employee safety and station reliability by upgrading the electrical system at HCS to meet current PG&E standards and requirements.

The Hinkley Electrical Upgrades project will:

- Replace the switchgear line-up (SG) located in the auxiliary building.
- Create a partitioned area inside the auxiliary building to house the new switchgear and provide temperature and humidity control.
- Replace (5) Motor Control Centers (MCC) located at various locations in the station.
- Modify (3) existing MCC located at various locations within the station.
- Install new conduit and cable from the switchgear to MCC.
- Procure temporary generation units to power Hinkley Compressor Station during the switchgear replacement by using 4-5 portable generators.
- Design and fabricate a fuel gas piping system for temporary generation during switchgear replacement.

There will be no improvements to existing gas infrastructure. The project aims to replace existing electrical infrastructure with a modern equivalent that meets current codes and standards. There will be no increases to electrical capacity. The scope of work is contained within the existing, fenced station footprint.

Virginia Strohl
Senior Biologist
Pacific Gas and Electric Company | 406 Higuera Street | San Luis Obispo, California 93401-3869
559.515.3904 cell | v1s4@pge.com

From: Strohl, Virginia <V1S4@pge.com>
Sent: Wednesday, March 20, 2024 5:28 PM
To: Wood, Brandy@Wildlife <Brandy.Wood@Wildlife.ca.gov>
Cc: Ellsworth, Alisa@Wildlife <Alisa.Ellsworth@wildlife.ca.gov>
Subject: PG&E Hinkley Compressor Station Electrical Upgrade
Hi Brandy,
PG&E is planning to upgrade the electrical system at the Hinkley Compressor Station in Hinkley, CA. I'd like to coordinate with CDFW on our proposed desert tortoise and Mohave ground squirrel protocol surveys for the project. Would you be available for a Teams call next week to coordinate?

I'd like to briefly present the project and our proposed surveys prior to beginning our surveys early next month. Please let me know if you do have any availability and what times work best for you. Thank-you in advance for your time, -Virginia

Virginia Strohl
Senior Biologist
Pacific Gas and Electric Company | 406 Higuera Street | San Luis Obispo, California 93401-3869
559.515.3904 cell | v1s4@pge.com

From: Ellsworth, Alisa@Wildlife <Alisa.Ellsworth@wildlife.ca.gov>
Sent: Wednesday, March 20, 2024 4:34 PM
To: Strohl, Virginia <V1S4@pge.com>
Cc: Wood, Brandy@Wildlife <Brandy.Wood@Wildlife.ca.gov>
Subject: RE: PG&E Hinkley Compressor Station Electrical Upgrade

Hi Virginia,
I'm including Brandy Wood who can assist you with your request.
Thank you,

Alisa Ellsworth, Environmental Program Manager
California Department of Fish and Wildlife
Inland Deserts Region, North
787 North Main Street Suite 220
Bishop, Ca 93514
(760) 937-2519
Alisa.Ellsworth@wildlife.ca.gov

From: Strohl, Virginia <V1S4@pge.com>
Sent: Wednesday, March 20, 2024 4:31 PM
To: Ellsworth, Alisa@Wildlife <Alisa.Ellsworth@wildlife.ca.gov>
Subject: PG&E Hinkley Compressor Station Electrical Upgrade

Hi Alisa,
I just left you a voicemail about discussing our proposed protocol surveys for Mohave ground squirrel and desert tortoise for the Hinkley Compressor Station Electrical Upgrade project in the town of Hinkley, CA. I'd like to set up a Teams call to briefly present the project and our proposed surveys prior to beginning our surveys early next month. I wasn't sure if you would be the contact for the coordination or if some one else from your office would be the contact. I'd like to try

schedule a meeting for next week if possible. I look forward to hearing from you soon. Thanks, -Virginia

Virginia Strohl
Senior Biologist
Pacific Gas and Electric Company | 406 Higuera Street | San Luis Obispo, California 93401-3869
559.515.3904 cell | v1s4@pge.com

From: Karo, Julia@Wildlife
To: Strohl, Virginia; Wood, Brandy@Wildlife
Cc: Poff, Marlee@Wildlife; sharon_dougherty@circlemountainbiological.com; Sarah Teed; Nettles, Wendy; Rice, Erin; Taylor, Colleen
Subject: RE: Request Approval for Modified Protocol Surveys and Notification of Mohave Ground Squirrel Surveys Under MOU (193250005) for the S-238 Hinkley Electrical Upgrade Project
Date: Wednesday, April 10, 2024 10:51:26 AM

Hi Virginia,

CDFW agrees with this approach for this specific project. Thank you for checking in.

Let me know if any questions arise during the surveys.

Thank you,

Julia Karo (she/her) Why?
Senior Environmental Scientist Specialist
Inland Deserts Region

From: Strohl, Virginia <V1S4@pge.com>
Sent: Wednesday, April 10, 2024 9:54 AM
To: Karo, Julia@Wildlife <Julia.Karo@Wildlife.ca.gov>; Wood, Brandy@Wildlife <Brandy.Wood@Wildlife.ca.gov>
Cc: Poff, Marlee@Wildlife <Marlee.Poff@Wildlife.ca.gov>; sharon_dougherty@circlemountainbiological.com; Sarah Teed <falconbiological@gmail.com>; Nettles, Wendy <WMN3@pge.com>; Rice, Erin <E1RJ@pge.com>; Colleen Taylor - Jacobs (Colleen.Taylor@jacobs.com) <Colleen.Taylor@jacobs.com>
Subject: Request Approval for Modified Protocol Surveys and Notification of Mohave Ground Squirrel Surveys Under MOU (193250005) for the S-238 Hinkley Electrical Upgrade Project

Hi Brandy and Julia,

Pacific Gas & Electric (PG&E) is planning to conduct protocol level surveys for desert tortoise, Mohave ground squirrel (MGS) and burrow owl for the S-238 Hinkley Compressor Station Electrical Upgrades project, which plans to upgrade the electrical equipment at the Hinkley Compressor Station in Hinkley, California. PG&E is seeking your approval of our modified protocol level surveys for the above-mentioned species. In addition, PGE is also notifying the California Department of Fish

and Wildlife (CDFW) for Circle Mountain Biological Consultants of their intent to conduct protocol level surveys for MGS, including live-trapping, as required under their Memorandum of Understanding (MOU) connected to Scientific Collecting Permit 193250005-19325-001.

A description of the project was previously sent to Brandy Woods on March 22, 2024. On March 28, 2024, Brandy Woods facilitated a Teams call to discuss PG&E's proposed protocol level surveys for desert tortoise, MGS and burrow owl for the project. In addition to Brandy Woods and myself, Julia Karo, Marlee Poff, Sharon Doughtery and Marjorie Eisert also participated in the Teams call.

The following descriptions of protocol level surveys to be conducted for the project include recommendations that were made by CDFW during the March 28, 2024, meeting.

Desert Tortoise

Focused surveys for desert tortoise will be carried out to USFWS (2019) protocols by qualified desert tortoise biologists with Circle Mountain Biological Consultants (CMBC), to determine presence/ absence of desert tortoise. As required by the protocol, biologist walking transects will survey for signs of desert tortoise at 10m (30-foot) intervals throughout undeveloped portions of the project area and staging areas. (See Figure 1, attached). Positive detection of tortoises will be determined by the following: tortoises, burrows, scats, tracks, courtship rings, drinking depressions, etc. Biologist will record all locations of tortoises and sign encountered during the survey effort using the USFWS 2021 Desert Tortoise Pre-Project Survey Data Sheet. Surveys for desert tortoise will also include the recommended Zone-of-Influence (ZOI) consisting of six transects walked 100' apart starting from the edge of the project area and staging areas. Figure 1 shows the planned survey areas, the desert tortoise ZOI transects, the burrowing owl buffer transects, and the proposed Mohave ground squirrel trapping grid lay-out.

Mohave Ground Squirrel

The MOU issued by CDFW identifies Ed LaRue Principal Investigator, Sharon Dougherty and Sarah Teed as Independent Researchers, and Susan Seville as a Field Assistant. Mr. LaRue, Ms. Dougherty, Ms. Teed and Ms. Seville will carry out protocol level surveys for MGS, including live-trapping, with the assistance of John Myers and Seth Cohen to determine absence/ presence of MGS in the project area. The survey will follow the protocol established by the California Department of Fish and Wildlife in January 2003, and revised in July 2010 and October 2023. Since the project area is located within an established compression station that has been active for many decades, little suitable habitat is present for MGS. The only potentially suitable area is comprised of less than two acres along the western edge of the facility. Given the small size of the area, only 5 live traps can be accommodated within the fenced facility.

The additional 93 traps will be placed at 35-m intervals in a standard 100-camera grid, as can best be accommodated in vegetated areas to the west, south, northwest, northeast, and east of the facility. (See Figure 1.) Ten trail camera stations will be placed in trapping areas within the facility and in adjacent areas.

The protocol requires trapping efforts to occur for 5 consecutive days during each of the three trapping periods: a. March 15 through April 30; b. May 1 through May 31; and c. June 1 through July 15. At least two weeks will separate each of the trapping periods on a project site. Currently CMBC is planning the following trapping session efforts: April 16- April 20, May 3- May 7 and June 3- June 7. Captured ground squirrels (both MGS and Antelope ground squirrels) will be marked using a non-toxic permanent marking pen. To facilitate identifying previously-captured ground squirrels in

camera-trap photos, marks will be made on the dorsolateral pelage of the animals. Live-trapping results will be reported to CDFW using the CDFW MGS Survey Form 2024.

The surveys and live-trapping for MGS will all occur on P&GE owned property in San Bernardino County in or adjacent to the Hinkley Compressor Station. For any information regarding the property, please contact me at the email or phone number listed at the bottom of this email. I've also attached a location map and site map for your convenience. The GPS coordinates for the center of the Hinkley Compressor Station are latitude 34.903016 and longitude -177.159001 using a WGS84 geographic projection from Google Earth.

Burrow Owl

A focused habitat evaluation for burrowing owl will be completed by qualified biologists with CMBC to determine presence/ absence of burrowing owl in the project area. Biologists will conduct surveys at 100-foot (30 m) intervals throughout the site and within a 150-meter buffer area, in which owls could be affected by noise and vibration, etc., from construction on the site as recommended by CDFW.

A breeding season burrowing owl survey will be completed as well. The California Burrowing Owl Consortium guidelines for breeding season surveys (1993,1997) require four survey visits spread evenly (roughly every 3 weeks) during the peak of the breeding season, from April 15-July 15. The visits will be timed either from 2 hours before to 1 hour after sunset, or 1 hour before to 2 hours after sunrise. All owl sightings, burrows, and sign will be mapped, and territories mapped as possible. All breeding behavior and nest information will be noted.

Thank-you for meeting with us on March 28, 2024, to discuss the proposed modified protocol surveys. Please let me know if I misconstrued or missed anything we discussed regarding the surveys. I look forward to hearing from you. As noted above, we are currently planning to start surveys on April 16, 2024, and would need your feedback before that date. Thank-you in advance for your time, -Virginia

Virginia Strohl
Senior Biologist
Pacific Gas and Electric Company | 406 Higuera Street | San Luis Obispo, California 93401-3869
559.515.3904 cell | v1s4@pge.com

From: Su, Brooke J
To: Strohl, Virginia
Cc: Rice, Erin; Taylor, Colleen; Eisert, Marjorie; Woulfe, MaryBeth
Subject: Re: [EXTERNAL] Request Approval for Desert Tortoise Protocol-Level Surveys for the S-238 Hinkley Compressor Station Electrical Upgrades Project
Date: Thursday, April 11, 2024 11:17:44 AM

Hi Virginia,

Apologies for the delayed response. The survey protocols look good to us. Looking forward to seeing the results.

Thank you,

Brooke Su (she/her)
Fish and Wildlife Biologist | Tribal Coordinator
U.S. Fish and Wildlife Service | Mojave Desert Division
Carlsbad Fish and Wildlife Office
2177 Salk Ave, Suite 250
Carlsbad, California 92008

From: Strohl, Virginia <V1S4@pge.com>
Sent: Wednesday, April 10, 2024 4:58 PM
To: Su, Brooke J <brooke_su@fws.gov>
Cc: Rice, Erin <E1RJ@pge.com>; Colleen Taylor - Jacobs (Colleen.Taylor@jacobs.com) <Colleen.Taylor@jacobs.com>; Eisert, Marjorie/SAC <Marjorie.Eisert@jacobs.com>
Subject: [EXTERNAL] Request Approval for Desert Tortoise Protocol-Level Surveys for the S-238 Hinkley Compressor Station Electrical Upgrades Project

Hi Brooke,

Pacific Gas & Electric (PG&E) is planning to conduct protocol level surveys for desert tortoise for the S-238 Hinkley Compressor Station Electrical Upgrades project, which plans to upgrade the electrical equipment at the Hinkley Compressor Station in Hinkley, California. PG&E is seeking your approval of our modified protocol level surveys for desert tortoise.

A description of the project was previously sent to Mary Beth Woulfe last month and I am including it again below for your ease of reference.

Focused surveys for desert tortoise will be carried out to USFWS (2019) protocols by qualified desert tortoise biologists with Circle Mountain Biological Consultants, to determine presence/ absence of desert tortoise. As required by the protocol, biologist walking transects will survey for signs of desert tortoise at 10m (30-foot) intervals throughout undeveloped portions of the project area and staging areas. (See Figure 1, attached). Positive detection of tortoises will be determined by the following: tortoises, burrows, scats, tracks, courtship rings, drinking depressions, etc. Biologist will record all locations of tortoises and sign encountered during the survey effort using the USFWS 2021 Desert Tortoise Pre-Project Survey Data Sheet. Surveys for desert tortoise will also include a Zone-of-Influence (ZOI) consisting of six transects walked 100' apart starting from the edge of the project area and staging areas as requested by the California Department of Wildlife. Figure 1 shows the planned survey areas and the desert tortoise ZOI transects.

Hinkley Compressor Station Electrical Upgrade Summary

To maintain gas transmission system reliability, PG&E is proposing to complete electrical upgrades at the Hinkley Compressor Station (HCS), located in Hinkley, CA approximately 8 miles west of Barstow, CA (see attached mapping) . HCS is a major compressor station on PG&E's Baja Path gas transmission system, which transports natural gas to millions of customers in pipelines L-300A and L-300B from the Arizona border to the San Francisco Bay Area. The station has no connection to utility power, generating all electricity needed on site with natural gas generators.

The electrical system at HCS has encountered a number of issues related to the equipment's age, reliability, maintainability and safety, and inefficient design. The Hinkley Electrical Upgrades project will increase employee safety and station reliability by upgrading the electrical system at HCS to meet current PG&E standards and requirements.

The Hinkley Electrical Upgrades project will:

- Replace the switchgear line-up (SG) located in the auxiliary building.
- Create a partitioned area inside the auxiliary building to house the new switchgear and provide temperature and humidity control.
- Replace (5) Motor Control Centers (MCC) located at various locations in the station.
- Modify (3) existing MCC located at various locations within the station.
- Install new conduit and cable from the switchgear to MCC.
- Procure temporary generation units to power Hinkley Compressor Station during the switchgear replacement by using 4-5 portable generators.
- Design and fabricate a fuel gas piping system for temporary generation during switchgear replacement.

There will be no improvements to existing gas infrastructure. The project aims to replace existing electrical infrastructure with a modern equivalent that meets current codes and standards. There will be no increases to electrical capacity. The scope of work is contained within the existing, fenced station footprint.

Please let me know if you have any questions or need additional information. Thank-you in advance for your time, -Virginia

Virginia Strohl
Senior Biologist
Pacific Gas and Electric Company | 406 Higuera Street | San Luis Obispo, California 93401-3869
559.515.3904 cell | v1s4@pge.com

Appendix B
Desert Tortoise Survey Memorandum

Pacific Gas and Electric Company

Attachment 1
Transmission Bio Memo

Project Name: S-238	**PG&E Order #: 74013548**
Contract Biologist: Circle Mountain Biological Consultants: Sharon Dougherty, Susan Seville, Sarah Teed	**PG&E Biologist:** Virginia Strohl
Project Location: Hinkley Compressor Station	**Date Prepared**: 9-4-24

1. Survey Description

Conduct a general biological survey, focused survey for Agassiz's desert tortoise, habitat assessment and breeding season survey for burrowing owl, and protocol-level survey and trapping for Mohave ground squirrel

2. Field Visit Performed?

On April 12, 2024. Sharon Dougherty and Susan Seville from Circle Mountain Biological Consultants (CMBC) visited the site, survey area, and surveyed all areas with unpaved surfaces inside the Hinkley Compressor Station fence line (with the exception of the park-like clubhouse area to the east). The survey consisted of transects spaced at 10-meter intervals per the USFWS (2019) protocol for desert tortoise presence-absence surveys. In addition, burrowing owl surveys of the buffer area were completed on transects spaced at 30-m intervals out to 150 m on all PG&E properties to the south, east, north, and west, and on some private lands to the west where permission was granted from the land owner(s). The owner of one private land to the west could not be contacted, and for this reason, this parcel were excluded from the survey. These burrowing owl transects were also surveyed for evidence of desert tortoise, as was an additional set of transects at 180 m at the request of CDFW. (See Figure 1, attached, for buffer transect and survey locations.). Subsequent burrowing owl breeding surveys were conducted of the buffer area during 4 events between May 15 and July 15, 2024.

Mohave ground squirrel trapping took place between April 16, 2024 and June 7, 2024, and followed the California Department of Fish and Wildlife (CDFW) Mohave Ground Squirrel Survey Guidelines (January 2003; revised July 2010, October 2023).

3. Project Description

To maintain gas transmission system reliability, Pacific Gas & Electric Company ("PG&E") is proposing to complete electrical upgrades at the Hinkley Compressor Station (HCS), located in Hinkley, CA approximately 8 miles west of Barstow, CA. HCS is a major compressor station on PG&E's Baja Path gas transmission system, which transports natural gas to millions of customers in pipelines L-300A and L-300B from the Arizona border to the San Francisco Bay Area. The station has no connection to utility power, generating all electricity needed on site with natural gas generators.

The electrical system at HCS has encountered a number of issues related to the equipment's age, reliability, maintainability and safety, and inefficient design. The Hinkley Electrical Upgrades project will increase employee safety and station reliability by upgrading the electrical system at HCS to meet current PG&E standards and requirements.

The Hinkley Electrical Upgrades project will:

- Replace the switchgear line-up (SG) located in the auxiliary building.
- Create a partitioned area inside the auxiliary building to house the new switchgear and provide temperature and humidity control.
- Replace (4) Motor Control Centers (MCC) located at various locations in the station.
- Modify (3) existing MCC located at various locations within the station.
- Install (1) new MCC within the station.
- Remove Auxiliary Load Center No. 1.
- Install new conduit and cable from the switchgear to MCC.

- Procure temporary generation units to power Hinkley Compressor Station during the switchgear replacement by using 4-5 portable generators.
- Design and fabricate a fuel gas piping system for temporary generation during switchgear replacement.

There will be no improvements to existing gas infrastructure. The project aims to replace existing electrical infrastructure with a modern equivalent that meets current codes and standards and there will be no increases to electrical capacity. The scope of work or project area is shown below and is contained within the existing, fenced station footprint and survey area.

4. Land Ownership

The project site is entirely owned by PG&E. Figure 1, below, shows land ownership in the areas surveyed, as well as within the planned project area.

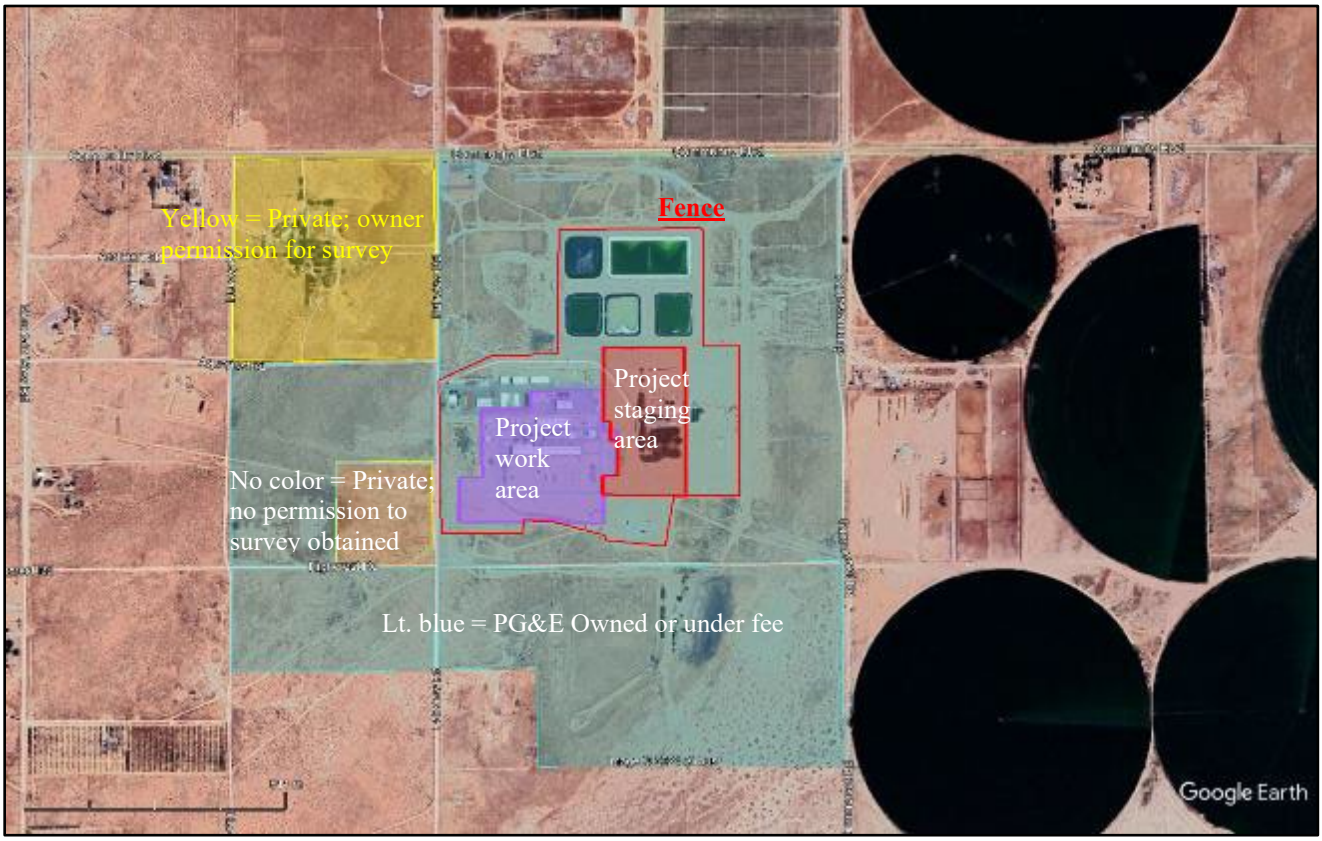

Figure 1. Land Ownership in Survey Area

5. Access

The site is accessed via paved, County-maintained roads, including Community Boulevard and Fairview Road.

6. Summary of Desktop Review

The California Natural Diversity Data Base (CNDDB) was accessed on 26 April 2024. (See "Species Potential for Occurrence," below.) Figure 2, below, shows locations of special-status species records within a 1.5-mile radius of the project area.

Special-status species records mapped at a confidential map scale are Mohave ground squirrel, arroyo toad, and Mojave fringe-toed lizard. CPUC can refer to confidential PEA Figure 5.4-3 and confidential PEA Figure 5.4-5 for the same mapped CNDDB information.

Figure 2. Records of Special Status Species within 1.5 miles of Project Area.

The project area is located in an area designated as Fremont-Kramer to Ord-Rodman Linkage for desert tortoise and the habitat value is described as "non-habitat" and "lost or severely disturbed habitat." The closest designated Critical Habitat Area for desert tortoise is the Fremont-Kramer Critical Habitat Area, which is located at its closest point 2.7 miles to the northwest of the project area. The facility is located about 1 mile east of mapped "MGS Important Areas" shown in PG&E HCP shape files. The project area does not fall within any protected lands or conservation easements, is not within a coastal area, is not located on private land or in any lands managed by a state or federal agency. A KMZ of the work area and access routes is available from PG&E.

6.A. Field Review

6.A.1. Methodology

Survey and Habitat Assessment Protocols. A significant paper was published in June 2011 (Murphy et al. 2011) whereby the "desert tortoise" of the Mojave Desert was split into two species, including *Gopherus agassizii*, referred to as "Agassiz's desert tortoise," and a newly described species, *G. morafkai*, referred to as "Morafka's desert tortoise," which occurs in the Sonoran Desert. According to Murphy et al. (2011), "…this action reduces the distribution of *G. agassizii* to only 30% of its former range. This reduction has important implications for the conservation and protection of *G. agassizii*, which may deserve a higher level of protection." Then in 2016 (Edwards et al. 2016), a third species of tortoise was described, referred to as the "Goode's Thornscrub Tortoise" (*Gopherus evgoodei*), which further reduced the perceived range of Morafka's desert tortoise. Agassiz's desert tortoise is the threatened species that occurs in the region surrounding the subject property.

For **Agassiz's desert tortoise**, CMBC followed the presence-absence survey protocol first developed by the USFWS in 1992 and revised in 2019. USFWS (2019) protocol recommends surveying transects at 10-meter (30-foot) intervals throughout all portions of a given parcel and its associated action area. In addition, at the request of the CDFW, CMBC surveyed six Zone-of-Influence transects located at a distance of 30, 60, 90, 120, 150, and 180 meters (~100 feet apart)

from the project area to the east, north, west, and south, where possible. The area north of community Boulevard was not considered appropriate habitat, since it is agricultural, and a parcel of private property to the west was excluded since it was not possible to get the owner's permission to access. (See Figure 1.)

For **burrowing owl**, although the formal habitat assessment does not specify a given interval to survey a site, subsequent breeding and nonbreeding studies identify that transects are surveyed at 7 to 20 meters (23 to 65 feet) apart, with five additional transects surveyed at 30-meter intervals out to 150 meters (500 feet) in adjacent areas in potential habitat (i.e., excluding areas substantially developed for commercial, residential, and/or industrial purposes) (Appendix D in CDFG 2012). With its narrower transect intervals, the tortoise survey was sufficient to cover the site for burrowing owl, and buffer area transects coincided with the first five zone-of-influence transects for desert tortoise. The focus of the survey was to find and inspect all burrows sufficiently large to be used by burrowing owls. UTM coordinates were collected for all such burrows, which are mapped in Figure 4. Importantly, this methodology is considered a formal *habitat assessment* for presence of burrowing owls, which can be conducted any time of the year. Breeding burrowing owl surveys were conducted in the buffer area during the spring and summer as outlined in CDFG (2012).

For **Mohave ground squirrel**, protocol trapping surveys were conducted between April 16, 2024, and June 7, 2024. CDFW Mohave Ground Squirrel Survey Guidelines (January 2003; revised July 2010, October 2023) were followed and required that visual surveys of the project site be carried out between March 15 and April 15. Visual surveys were carried out concurrent with focused surveys for desert tortoise and habitat assessment for burrowing owl. A trapping grid including 100 Sherman live traps was designed based on the best available habitat surrounding the project area. Ten trail cameras baited with grain and peanut butter powder were placed around the grid. Figure 3 shows the trap and camera locations.

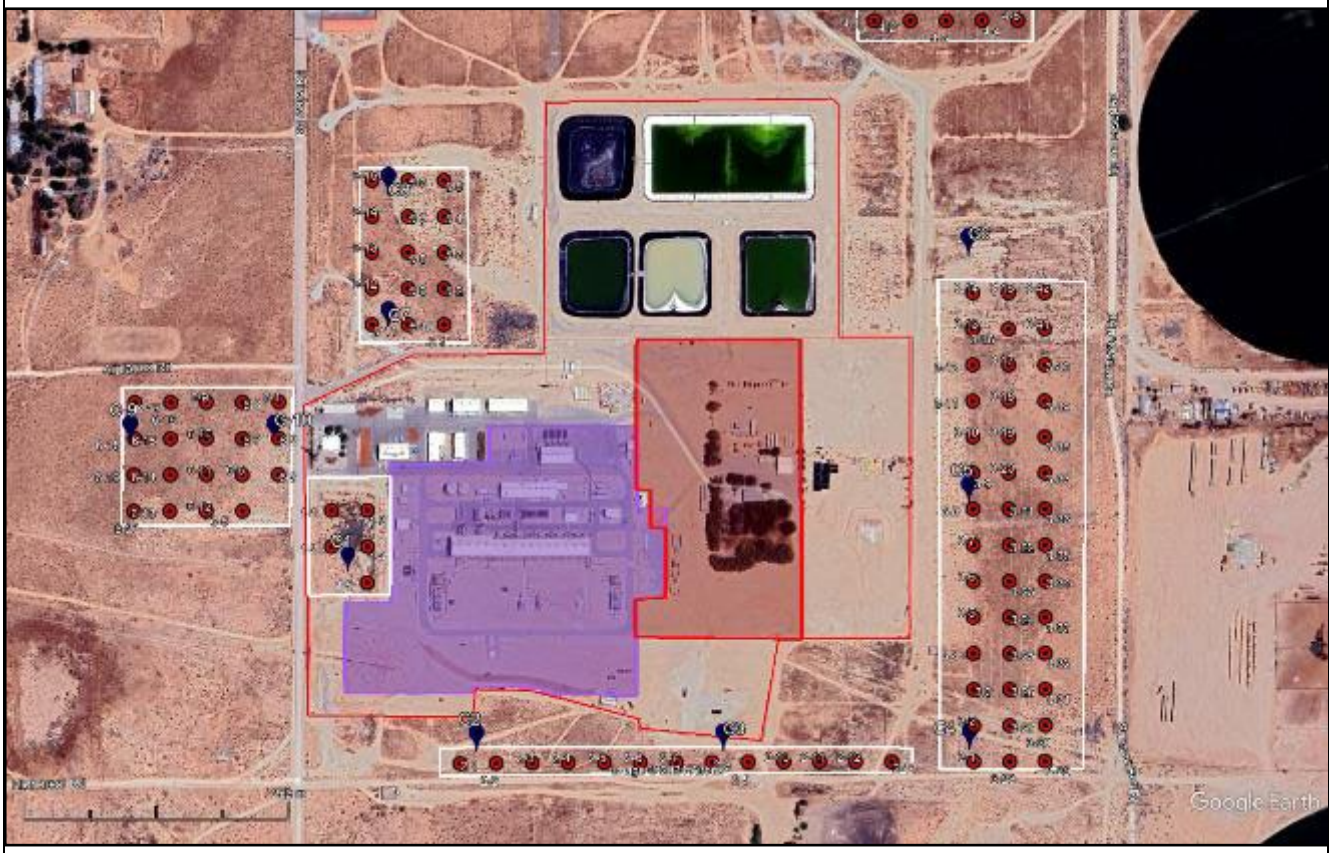

Figure 3. Mohave ground squirrel trapping grid and camera placement

Three trapping sessions were conducted per the protocol and ran for 5 consecutive days during each of the three trapping periods: 1) March 15 through April 30; 2) May 1 through May 31; and 3) June 1 through July 15. The trapping sessions were conducted with at least two weeks apart between them. Actual trapping sessions were April 16-20, 2024, May 3-7, 2024, and June 3-7, 2024. Captured ground squirrels (both MGS and AGS) were marked using a non-toxic permanent marking pen, as directed by the protocol. All measures to ensure the health and welfare of Mohave Ground Squirrels provided in the survey guidelines were followed.

Field Survey Methods. For a total of 20 survey hours, between 1015 and 1600 on March 12, 2024, and between 0815 and 1300 on March 13, 2024, Susan Seville and Sharon Dougherty of CMBC surveyed the site and adjacent areas as described herein. This effort entailed a survey of transects, spaced at 10-meter (30-foot) intervals within all unpaved areas within the HCS, shown as turquoise-outlined in Figure 4, below. As depicted in Figure 4, peripheral transects (shown as blue lines) were surveyed for detection of burrowing owls and desert tortoise at 30-meter (100-foot) intervals out to 180 m where habitat is present and permission to survey was obtained.

As the site was surveyed, tallies of observable human disturbances encountered were noted. 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 survey 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 Survey

Date 2024	Begin to End = Total survey hours*	Weather Conditions	
		Beginning	Ending
4/12/24	1015 to 1600 = 10.5 survey hrs	77°F, 2↑ 3 mph, 20% cloud	80°F, 12 ↑ 24 mph, <5% cloud
4/13/24	0815 to 1300 = 9.5 survey hrs	56°F, 2 ↑ 5 mph, 0% cloud	73°F, 7 ↑ 8 mph, <5% cloud

*Total hours = @@ hours multiplied by two for the two biologists surveying the site = @@ hours.

All plant and animal species identified during the survey 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. A digital camera (cell phone) was used to take representative photographs. ©2024Google™ Earth was accessed via the internet to provide available aerial photographs of the subject property and surrounding areas.

6.A.2. Results

Common Biological Resources. The common plant and animal species identified during the survey, including survey buffers, are listed in Appendices A and B, respectively. Based on DeLorme Topo USA® 10.0 software, elevations on the subject property range from approximately 681 meters (2,233 feet) at the southwest corner down to 670 meters (2,200 feet) at the northeast corner. Terrain is relatively flat. Soils are sandy loam. No blueline streams designated by the U.S. Geological Survey (USGS) occur on-site.

Common Flora. The 45 plant species identified during the survey are listed in Appendix A. The project is located within the highly developed HCS, with very little native habitat present. The two-acre area, located within the HCS, on the western boundary of the facility, south of the entrance, and in adjacent, unfenced areas is alkali desert scrub (ASD) dominated by Allscale (*Atriplex canescens*). This area, which is outside of the project area, appears to have been a borrow pit and is low-lying compared to the rest of the site, with some seasonal flooding. Adjacent lands are a mix of ASD and Desert Scrub (DSC), with more creosote bush (*Larrea tridentata*) at slightly higher elevations.

Common Fauna. The 2 reptile, 19 bird, and 4 mammal species identified during the survey are listed in Appendix B. Most are common desert species or species typically associated with developed areas, but several waterbirds are present in the vicinity of the evaporation ponds on the north part of the facility.

Uncommon Biological Resources. Figure 4 shows the survey areas, locations of zone-of-influence and burrowing owl buffer transects, observations of special status species, nesting birds, and California ground squirrel burrows inspected for evidence of burrowing owl.

Agassiz's Desert Tortoise. The only **desert tortoise** sign found either on-site or in adjacent areas during this focused protocol survey for the species (USFWS 2019) were two small fragments of an old desert tortoise carcass (greater than 4 years old). (See the green symbol near the southern fence line in in Figure 4, below.) These fragments may have been present as early as ca. 2017, when the fenced area was expanded to the south, and vegetation in that

area was removed. Based on the absence of any other tortoise sign on the subject property and in adjacent areas, CMBC concludes that Agassiz's desert tortoise is currently absent from the subject property. Also, there is little likelihood of wild tortoises entering the site from adjacent areas, either to pass through the site or establish residency, as the site is fenced, and no suitable habitat is present within the fenced facility.

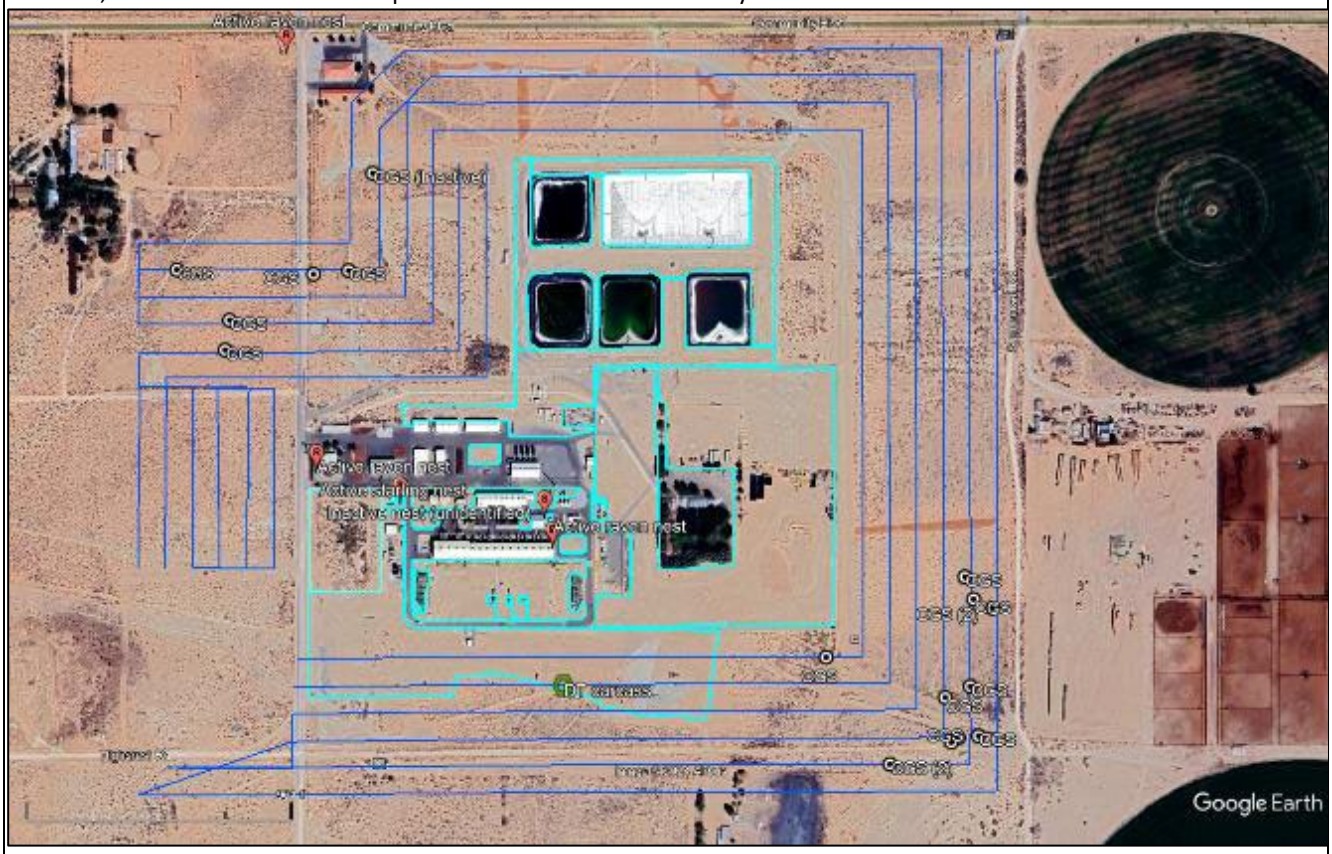

Figure 4. Survey Results.

Other Special Status Species. U.S. Fish and Wildlife Service (2008), California Department of Fish and Wildlife [CDFW 2024a for California Natural Diversity Data Base; 2024b for Special Plant Species list; 2024c for Special Animal Species list; and California Native Plant Society (CNPS 2024)] maintain lists of animals and/or plants considered rare, threatened, or endangered, which are herein collectively referred to as "special status species." The six species included in the CNDDB report for the Hinkley quadrangle are listed and evaluated in a table included in this memo, labeled "Species Potential for Occurrence," and include Arroyo toad, Mojave Tui chub, Mojave fringe-toed lizard, and American badger in addition to the three target species in CMBC's surveys (desert tortoise, burrowing owl, and Mohave ground squirrel). Arroyo toad, Mohave tui chub and Mojave fringe-toed lizard all have specific habitat requirements that preclude their occurrence in the project area and surrounding undeveloped lands and are thus considered absent.

Burrowing owl is designated as a California Species of Special Concern by CDFW (2024c), as a Bird of Conservation Concern by the USFWS (2008) and is considered Sensitive by the BLM (CDFW 2024a). It is one of the focal species specifically sought during field surveys, particularly in adjacent areas, and is usually detected by distinctive feathers, zygodactyl (x-shaped) tracks, and whitewash (fecal material deposited away from burrows may be from other bird species). Although pellets and feathers are sufficiently distinctive that they may be identified away from burrows, it is one or more of these signs at sufficiently large burrows that are the most definitive means of determining burrowing owl use of a given site.

In the case of the subject property, there was no evidence of burrowing owl. Burrowing owls do not create their own burrows; rather they find existing burrows, which they may slightly modify in order to occupy. Typical existing burrows used by burrowing owls include abandoned kit fox dens, both active and inactive tortoise burrows, deeper badger digs, and inactive California ground squirrel burrows. No such burrows were found on-site, but 17 California ground squirrel burrows of appropriate size were noted in adjacent areas and are mapped in Figure 4. Only one of these burrows was clearly inactive.

Four records for burrowing owls are included in the CNDDB report for the Hinkley quadrangle. These are all from 2007 and located about 4 miles to the northwest of the subject property. Nesting season surveys were conducted during 4 periods between April 15 and July 15. No burrowing owls or active burrows were observed.

No Mohave ground squirrels were found during the 15 trapping-day protocol trapping survey. A total of 28 camera trapping days were completed from April 15 to May 7, 2024, and June 3 to June 7, 2024, Inspection of 86,000 images resulted in no detection of Mohave ground squirrels.

7. Land Use

The project area is located within the fenced PG&E Hinkley Compressor Station, which is occupied by numerous buildings, housing natural gas generators, offices, and associated infrastructure. To the south, there is a mix of developed and undeveloped lands, including the Barstow gun club. To the east, lands outside the fence are disturbed native scrub, with a dairy farm and alfalfa field opposite Summerset Road. To the north, PG&E operates alfalfa cultivation as part of its groundwater recharge project, and to the west, lands are a mix of rural residential and somewhat disturbed native habitat. Several PG&E gas lines pass through lands adjacent to the fenced facility.

8. Habitat Types

The survey is located within the highly developed HCS, with very little native habitat present. The two-acre area on the western boundary of the facility, south of the entrance, and in adjacent unfenced areas is alkali desert scrub (ASD) dominated by Allscale (*Atriplex canescens*). (See Figure 4). This area, which is a part of the HCS and is included in the survey area, is not included in the project area. It appears to have been a borrow pit and is low-lying compared to the rest of the site, with some seasonal flooding. Adjacent lands are a mix of ASD and Desert Scrub (DSC), with more creosote bush (*Larrea tridentata*) at slightly higher elevations.

9. Nesting Birds

During CMBC's site survey and trapping surveys, several nests were identified and are mapped in Figure 4. Three active raven nests were noted, two within the fenced facility and one on a cell tower near the southwest corner of Community Boulevard and Fairview Road. An active European starling nest was located in the eaves of a building, and an inactive nest in a separate building. European starlings are an invasive species, and their nests are not protected under the Migratory Bird Treaty Act. Two other bird species present on the site (house sparrow and Eurasian collared-dove) also fall under this category. The project is scheduled for fall of 2024, by which time there should not be any active nests on the site or in surrounding areas.

10. Aquatic Resources

The only aquatic features on the site are evaporation ponds on the north part of the facility. While American avocets, black stilts, American gadwalls, American pipit, and unidentified sandpipers were observed at these ponds, shorebirds are discouraged from using these ponds through auditory hazing (canons). (Hazing was paused during MGS trapping sessions.) No project activity will take place in the vicinity of these ponds.

11. Safety Observations

No observations.

12. Species Potential for Occurrence

Species/ Common Name	Absent	Unlikely to Occur	Seasonally present	Likely to occur	Potential to occur	Present*
Anaxyrus californicus/ arroyo toad	**X** Amphibious. Requires aquatic habitat. Nearest habitat is Mojave River.					
Athene cunicularia/ burrowing owl	**X** No evidence of species found on-site or in adjacent areas.					
Siphateles bicolor mohavensis/ Mohave tui chub	**X** Aquatic. No suitable habitat present.					
Xerospermophilus mohavensis/ Mohave ground squirrel					**X** One record from CNDDB, ±0.7 mile to NW. Protocol trapping surveys completed and none were found. Project area is developed and not suitable habitat.	
Taxidea taxus/ American badger		**X** No evidence of species found during site surveys and buffer area surveys. Project area is developed and not suitable habitat.				
Gopherus agassizii/ desert tortoise		**X** No evidence of species found during site surveys and buffer area surveys. Project area is developed and not suitable habitat.				
Uma scoparia/ Mojave fringe-toed lizard	**X** Requires Aeolian sand deposits. Nearest suitable habitat is Mojave River.					

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Appendix A. Plant Species Detected

The following plant species were identified on-site during the focused floral inventory described in this report. Protected plant species are highlighted in red and signified by "(PPS)" following the common names. The 16 species found only in adjacent areas are signified by "+."

GNETAE	GNETAE
Ephedraceae	**Joint-fir family**
+Ephedra nevadensis	Nevada joint-fir
ANGIOSPERMAE: DICOTYLEDONES	DICOT FLOWERING PLANTS
Asclepiadaceae	**Milkweed family**
Funastrum cynanchoides var. *hartwegii*	Climbing milkweed
Asteraceae	**Sunflower family**
Ambrosia dumosa	Burrobush
Ambrosia salsola	Cheesebush
Chaenactis fremontii	Desert pincushion
Chaenactis stevioides	Gray-leaved pincushion
Erigeron (*Conyza*) *canadensis*	Mare's tail
Lasthenia californica	California goldfields
Layia glandulosa	White tidy tips
Malacothrix coulteri	Snake's-head
Malacothrix glabrata	Desert dandelion
+Rafinesquia neomexicana	Desert chicory
*+*Sonchus oleraceus*	Common sow-thistle
Stephanomeria exigua	Milk aster
Boraginaceae	**Borage family**
Amsinckia tessellata	Fiddleneck
Cryptantha maritima	Guadalupe cryptantha
Pectocarya platycarpa	Broad-margined combseed
Brassicaceae	**Mustard family**
*+*Brassica tournefortii*	Saharan mustard
Lepidium lasiocarpum	Sand peppergrass
**Sisymbrium altissimum*	Tumble mustard
Cactaceae	**Cactus family**
Cylindropuntia echinocarpa	Silver cholla (PPS)
Chenopodiaceae	**Goosefoot family**
Atriplex canescens	Four-winged saltbush
Atriplex polycarpa	Allscale
*+*Chenopodium vulvarium*	Stinking goosefoot
**Salsola tragus*	Russian thistle
Geraneaceae	**Geranium family**
**Erodium cicutarium*	Red-stemmed filaree
Loasaceae	**Stick-leaf family**
+Mentzelia albicaulis	Little blazing star
Malvaceae	**Mallow family**
+Eremalche exilis	Trailing mallow
+Malva parviflora	Cheeseweed
+Sphaeralcea ambigua	Desert mallow
Onagraceae	**Evening-primrose family**
+Camissonia campestris	Mojave sun-cups
Chylismia (*Camissonia*) *claviformis*	Brown-eyed primrose
Oenothera deltoides	Devil's lantern
Polemoniaceae	**Phlox family**
Gilia stellata	Dotted-throat gilia
Polygonaceae	**Buckwheat family**
Chorizanthe rigida	Rigid spineflower

Eriogonum gracile	Buckwheat
Solanaceae	**Nightshade family**
+Lycium andersonii	Anderson's box-thorn
+Lycium cooperi	Peach thorn
Tamaricaceae	**Tamarisk family**
*+*Tamarix ramosissima*	Tamarisk
Zygophyllaceae	**Caltrop family**
Larrea tridentata	Creosote bush
ANGIOSPERMAE: MONOCOTYLEDONES	MONOCOT FLOWERING PLANTS
Amaryllidaceae	**Amaryllis family**
Dichelostemma capitatum	Blue dicks
Poaceae	**Grass family**
**Bromus madritensis* ssp. *rubens*	Red brome
**Bromus tectorum*	Cheat grass
**Hordeum murinum*	Hare barley
**Schismus* sp.	Split-grass

* - 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 inventory described in this report. Waterbirds found only in the evaporation ponds (outside the project area) are signified by #. Those only found in adjacent areas are signified by "+."

REPTILIA	REPTILES
Iguanidae	**Iguanids**
Uta stansburiana	Common side-blotched lizard
Teiidae	**Whiptails**
+Cnemidophorus tigris	Western whiptail
AVES	BIRDS
Ardeidae	**Herons**
#Egretta thula	Snowy egret
Anatidae	**Ducks, geese, and swans**
#Anas cyanoptera	Cinnamon teal
#Anas strepera	Gadwall
Recurvirostridae	**Stilts and avocets**
#Himantopus mexicanus	Black-necked stilt
#Recurvirostra americana	American avocet
Columbidae	**Pigeons and doves**
Streptopelia decaocto	Eurasian collared-dove
Zenaida macroura	Mourning dove
Tyrannidae	**Tyrant flycatchers**
Sayornis saya	Say's phoebe
Corvidae	**Crows and jays**
Corvus corax	Common raven
Mimidae	**Mockingbirds and thrashers**
+Mimus polyglottos	Northern mockingbird
Motacillidae	**Wagtails and pipits**

Anthus rubescens	American pipit
Sturnidae	**Starlings**
Sturnus vulgaris	European starling
Emberizidae	**Sparrows, warblers, tanagers**
+Spizella breweri	Brewer's sparrow
+Zonotrichia leucophrys	White-crowned sparrow
+Sturnella neglecta	Western meadowlark
Euphagus cyanocephalus	Brewer's blackbird
Fringillidae	**Finches**
Carpodacus mexicanus	House finch
Passeridae	**Weavers**
Passer domesticus	House sparrow
MAMMALIA	MAMMALS
Leporidae	**Hares and rabbits**
Lepus californicus	Black-tailed hare
Sciuridae	**Squirrels**
+Otospermophilus beecheyi	California ground squirrel
Heteromyidae	**Pocket mice**
+Dipodomys sp.	Kangaroo rat
Cricetidae	**Rats and mice**
Neotoma lepida	Desert wood rat

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.

Appendix C. Site Photos

Figure 5. Locations of photos

Photo 1. NW corner of HCS facility, facing SE

Photo 2. SW corner of HCS facility, facing NE

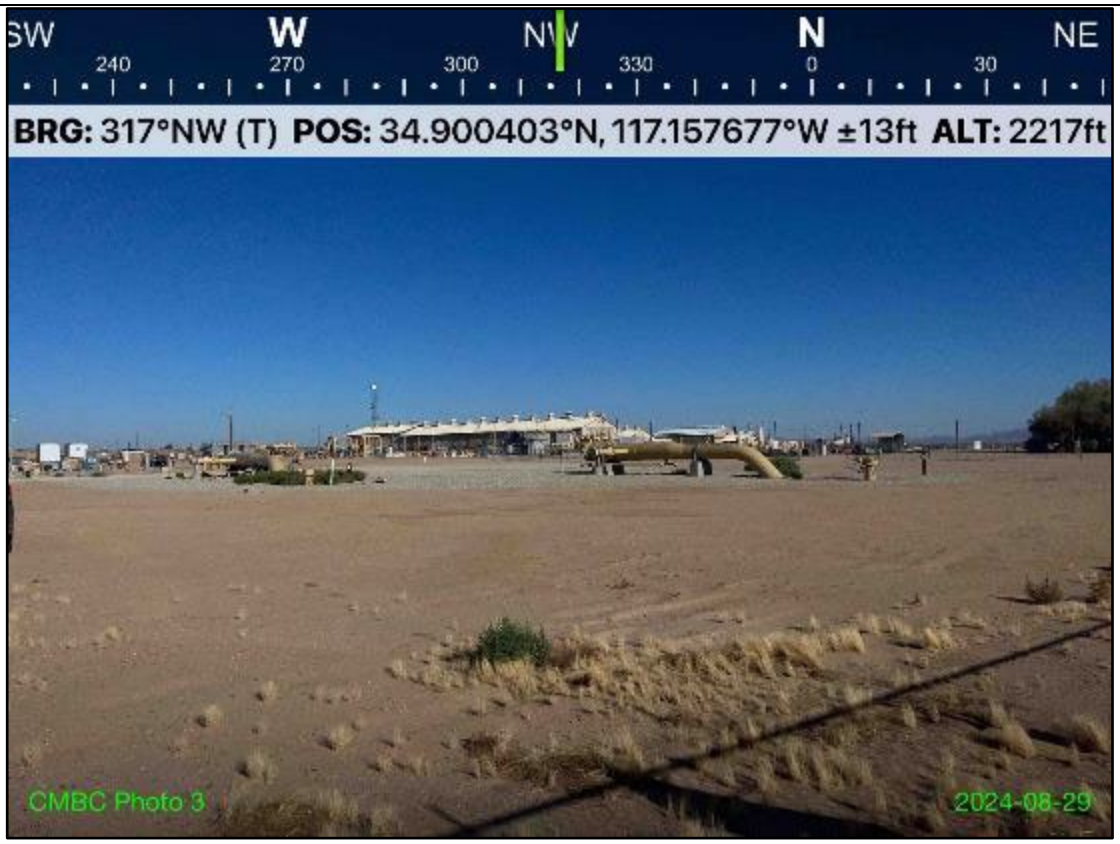


Photo 3. Fence corner on S border of HCS facility, facing NW

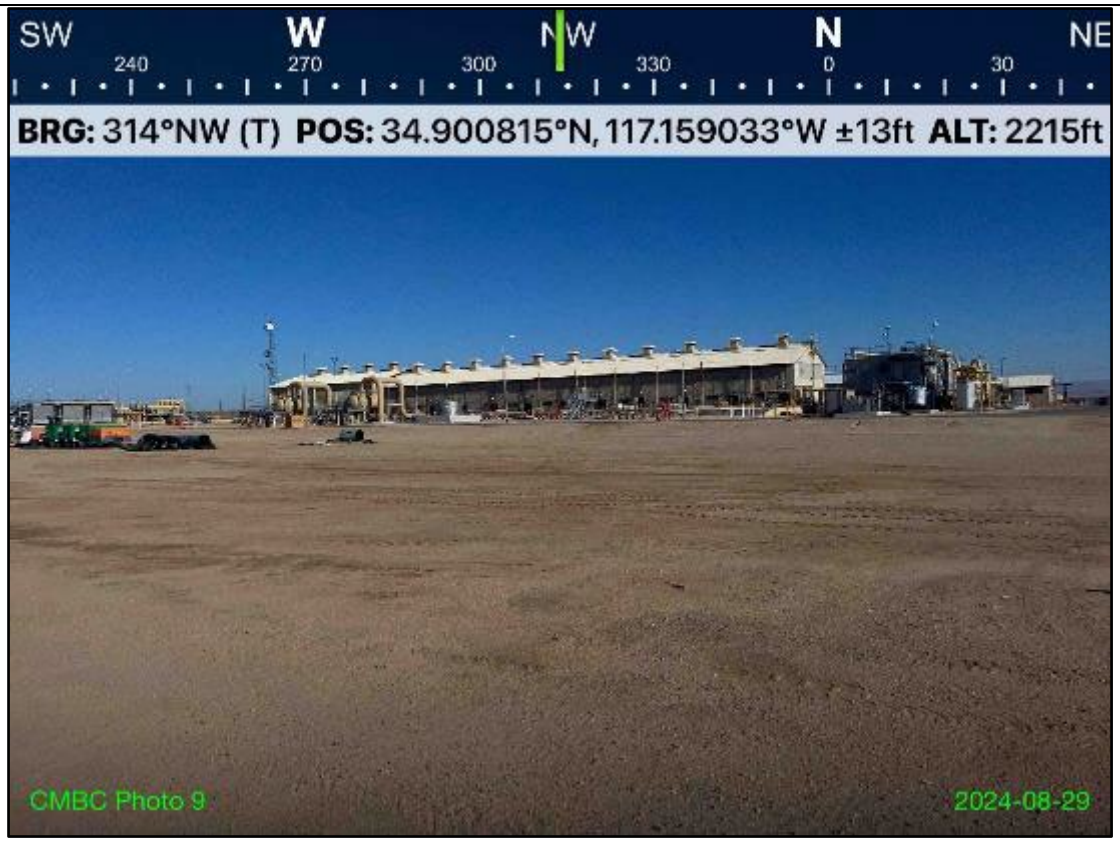
Photo 4. SE corner of HCS facility, facing NW

Picture 5. NE corner of HCS facility, excluding evaporation ponds, facing SW

Picture 6. NW corner of Project Area, facing SE

Picture 7. Interior SW corner of Project Area, facing NE

Picture 8. SW corner of Project Area, facing NE



Picture 9. SE corner of Project Area, facing NW

Photo 10. NE corner of Project Area, facing SW

Photo 11. NW corner of Staging Area, facing SE

Photo 12. SW corner of Staging Area, facing NE

Picture 13. SE corner of Staging Area, facing NW

Picture 14. NE corner of Staging Area, facing SW

Picture 15. View of Habitat Off-site to East of HCS facility

Recommendations for Resource Impact Minimization
None

11. Project Impacts	
C. Are any special-status animal or plant species, or habitat that could support such species, known to be present on or near the project site?	☒Yes ☐No ☐Unknown Agassiz's desert tortoise Mohave ground squirrel Burrowing owl ☐Continued on additional page(s)
D. Identify the source(s) of information that supports a "yes" or "no" answer above in Box 11.C.	CNDDB records, PG&E ArcGIS shape files.
E. Has a biological study been completed for the project site?	☒Yes ☐No
G. Have fish or wildlife resources or waters of the state been mapped or delineated on the project site?	☐Yes ☒No (None present.) Attach Map

12. Measures to Protect Fish, Wildlife, and Plant Resources	
B. Describe project avoidance and/or minimization wildlife, and plant resources. measures to protect fish,	Project will take place within non-habitat, fenced areas. Project will take place in fall, outside the bird nesting season. ☐Continued on additional page(s)
C. Describe any project mitigation and/or compensation measures to protect fish, wildlife, and plant resources.	None ☐Continued on additional page(s)

Appendix C
Mohave Ground Squirrel Survey Memorandum

Mohave Ground Squirrel Trapping Results: PG&E S-238 Transmission Project, Hinkley, San Bernardino County, California

Prepared for:

Jacobs Engineering Group, Inc.
2485 Natomas Park Drive Suite 600
Sacramento, California 95833
PH: (916) 806-9250

Contacts: Marjorie Eisert, Jacobs; Virginia Stroh, PG&E
Email: Marjorie.Eisert@jacobs.com; v1s4@PGE.com

Pacific Gas and Electric's S-238 Electric Upgrades Project
at the PG&E Compressor Station in the Community of Hinkley,
San Bernardino County, California
(U.S. Geological Survey 7.5' Hinkley Quadrangle,
Township 9N, Range 3W, a portion of Section 2, S.B.B.&M)

Prepared by:

Sarah Teed
Circle Mountain Biological Consultants, Inc.
P.O. Box 3197
Wrightwood, California 92397

Email: falconbiological@gmail.com
Contact: Sarah Teed
PH: 760-223-1329

I hereby certify that the statements furnished herein, including attached exhibits, present the data and information required for this Mohave ground squirrel trapping report, 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 trapping effort 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: Sarah Teed

June 24, 2024

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Mohave Ground Squirrel Trapping Results: S-238 Transmission Project, Hinkley, San Bernardino, California

I. INTRODUCTION

Circle Mountain Biological Consultants, Inc. (CMBC) was contracted by Virginia Strohl, senior biologist with Pacific Gas & Electric Company ("PG&E") to perform trapping surveys to determine the presence of the California State threatened Mohave ground squirrel (*Xerospermophilus mohavensis*), herein "MGS." It is our understanding that in order to maintain gas transmission system reliability, PG&E is proposing to complete electrical upgrades at the Hinkley Compressor Station (HCS), located in Hinkley, CA approximately 8 miles west of Barstow, CA. and that the survey is intended to determine the presence-absence of this particular species.

The project area of 65 acres is located within the developed Hinkley Compressor Station. The grid was set up in the following general location: U.S. Geological Survey 7.5' Hinkley Quadrangle Township 9N, Range 3W, a portion of Section 2, S.B.B.&M. Table 1, below, provides latitude and longitude coordinates for the trapping grid sections that were established and used for the project.

Table 1. Coordinates of Modified Grid (WGS84)

Modified Grid	Latitude:	Longitude:	Total area (acres)
Section 1	34.90211	-117.16223	2.24
Section 2	34.90031	-117.16073	6.68
Section 3	34.90212	-117.15505	15.6
Section 4	34.90671	-117.1558	1.44
Section 5	34.90469	-117.16145	4.43
Section 6	34.90306	-117.16357	5.44

The following background information for the species is published in various places (e.g., David Laabs' species account published in U.S. Bureau of Land Management 2005), and much of it was in the form of personal communication from Dr. Phil Leitner to Ed LaRue of CMBC. Following winters of sufficient rainfall [e.g., a minimum of about 7.5 centimeters (3 inches)], MGS emerge in February from dormancy, reproduce, and have a litter of up to nine young in late March to early April; they forego reproduction if there is less than about 3 inches of rainfall. If reproductive, they will remain active into the summer, with adults becoming dormant in June and July and juveniles as late as August; if there is no reproduction, adults will become dormant as early as late May. The MGS is approximately 20 to 23 centimeters (8 to 9 inches) in length, sandy-colored on top, lighter underneath, with a bi-colored (dark above, light below) tail flattened dorso-ventrally. Their diet consists of seeds, leaves, flowers, and fruits of both annual and perennial plants; arthropods are occasionally taken. Their ability to overwinter depends on achieving a body weight of approximately 180 grams. The MGS is currently listed as Threatened by the California Fish and Game Commission. U.S. Fish and Wildlife Service (USFWS) has declined to list it federally following two petitions, the last of which was in 2005.

Mohave Ground Squirrel

The Memorandum of Understanding (MOU) SC-001544 was issued June 2, 2023, and is valid through December 31, 2026, in connection with Scientific Collecting Permit (SCP; S-193250005-19325-001) issued by California Department of Fish and Wildlife (CDFW) identifies Ed LaRue Principal Investigator, Sharon Dougherty and Sarah Teed as Independent Researchers, and Susan Seville as a Field Assistant. Ms. Teed carried out protocol level surveys for MGS, including live trapping, with the assistance of Sharon Dougherty, Susan Seville, and volunteer observer John Myers to determine absence/presence of MGS within the 65-acre project area. The survey followed the protocol established by the CDFW in January 2003 and revised in July 2010 and October 2023.

Since the project area is located within an established compression station that has been active for many decades, little suitable habitat is present for MGS. The only potentially suitable area is comprised of less than two acres along the western edge of the facility. Given the small size of the area, only five live traps can be accommodated within the fenced facility.

The additional 95 traps were placed at 35-m intervals as best as could be accommodated in vegetated areas to the west, south, northwest, northeast, and east of the facility with a total combined trapping area of 35.83 acres. (See Figure 1.) Ten trail camera stations were placed

in trapping areas within the facility and in adjacent areas.

The protocol requires trapping efforts to occur for five consecutive days during each of the three trapping periods: a. March 15 through April 30; b. May 1 through May 31; and c. June 1 through July 15. At least two weeks separated each of the trapping periods on a project site. CMBC completed the following trapping session efforts: Session 1. April 16- April 20, Session 2. May 3- May 7 and Session 3. June 3- June 7. Captured ground squirrels were marked using a non-toxic permanent marking pen. To facilitate identifying previously captured ground squirrels in camera-trap photos, marks were made on the dorsolateral pelage of the animals. Live-trapping results will be reported to California Department of Fish and Wildlife (CDFW) using the CDFW MGS Survey Form 2024.

The surveys and live trapping for MGS all occurred on PG&E-owned property in San Bernardino County in or adjacent to the HCS. The GPS coordinates for the center of the HCS are latitude 34.903016 and longitude -177.159001 using a WGS84 geographic projection from Google Earth.

As described below, the methodology used for this effort is referred to as "Protocol Trapping," which is regulated by CDFW (see CDFG 2003 revised 2010 and October 2023).

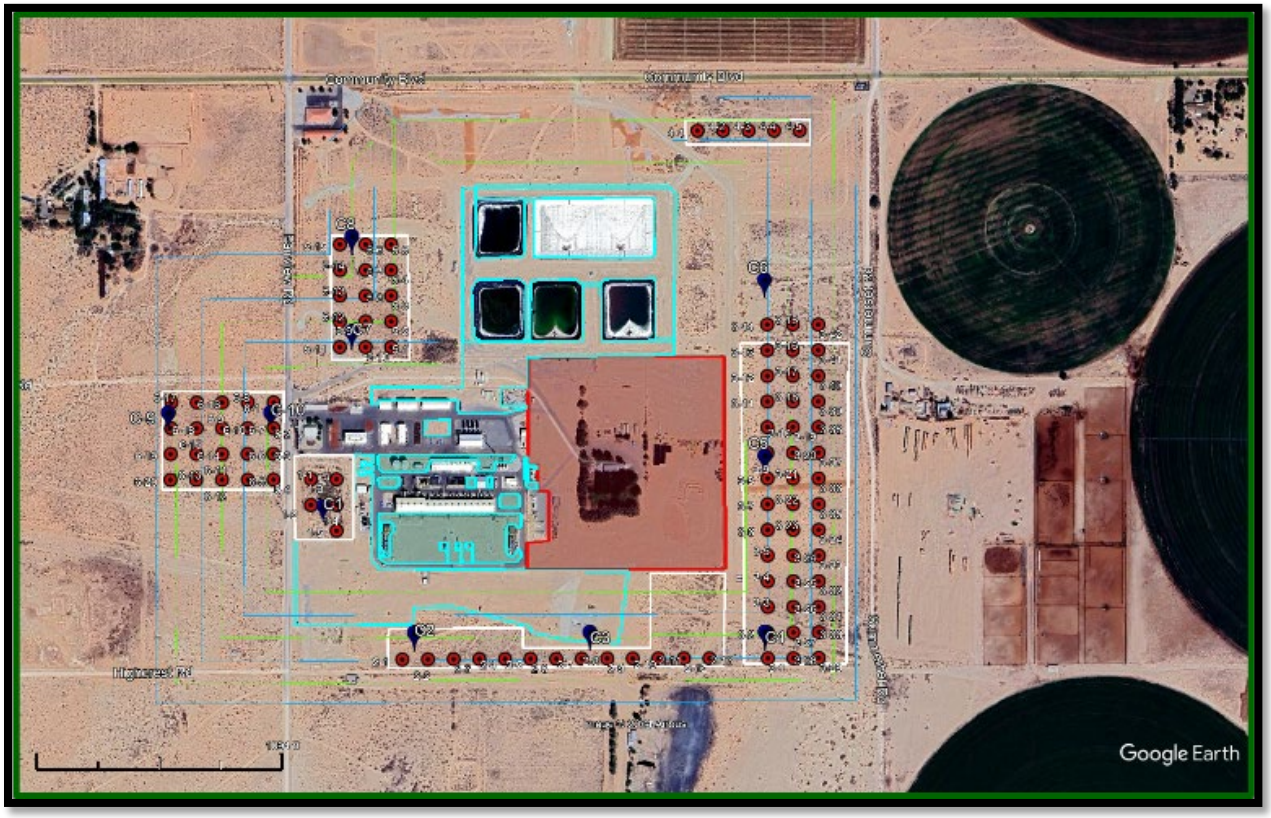

Figure 1. Modified grid location layout projected over aerial photograph of subject property. Individual traps are shown as red circles.

II. FIELD SURVEY METHODS

Surveys were conducted according to the following recommended guidelines. Actual implemented methods are listed following the official methodology, from the "California Department of Fish and Wildlife Mohave Ground Squirrel Survey Guidelines," dated January 2003 and revised in 2010 and 2023. A note on how the requirements have been met is described, following the CDFW text.

1. **Requirement:** Visual surveys to determine MGS activity and habitat quality shall be undertaken the period of 15 March through 15 April. All potential habitat on a project site shall be visually surveyed during daylight hours by a biologist who can readily identify the MGS and the white-tailed antelope squirrel (*Ammospermophilus leucurus*).

   Action Taken: Visual surveys were performed by Sharon Dougherty and Susan Seville during daylight hours on April 12, 2024.

2. **Requirement:** If visual surveys do not reveal presence of the MGS on the project site, standard small-mammal trapping grids shall be established in potential MGS. The number of grids will depend on the amount of potential habitat on the project site.

   Action Taken: For this effort a modified grid of 100 traps was established, comprised of six separate trapping areas throughout the 65-acre site. Notification of approval to implement this modified MGS protocol trapping grid was received April 10, 2024, from Julia Karo, Senior Environmental Scientist Specialist with CDFW.

3. **Requirement:** Live-trap grids should be established in representative patches of the best available MGS habitat within the project site to maximize the potential to detect MGS, as determined by the qualified biologist for the project. Standard configurations of 100 traps spaced at 35 meters (115 feet) apart are ten by ten traps for non-linear projects and 4 by 25 traps for linear projects. Bait should consist of rolled oats, mixed grains, or bird seed. Other seed and grain mixes may be used where personal experience has shown a particular brand or mixture is effective in attracting MGS. If using a simple bait, such as rolled oats, a small amount of peanut butter should be mixed into the dry bait to increase attractiveness.

   Action Taken: In this case, 100, 12-inch Sherman traps with shade boxes, spaced 35 meters apart were placed on the subject property as shown in Figure 1. The configuration was chosen to (a) cover as much of the site and as wide an area as possible; (b) to place traps in habitats most likely to support MGS; and (c) to avoid barren areas, active project areas, etc. that are not ideal for MGS. For this project the single grid of 100 traps was intended to survey the 65-acre± subject property. The bait mixture used, consisted of four-way grain mixed with powdered peanut butter.

4. **Requirement:** Trapping should occur for five consecutive days during each of the three trapping periods. At least two weeks should separate each of the trapping periods on a project site. The Trapping Periods are:
    a. March 15 through April 30
    b. May 1 through May 31 and
    c. June 1 through July 15.

Action taken: The completed trapping dates are:
Session 1: April 16-20, 2024.
Session 2: May 3-7, 2024.
Session 3: June 3-7, 2024.

5. **Requirement:** The times for trap opening and closure for MGS detection should depend on the forecast high temperature of the day and the actual air temperatures as measured on the project site.
    a. On days forecasted or expected not to exceed 32°C (90°F), trap opening should begin no later than one hour after sunrise. Assuming air temperature as measured onsite does not exceed 32°C (90°F), then the traps should remain open for a minimum of 10 hours.
    b. On days forecasted or expected to exceed 32°C (90°F), trap opening should begin at first light, with the expectation that traps may need to be closed after the first or second trap check. When traps are closed due to high temperatures four hours or more after opening, the effort may be considered a full trap-day. If traps are open less than four hours, an additional day of trapping on the grid should be conducted to make up for the short day.
    c. Additional information on trap check intervals and trap closures on hot days are described in the Health and Welfare section. Basic weather conditions should be recorded each day on each grid during the mid-day/afternoon trap check:
    The date and time of the weather data**.** Date and time should be formatted as mm/dd/yyyy hh:mm, with a space between date and time values. Use 24-hour clock values for time.
    a. Air temperature (Celsius degrees) within 50 cm above the ground surface, recorded in the shade of a natural object (shrub, tree) or human body. Do not record temperature in the shade of a vehicle.
    b. Estimated percent cloud cover, recorded in 10% bins (i.e., 0%, 10%, 20%, etc.)
    c. Wind speed should be recorded as per the attached Beaufort Scale. Beaufort Scale values may be derived from observations or from use of hand-held anemometers.

Action Taken: These measures were implemented with temperatures measured at 50 cm in the shade of a shrub. Each of the three sessions met the requirements of a four-hour minimum trapping time and were counted as full trap days. The CDFW MGS Survey Form 2024 lists recorded weather results.

7. **Requirement:** Captured ground squirrels (both MGS and AGS) should be marked using a non-toxic permanent marking pen. To facilitate identifying previously captured ground squirrels in camera-trap photos, marks should be made on the dorsolateral pelage of the animals.

   Action Taken: All captured ground squirrels were marked using non-toxic markers. No MGS were captured during this effort.

8. **Requirement:** Live-trapping results should be reported to CDFW using the CDFW MGS Survey Form 2024.

   Action Taken: The results of this trapping session have been recorded using the CDFW MGS Survey Form 2024.

9. **Requirement:** Live-trapping programs should adhere to the Measures to Ensure the Health and Welfare of Mohave Ground Squirrels section of these survey guidelines.

   Action Taken: All live trapping efforts adhered to the Measures to Ensure the Health and Welfare of Mohave Ground Squirrels as stated in the guidelines protocol.

Since no MGS were captured, the results of this survey are valid for the period of one year, or until June 7, 2025. If the site is not developed by June 7, 2025, another protocol trapping survey will be required to ascertain persisting absence.

In addition to establishing the grid and trapping as described above, ten Browning "Dark Ops" motion sensor cameras were placed within the trapping configuration, and simultaneously operated for a total of 28 days during the trapping survey. Four-way grain mixed with powdered peanut butter was placed in front of the traps at a distance conducive to capturing images of squirrels, which is generally 1.5 to 2.0 meters in front of each camera. Cameras were oriented to the north and situated to minimize disturbance by waving branches, so that they focused on a relatively open area. The cameras were placed on site, throughout the six trapping areas at the beginning of Session 1 on April 15, 2024 operating continuously for 24 hours a day in the interim through May 7, 2024, which concluded the second live trapping session. A second session of camera trapping began on June 3, 2024, operating through June 7, 2024, coinciding with the third live-trapping session. Inspection of ±86,000 images resulted in no detection of MGS.

Table 2. Habitat Description & Summary of Effort

Independent Investigator:	Sarah Teed		
Dominant Annuals:	*Bromus madritensis* ssp. *rubens, Schismus* sp.		
Dominant Perennials:	*Atriplex canescens, A. polycarpa*		
Number of Winterfat:	0	**Number of Spiny hopsage:**	0
Landform:	Alluvial plain, dunes to the south		
Soil Type:	Sandy loam, with cobbles	**Elevation:**	671-677 meters (2,203-2,221 feet)
Total Acres Trapped:	65	**# Grids Trapped**	1
		# Traps	100

TRAPPING RESULTS

No MGS were captured during this protocol-level survey performed by CDFW-authorized personnel nor during operation of 10 cameras operated for 28 days. The lack of captures should indicate to CDFW that MGS do not occur on the subject property and that additional surveys are not required so long as the site is developed in the next year, after which time another survey would be required.

The CDFW form accompanying this report contains information for animals captured and weather conditions during the three trapping sessions. Table 3, below, lists specific methods for recording weather and codes for non-target animals trapped incidentally.

Table 3. CDFW MGS Trapping Form Conventions

TEMP °F[2] - The temperature ("air temperature") given was measured 50#cm above the ground in the shade of a shrub at the beginning of the day, followed by the **2nd** temperature, which was taken the same way at the beginning of the final check. Temperatures and maximum wind speeds were recorded using a hand-held Kestrel® weather and wind speed meter.
Other[3] - Codes for other animals trapped given in the 4th through 6th columns include: AGS = Antelope ground squirrel (*Ammospermophilus leucurus*) CAGS = California ground squirrel (*Otospermophilus beecheyi*) DEMO = Deer mouse (*Peromyscus maniculatus*) DEIG= Desert Iguana (*Dipsosaurus dorsalis)* HOSP = House sparrow (*Passer domesticus*) KRAT = Unidentified kangaroo rat (*Dipodomys* sp.) POMO = Unidentified pocket mouse (*Perognathus* sp.) WWTA = Western whiptail (*Cnemidophorus tigris*)
AGS[4] – Results reported herein for antelope ground squirrel (AGS) indicate total numbers of animals captured each day for each session. Additional data including trap stations, sex of animal, reproductive status (e.g., scrotal males, lactating females, etc.), relative age (adult versus juvenile), and number of recaptures (up to four) were collected in the field and are available upon request.

III. CONCLUSIONS

No MGS were found during the 15-day protocol trapping survey nor during 28 days of operating motion cameras as reported herein. Additional surveys are not required so long as the site is developed in the next year, after which time another survey would be required. Whereas this report includes results of a focused, protocol trapping survey and motion camera study, a more detailed report on all biota observed on the project site for PG&E's S-238 Electrical Upgrades Project S-238 at the HCS is given in the Biological Memo by CMBC in April of 2024 for the project, which has already been provided to PG&E Senior Biologist Virginia Strohl and Jacobs Senior Project Manager/Senior Biologist Marjorie Eisert. That report includes photographs and extensive additional biological information characterizing the subject property.

IV. REFERENCES AND LITERATURE CITED

California Department of Fish and Game (currently "CDFW"). 2003 revised 2010, 2023. CDFG unpublished guidelines. Mohave Ground Squirrel Survey Guidelines. Sacramento, CA.

Circle Mountain Biological Consultants, Inc. 2024. "Bio Memo for PG&E's S-238 Electrical Upgrades project." Dated 24 April 2024.

Appendix D
Rare Plant Survey Memorandum

D R A F T

PG&E S-238 Hinkley Electrical Upgrades Project Pre-construction Floristic Survey Report – Spring 2024

Prepared for

Pacific Gas and Electric Company

September 2024

Prepared by

Balk Biological, Inc.

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Acronyms and Abbreviations

BLM	U.S. Bureau of Land Management
CDNPA	California Desert Native Plants Act
CEQA	California Environmental Quality Act
CDFW	California Department of Fish and Wildlife
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Ranked
HUC	Hydrologic Unit Code
MCC	Motor Control Center
msl	mean sea level
NRCS	Natural Resources Conservation Service
PG&E	Pacific Gas and Electric Company
Project Area	Hinkley Compressor Station plus 100-foot buffer
SR	State Route
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
Work Area	Hinkley Compressor Station

SECTION 1

Introduction

Pacific Gas and Electric Company's (PG&E's) S-238 Hinkley Compressor Station (HCS) Electrical Upgrades Project (project) will upgrade and replace the station's electrical distribution equipment that has reached the end of its useful life or requires change for safety, reliability, or maintainability. As part of the proposed project, the station's existing electrical power switchgear and motor control centers (MCCs) or load centers or will be replaced or modified and connecting conduit and cable (also called wire or feeders) will be installed between the switchgear and MCC locations (Figure 1). Temporary generators will power the station during construction when electric equipment connecting with the permanent generators is deenergized during specific construction activities. After the upgrade is complete, the temporary generator equipment and associated existing gas fuel lines will be removed. The temporary gas fuel lines are installed at the station to allow emergency use of temporary generators to avoid station shutdown should electrical equipment fail while approval for the proposed project is proceeding.

All construction will occur within the boundaries of the fenced HCS. Most of the work will not require ground disturbance; equipment modification will occur within buildings, on existing infrastructure, or cable will be replaced in pre-existing conduit. Other equipment replacement, modification or installation will not be ground disturbing. A portion of the station's existing staging area will be used for project staging. Temporary generators on trailers will power the station during construction when electric equipment connecting with the permanent generators is deenergized during specific construction activities. After the upgrade is complete, the temporary generator equipment will be removed. The only new construction consists of the installation of four (4) Motor Control Centers (MCC) and Four trenches will be made in the work area to install approximately 200 feet of new conduit (Figure 1). The footprint for each of the MCCs will average 150 square feet for a total estimated disturbance of 600 square feet (0.0149 acre). The project is scheduled to mobilize in approximately April 2025 and be completed in approximately February 2027. Ground disturbing activities are expected to occur over approximately 60 workdays in May 2025 to July 2025.

This report presents the results of the botanical surveys conducted in April 2024 to identify and map any special-status plant species (as defined in Section 3, Methodology) that may be present within or adjacent to the proposed work areas.

1.1 Project Location

Hinkley Compressor Station is a staffed facility located at 35863 Fairview Road in the community of Hinkley, California, in San Bernardino County. The main station entrance on Fairview Road is approximately 1 mile south of State Route (SR) 58 (refer to Figure 2). The station is approximately 1 mile west of the city limits of the City of Barstow. The fenced station occupies approximately 64 acres on a 160-acre parcel adjacent to Community Boulevard at Fairview Road. Two PG&E gas transmission lines, Line 300A and Line 300B, cross the southwest corner of the station in a northwest-southeast orientation.

1.2 Ecological Setting

Most of the project is located within the Lucerne-Johnson Valleys and Hills ecological subsection of the Mojave Desert Ecological Section (Miles and Goudey, 1998). The subsection is characterized by mountains, hills, piedmonts, and alluvial plains (Miles and Goudey, 1998). The project is located within the U.S. Department of Agriculture's (USDA's) Land Resource Region D – Western Range and Irrigated Region (Natural Resources Conservation Service [NRCS], 2022). This is the largest of the Land Resource

Regions and includes the semi-desert plateaus, plains, basins, and mountains from southeastern Oregon to the Mexico border throughout eastern California; it extends eastward into southwestern Texas and northward into Wyoming.

Locally, the landscape is characterized by gently rolling hills in the western and southern buffer of the site, with the substation and eastern and northern buffer areas being located on nearly level ground/alluvium. Topography ranges from approximately 669 feet above mean sea level (msl) in the northeast corner of the survey area to 677 feet amsl in the west-central portion of the survey area (across Fairview Road to the west of the PG&E administrative office). The following sections provide additional information on the climate, hydrology, geology, and soils. Descriptions of the vegetation communities are provided in Section 2.

Representative photographs of the survey area are provided in Appendix A.

1.2.1 Climate and Hydrology

Regional climate data were obtained from the Barstow Station (USDA NRCS 2024a), located approximately 8.6 miles east of the Hinkley Electrical Upgrades Project Area (Project Area). Average temperatures range from a low of 24 degrees Fahrenheit (°F) in December to a high of 111°F in July. Average annual precipitation is 3.92 inches with the largest amounts of rainfall occurring during summer thunderstorms between July and September and winter rains between December and March. Very little rainfall occurs in May and June.

The project is located within the Coyote – Cuddeback Lakes Watershed (Hydrologic Unit Code [HUC] 18090207; United States Geological Survey [USGS] 2024), a subset of the Northern Mojave – Mono Lake Watershed (HUC 1800). The primary feature in the Coyote – Cuddeback Lakes Watershed Hydrologic Unit is Harper Lake, located approximately 10.2 miles northwest of the Project Area, north of SR-58.

No water features are located within the Hinkley Project Area itself. Local surface waters consist of the Mojave River, small desert washes that flow south to the Mojave River, and desert washes that flow north to Harper Lake during infrequent large rain events (LRWQCB 2013).

1.2.2 Geographical Setting

The project is located within the Mojave Desert geomorphic province, which is characterized by isolated mountain ranges separated by large expanses of desert, bordered by the Garlock Fault in the north and the San Andreas Fault in the west. There is little elevational relief, with the project area generally located on the edge of a flat basin-like area (the Hinkley Valley) adjacent to the Mojave River, which is located within approximately 0.75 mile to the southeast of the site. Soils consist of quaternary alluviums from deposits by the Mojave River flows. These deposits overlay erosional deposits from surrounding mountains. Project survey areas to the west of the compressor station show more elevational relief, with very gently rolling hills beginning to be present as one moves west.

Three soil types have been mapped within the botanical survey area: (1) Cajon Loamy Sand, Loamy Substratum, 0-2% Slopes; (2) Norob-Halloran Complex, 0-5% Slopes, and (3) Cajon Sand, 0-2% Slopes (NRCS 2024b). See Table 1 below for a summary of the relevant characteristics of each of these soil types.

Table 1. Soil Types Mapped within the Project Area

Map Unit Name	Landform	Drainage Class	Salinity	Profile	Ecological Site Classification	Notes
Cajon Loamy Sand, Loamy Substratum, 0-2% Slopes	Alluvial fan (derived from granitic sources)	Somewhat excessively drained	Very slightly saline to moderately saline	0-7”: loamy sand; 7-20”: sand; 20-42”: loamy sand	Sandy	Soil type consists of approximately 85% Cajon Loamy Sand, Loamy Substratum, and 15% other minor components. Majority of the survey area consists of this soil type.
Norob-Halloran Complex, 0-5% Slopes	**Norob**: Fan remnants (derived from granitic sources) **Halloran**: Alluvial fan (derived from granitic sources)	Moderately well-drained	Slightly saline to strongly saline	**Norob**: 0-5”: loamy sand; 5-33”: sandy clay loam; 33 to 60”: stratified gravelly loamy sand to sandy clay loam **Halloran**: 0 to 2’: sand; 2 to 21”: sandy loam; 21 to 33”: loamy sand; 33 to 60”: stratified sand to sandy loam	Alkali sandy	Soil type consists of approximately 60% Norob soils, 20% Halloran soils, and 20% other minor components. Small area mapped in the southwestern portion of the substation and survey area boundary
Cajon Sand, 0-2% Slopes	Alluvial fan (derived from granitic sources)	Somewhat excessively well-drained	N/A	0-7”: sand; 7-25”: sand; 25-45”: gravelly sand; 45-60”: stratified sand to loamy fine sand	Sandy	Soil type consists of approximately 85% Cajon Sand, 0-2% Slopes, and 15% other minor components. Two small areas mapped in the survey area: northwest of the substation and in the extreme east region of the survey area.

SECTION 2

2.0 Vegetation Communities/Land Cover Types

There are two primary terrestrial plant communities and one non-vegetated land cover type located in and around the project work areas. Vegetation classification follows the second edition of *A Manual of California Vegetation* (Sawyer *et al*., 2009). The primary terrestrial plant community types are disturbed creosote bush scrub and disturbed allscale scrub. The non-vegetated land cover type is developed. Detailed descriptions of these primary plant communities are provided in the following sections.

2.1.1 Developed Land

Developed refers to areas that have been constructed upon or otherwise physically altered to an extent that native vegetation communities are no longer supported. This land cover type generally consists of semi-permanent structures, homes, parking lots, pavement or hardscape, and sometimes landscaped areas that require maintenance and irrigation (e.g., ornamental greenbelts). The HCS, occupied by numerous buildings, housing natural gas generators, offices, and associated infrastructure, was mapped as developed. The entire project area is disturbed from previous work activities associated with the HCS. The project area is almost completely denuded of any vegetation except for ornamental landscape plantings along the access road and within the staging area where large ornamental trees (athel [*Tamarix aphylla*], ornamental elm [*Ulmus* sp.], and ornamental pine [*Pinus* sp.]) and shrubs exist around an employee recreation area.

2.1.2 Creosote Bush – White Bursage Scrub: *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance

Creosote Bush Scrub is also present adjacent to the HCS project site. It is most accurately keyed to the Creosote Bush - White Bursage - Allscale Scrub Association (of the Creosote Bush – White Bursage Alliance) (Sawyer *et al.* 2009). The Creosote Bush - White Bursage vegetation alliance must contain at least 1% absolute cover of creosote bush and 1% absolute cover of white bursage, with these two species exceeding twice the cover of other shrub species (with a few exceptions). This scrub alliance is common throughout a variety of mainly upland habitats but may also be common in minor washes and rills. Around the HCS project site, allscale is also common in this community, allowing a further classification of this community into the Creosote Bush - White Bursage – Allscale Scrub association. Adjacent to the project site, this scrub association is disturbed, with red-stemmed filaree (*Erodium cicutarium*) and Mediterranean schismus (*Schismus barbatus*), although native species are also present in high quantities and diversity. Common native species included evening primroses (*Eremothera/Oenothera* spp.), blue dicks (*Dichelostemma capitatum* ssp. *pauciflorus*), tick-seed (*Leptosyne calliopsidea*.), rigid spineflower (*Chorizanthe rigida*), and desert plantain (*Plantago ovata*).

2.1.3 Allscale Scrub: *Atriplex polycarpa* Shrubland Alliance

Within the HCS there is an approximately two-acre area, on the western boundary of the project site, with native vegetation consisting of allscale scrub with occasional creosote bush (*Larraea tridentata*). This area appears to have been a borrow pit and is low-lying compared to the rest of the site, with some seasonal flooding. The majority of the vegetation in the HCS botanical survey area buffer can be classified as Allscale Scrub. This vegetation community is common in low-lying, sandy-soils areas of the Mojave Desert, particularly the western Mojave. It is common on low-lying areas such as alluvial fans, edges of playas, and along washes. It is dominated by allscale (allscale composes at least 2% of the

absolute cover) but may contain other species of shrubs for up to 50% of the relative cover (Sawyer *et al.* 2009). Allscale Scrub onsite is dominated by allscale, with almost no other shrub species present. In openings between shrubs, annual species may be present. Onsite, these annual species were uncommon but included gilias (*Gilia* spp.), buckwheat (*Eriogonum* spp.), combseed (*Pectocarya* spp.), fiddlenecks (*Amsinckia* spp.), annual bur-sage (*Ambrosia acanthicarpa*), snakeheads (*Malacothrix coulteri*). Allscale Scrub onsite is low quality habitat due to areas with bare ground due to recent disturbance and other areas with a prevalence of weeds such as London rocket (*Sisymbrium irio*), brome grasses (*Bromus* spp.), and prickly lettuce (*Lactuca serriola*).

2.2 Wetland Communities

There are no wetlands within the project area. The only aquatic features on the site are evaporation ponds within the HCS and north of the project area. The only surface waters in the project vicinity are the Mojave River, small desert washes that flow south to the Mojave River, and desert washes that flow north to Harper Lake during infrequent large rain events (LRWQCB 2013).

There are no watercourse crossings associated with the proposed project and no watercourse crossings will be affected by construction activities.

SECTION 3

Methodology

3.1 Special-Status Plants

The purpose of the pre-construction botanical surveys conducted in April 2024 was to identify any special-status plant species that occur within the project work areas, and to ensure that such species are documented and mapped prior to the start of construction activities.

A plant species was considered to be special-status if it met one or more of the following criteria:

- Species that are listed, proposed for listing, or candidates for listing as threatened or endangered under the federal Endangered Species Act (50 CFR 17.11, 76 Federal Register 66370)
- Species that are listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (FGC § 2050 et seq., 2062, 2067, and 2068)
- Species listed by California Native Plant Society (CNPS) as lists 1 through 4 in the current online version of its Inventory of Rare and Endangered Plants of California (CNPS 2024) as they meet the definition of "rare" or "endangered" under CEQA Guidelines §15125 (c) and/or §15380

3.1.1 Research and Literature Review

Prior to the initial botanical surveys, research was conducted to identify special-status plant species with a potential to occur in the Project Area. A preliminary list of potentially occurring special-status plants (target list) was derived from several sources. Research on special-status plants in California included quadrangle-based searches of the CNPS Inventory of Rare and Endangered Plants of California and the California Natural Diversity Database (CNDDB) RareFind5 database (CDFW 2024) to identify potentially occurring special-status plants. The 7.5-minute U.S. Geologic Survey (USGS) quadrangle containing the Project Area (Corning Quadrangle) and the 11 surrounding USGS 7.5-minute quadrangles (Hinkley, Barstow, Barstow SE, Twelve Gauge Lake, Lockhart, Water Valley, Bird Spring, Mud Hills, Wild Crossing, and Hodge) were included in both the CNPS and CNDDB RareFind5 database searches. The CNDDB Quickviewer online database was also searched to identify potentially occurring plant species such as CRPR List 4 plants that are not recorded on a quadrangle basis in the RareFind5 database. Prior to the surveys the CNPS (2024) Inventory of Rare and Endangered Plants of California and the CNDDB (CDFW, 2024a) RareFind5 database were both reviewed to determine if any additional species had been added since the initial database review. In addition, plants that are designated as federally listed or candidate species by the U.S. Fish and Wildlife Service (USFWS) (1996, 2024a, 2024b) were also considered.

The list of native plants that are protected under the California Desert Native Plants Act (CDNPA) (1981) was also reviewed and evaluated based on reported occurrences, habitats, and distributional ranges of each species.

If a species' distribution, habitat, or elevation range precluded its possible occurrence in the Project Area or vicinity, it was not considered further. A species was determined to have potential to occur within the Project Area if its known or expected geographic range includes the Project Area and suitable habitat (including soil preference, if any) was identified in the Project Area during any of the botanical surveys.

Based on the pre-survey research and literature review, 22 special-status plants have the potential to occur in the Project Area. These species, along with data on flowering period, conservation status, habitat preferences, geographic distribution, and known locations in the vicinity of the survey area, are presented in Appendix B. The list of potential special-status species includes one species designated as federally-listed endangered, one species proposed for listing by the state of California, 11 additional

species designated CRPR 1B or 2B, and 9 plants that are CRPR 3 or 4 in the Inventory of Rare and Endangered Plants of California (CNPS 2024).

3.2 Reference Site Visits

Immediately prior the botanical survey, known occurrences of Barstow woolly sunflower (*Eriophyllum mojavense*), desert cymopteris (*Cymopteris deserticola*), and Beaver Dam breadroot (*Pediomelum castoreum*), were visited. No individuals of these species were observed at any of these locations. It is possible that these locations are no longer extant, or timing of the survey was not optimal for observation of these species.

Survey Area

The approximately 83-acre survey area included the HCS and a 100-foot botanical survey buffer. The extent of the survey area is shown in Figure 2.

3.3 Field Surveys

Protocol-level floristic surveys that conform to the guidelines of the California Department of Fish and Wildlife (CDFW, 2009), the USFWS (2011), and the CNPS (2001) were conducted in the 83-acre survey area (Figure 2). The survey was conducted by Balk Biological botanist Michelle Balk on April 15 and 16, 2024.

The objective of the surveys was to generate a comprehensive list of all plant species that occur in the survey area and to census, map, photograph, and record data for any special-status species found.

Because of the relatively few plant collections known from the Hinkley area, it was possible that a special-status plant not known to occur in the Project Area or vicinity (and therefore not on the target list shown in Appendix B) would be detected during the surveys. Therefore, the surveys were floristic and comprehensive in nature, meaning that all plants found were identified. Species that were not immediately recognizable to the surveyor were identified using the Jepson Manual (Baldwin *et al*., 2012) to the level necessary to determine whether they had special-status significance.

The ability of surveyor to detect and identify plants efficiently and accurately in the field was enhanced by a field review of the common plant species in the Project Area prior to beginning the surveys. The surveyor also reviewed reference locations, photographs and information of targeted special-status plants as well as information provided from the Jepson Online Interchange (Jepson Herbarium, 2024) prior to the surveys.

The entire survey area (HCS plus 100-foot buffer) was walked via meandering transects to ensure coverage of the entire survey area. A list of all vascular plant species observed during the plant surveys is included in Appendix D. Nomenclature for scientific names follows the Jepson Online Interchange for California Floristics (Jepson Herbarium, 2024).

Results

4.1 Survey Conditions

Survey conditions in April 2024 were considered acceptable. The average rainfall for Barstow, California (the nearest station) between October and March is approximately 3.86 inches (USDA NRCS 2024b). The site received approximately 6.22 inches of winter rainfall between the months of October 2023 and March 2024 (USDA NRCS 2024b).

4.2 Survey Results

No federal or state listed endangered, threatened, or rare plants and no BLM sensitive species were found during the March 2024 surveys. No CRPR-listed plants according to the CNPS were observed.

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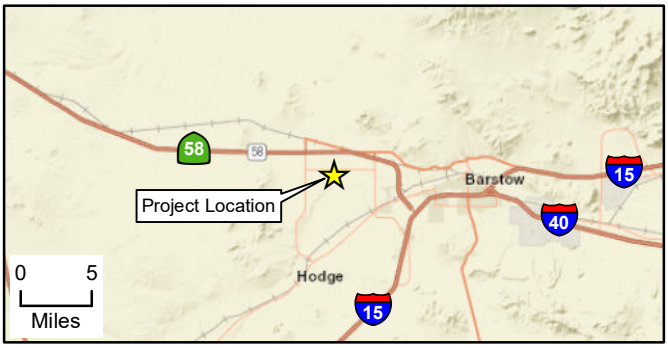
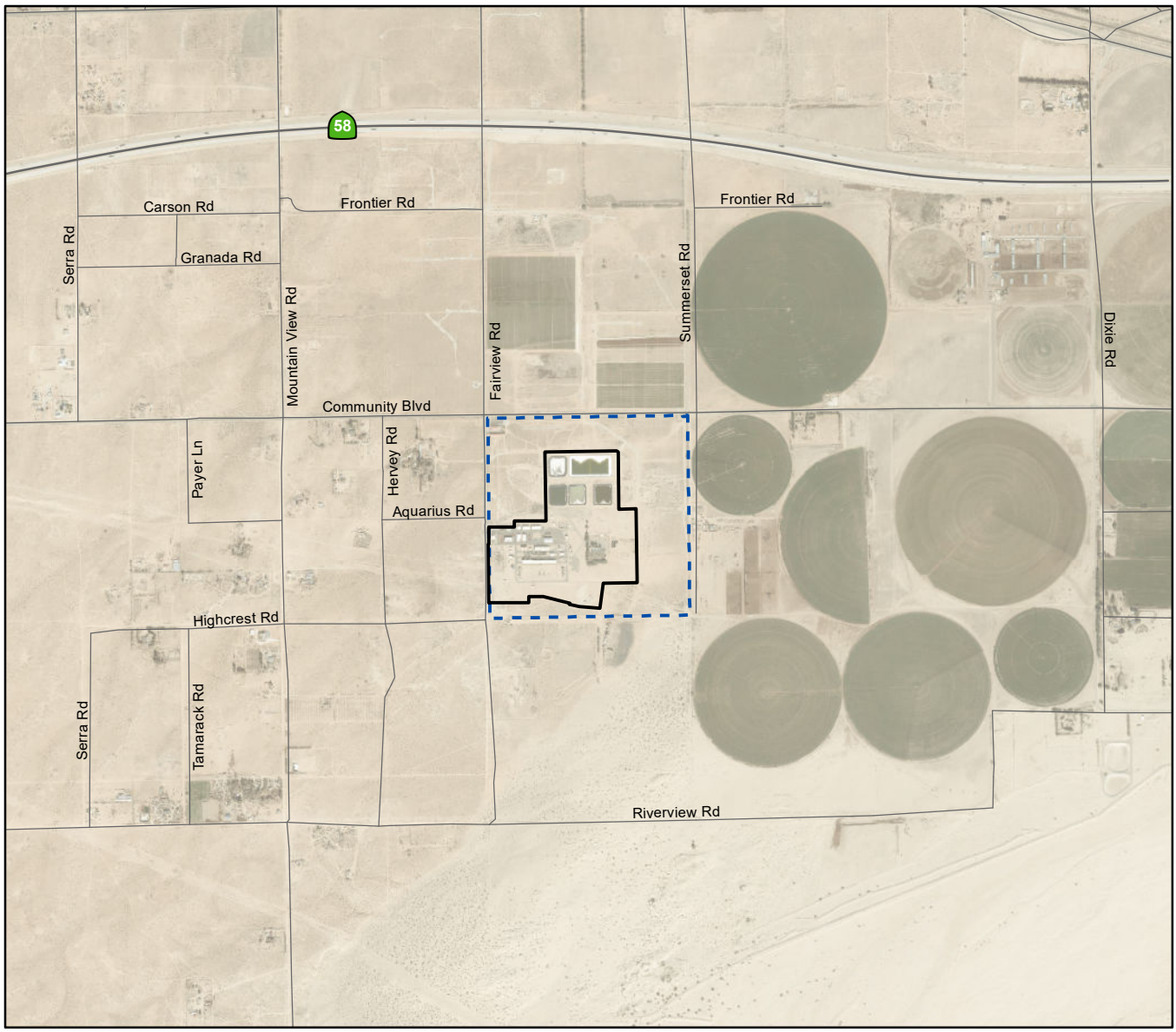
Figures





Version: 9/17/2024

Legend

- Hinkley Compressor Station Perimeter Fence Line
- Property Boundary

N

0 0.25 0.5

Miles

Figure 1
Project Overview
S-238 Hinkley Electrical Upgrades
Pacific Gas & Electric Company

Preliminary and Subject to Change Based on CPUC Requirements, Final Engineering, and Other Factors

Jacobs

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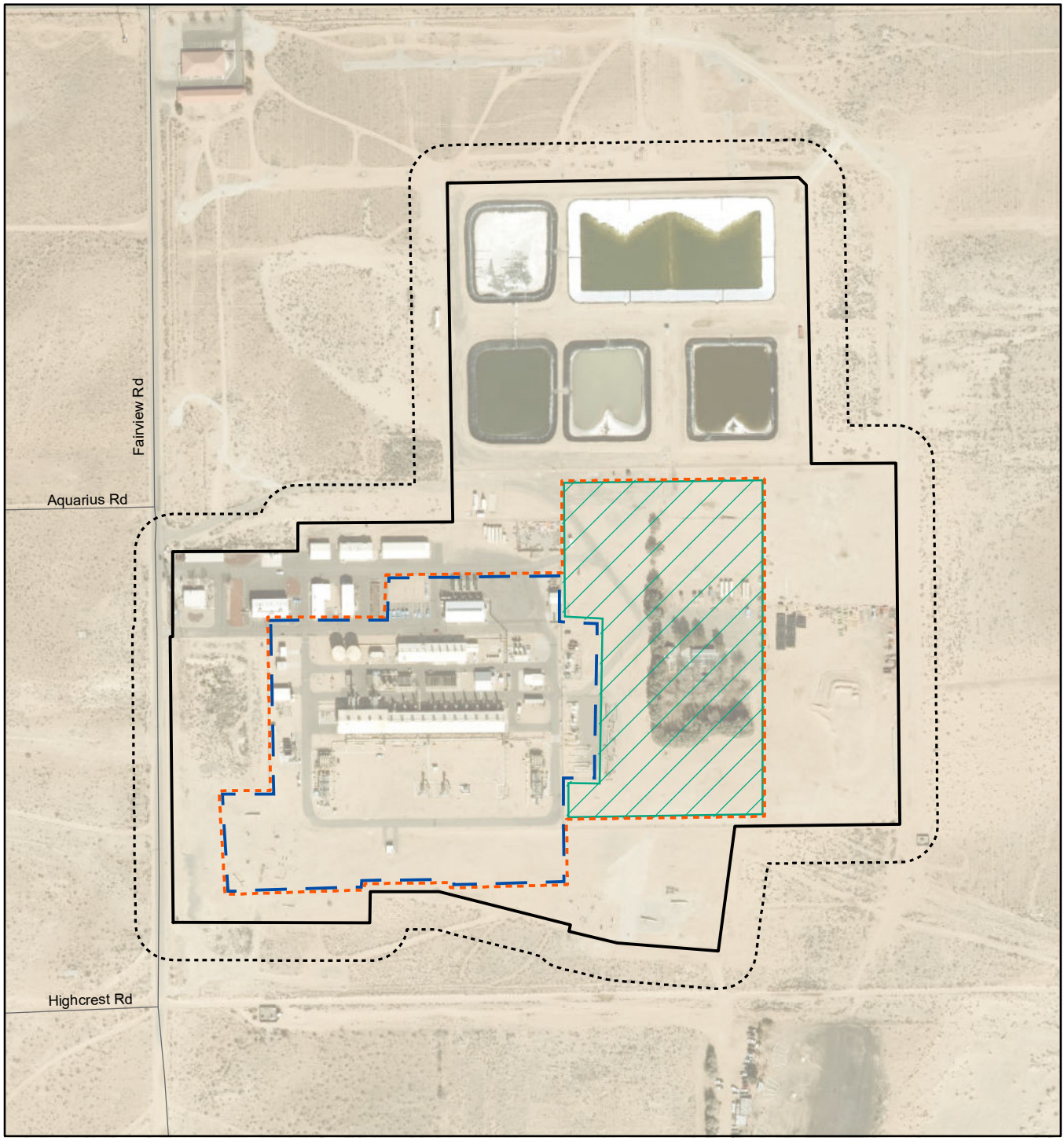

Version: 9/17/2024

Legend

- Hinkley Compressor Station Perimeter Fence Line
- Botanical Survey Limit
- Staging Area
- Work Area
- Project Area

0 200 400
Feet

N

Figure 2
Botanical Survey Area
S-238 Hinkley Electrical Upgrades
Pacific Gas & Electric Company

Preliminary and Subject to Change Based on CPUC Requirements, Final Engineering, and Other Factors

Jacobs

Appendix A
Photographs of the Survey Area

Photo 1. Northern Portion of the Survey Area, facing West

Photo 2. Northeast Corner of the Survey Area, facing South

Photo 3. East-central Region of the Survey Area, facing South

Photo 4. Southeast Corner of the Survey Area, facing North

Photo 5. Southwestern Corner of the Survey Area, facing North

Photo 6. Western Region of the Survey Area, facing East/Southeast

Photo 7. West-central Region of the Survey Area, facing South

Photo 8. Northwestern Region of the Survey Area, facing East

Photo 9. North-central Region of the Survey Area, facing Southwest

Photo 10. North-central Region of the Survey Area, facing East

Appendix B
Target List of Special-status Plant Species with the Potential to Occur in the Project Area

Table B. Target List of Special-status Plant Species with the Potential to Occur in the Project Area

Common Name	Scientific Name	Status[1] State/Federal/CRPR	Flowering Period	Habitat	Potential to Occur[2]
TREES					
Western Joshua tree	*Yucca brevifolia*	SC/None/None	Mar-May	Joshua tree "woodland", desert flats and slopes	**Unlikely.** Not observed during surveys. Suitable habitat is present, but if present onsite this large perennial species would likely have been observed.
SHRUBS AND CACTI					
Mojave fishhook cactus	*Sclerocactus poluyancistrus*	None/None/4.3	April -July	Great Basin scrub, Joshua tree "woodland"; Mojavean desert scrub, usually carbonate soils	**Unlikely.** Not observed during surveys. Suitable habitat is present, but if present onsite this large perennial species would likely have been observed.
Mojave indigo-bush	*Psorothamnus arborescens* var. *arborescens*	None/None/4.3	April - May	Mojavean desert scrub, riparian scrub	**Unlikely.** Not observed during surveys. Suitable habitat is present, but if present onsite this large perennial species would likely have been observed.
Mojave menodora	*Menodora spinescens* var. *mohavensis*	None/None1B.2	Apr – May	Mojavean desert scrub. Slopes, canyons, gravelly, rocky soils. Andesite gravel	**Unlikely.** Not observed during surveys. Suitable habitat is present, but if present onsite this large perennial species would likely have been observed.
Torrey's box-thorn	*Lycium torreyi*	None/None/4.2	Jan–Nov	Sandy, rocky, washes, streambanks, desert valleys in Mojavean and Sonoran Desert scrub.	**Unlikely.** Suitable habitat is present, but if present onsite this large perennial species would likely have been observed.
HERBACEOUS PLANTS					
Barstow woolly sunflower	*Eriophyllum mojavense*	None/None/1B.2	Mar – May	Chenopod scrub, Mojavean desert scrub, playas	**Possible within buffer area only.** Suitable habitat is present for this annual herb within the buffer area west of Fairview Road, but this species was not observed.
Beaver dam breadroot	*Pediomelum castoreum*	None/None/1B.2	April - May	Joshua tree "woodland," Mojavean desert scrub/roadsides, washes, sandy areas, openings, roadcuts	**Unlikely to occur within buffer area only.** Suitable habitat is present onsite, but this species was not observed.
Borrego milkvetch	*Astragalus lentiginosus* var. *borreganus*	None/None/4.3	Feb–May, Sep	Creosote bush scrub; widely scattered in sand dunes, or semi-stabilized sandy areas in valleys.	**Possible within buffer area only.** Suitable habitat is present for this annual herb, but the species was not observed in the survey area.

Table B. Target List of Special-status Plant Species with the Potential to Occur in the Project Area

Common Name	Scientific Name	Status[1] State/Federal/CRPR	Flowering Period	Habitat	Potential to Occur[2]
California alkali grass	*Puccinellia simplex*	None/None/1B.2	March – May	Sinks, lake margins, flats within chenopod scrub, meadows and seep;, valley and foothill grassland, vernal pools. Alkaline areas, vernally mesic	**Unlikely.** Suitable habitat and microhabitat generally not present within survey area.
Chaparral sand verbena	*Abronia villosa ssp. aurita*	None/None/1B.1	(Jan)Mar-Sep	Chaparral, coastal scrub, desert dunes. Sandy soils	**Unlikely.** Suitable habitat and microhabitat generally not present within survey area.
Colorado Desert larkspur	*Delphinium parishii* ssp. *subglobosum*	None/None/4.3	Mar – June	Chaparral, cismontane woodland, pinyon and juniper woodland, Sonoran desert scrub	**Possible within buffer area only.** Suitable habitat is present for this annual herb, but the species was not observed in the survey area.
Creamy blazing star	*Mentzelia tridentata*	None/None/1B.3	Mar – May	Mojaven desert scrub. Sandy, rocky, or gravelly substrates	**Possible within buffer area only.** Suitable habitat is present for this annual herb, but the species was not observed in the survey area.
Crowned muilla	*Muilla coronata*	None/None/4.2	Mar – April (May)	Chenopod scrub, Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland	**Possible within buffer area only.** Suitable habitat is present for this annual herb, but the species was not observed in the survey area.
Desert cymopterus	*Cymopterus deserticola*	None/None/1B.2	Mar – May	Joshua tree "woodland", Mojavean desert scrub. Sandy soils	**Possible within buffer area only.** Suitable habitat is present for this annual herb, but the species was not observed in the survey area.
Joshua Tree poppy	*Eschscholzia androuxii*	None/None/4.3	Feb – May (June)	Washes in Joshua tree "woodland" and Mojavean desert scrub.	**Unlikely.** Site does not contain washes to support this species.
Lane Mountain milkvetch	*Astragalus jaegerianus*	None/FE/1B.1	Apr – June	Joshua tree "woodland", Mojavean desert scrub. Granitic, sometimes gravelly or sandy	**Possible within buffer area only.** Suitable habitat is present for this annual herb, but the species was not observed in the survey area.
Mojave monkeyflower	*Diplacus mohavensis*	None/None/1B.2	Apr – June	Joshua tree "woodland", Mojavean desert scrub. Sometimes sandy or gravelly soils. Often in washes.	**Possible within buffer area only.** Suitable habitat is present for this annual herb, but the species was not observed in the survey area.

Table B. Target List of Special-status Plant Species with the Potential to Occur in the Project Area

Common Name	Scientific Name	Status[1] State/Federal/CRPR	Flowering Period	Habitat	Potential to Occur[2]
Mojave spineflower	*Chorizanthe spinosa*	None/None/4.2	Mar – July	Chenopod scrub, Joshua tree "woodland", Mojavean desert scrub, Playas. Often alkaline soils.	**Possible within buffer area only.** Suitable habitat is present for this annual herb, but the species was not observed in the survey area.
Parrish's phacelia	*Phacelia parishii*	None/None/1B.1	Apr-May (Jun-Jul)	Mojavean desert scrub, playas. Sometimes alkaline or clay soils.	**Possible within buffer area only.** Suitable habitat is present for this annual herb, but the species was not observed in the survey area.
Slender cottonheads	*Nemacaulis denudata* var. *gracilis*	None/None/2B.2	Mar–May	Creosote bush scrub; sandy soils on stabilized dunes and sand ramps.	**Unlikely.** Site does not contain stabilized dunes or sand ramps to support this species, and the species was not observed in the survey area.
Spiny-hair blazing star	*Mentzelia tricuspis*	None/None/2B.1	Apr–Jun, Sept–Oct	Mojavean desert scrub; sandy or gravelly slopes and washes.	**Unlikely.** The site buffer contains a minimal amount of marginally suitable habitat for this species, but the species was not observed in the survey area.
White pygmy-poppy	*Canbya candida*	None/None/4.2	Mar – June	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland. Sandy/granitic/gravelly soils	**Possible within buffer area only.** Suitable habitat is present for this annual herb, but the species was not observed in the survey area.

Table B. Target List of Special-status Plant Species with the Potential to Occur in the Project Area

Common Name	Scientific Name	Status[1] State/Federal/CRPR	Flowering Period	Habitat	Potential to Occur[2]

Notes

[1] Conservation status abbreviations:

SC – State Candidate for listing

FE – Federally-listed endangered

S – Sensitive. California Rare Plant Ranks (CRPR) (formerly CNPS Lists)

1B Plants rare, threatened or endangered in California and elsewhere.

2B Plants rare, threatened or endangered in California, more common elsewhere.

3 Plants for which more information is needed – a review list.

4 Plants of limited distribution – a watch list.

California Rare Plant Subcategories

.1 Seriously threatened in California.

.2 Fairly threatened in California.

.3 Not very threatened in California.

[2] Potential to occur definitions:

Present: Species observed on the site.

Possible: Species not observed on the site, however conditions suitable for occurrence.

Unlikely: Species not observed on the site, conditions marginal for occurrence.

Sources:

California Native Plant Society, 2024; California Natural Diversity Database (CDFW, 2024a); Jepson Online Interchange, 2024

Appendix C
Vascular Plant Species Observed in the Project Area

Table C. Vascular Plants Observed within the Hinkley Compressor Station Botanical Survey Area During April 2024 Surveys

Scientific Names[1]	Common Names	Status[1]
GYMNOSPERMS		
EPHEDRACEAE	**Ephedra family**	
Ephedra sp.	Mormon tea	Native
PINACEAE	**Pine family**	
Pinus sp.	Pine	Non-native
ANGIOSPERMS-DICOTS		
APOCYNACEAE	**milkweed family**	
Nerium oleander	Oleander	Non-native
ASTERACEAE	**Sunflower family**	
Ambrosia acanthicarpa	Annual bur-sage	Native
Ambrosia dumosa	white bursage	Native
Ambrosia salsola	Cheesebush	Native
Chaenactis fremonti	Fremont's pincushion	Native
Erigeron canadensis	Horseweed	Native
Lactuca serriola	Prickly lettuce	Naturalized
Lasthenia californica	California goldfields	Native
Leptosyne calliopsidea	Leaf-stem tickseed	Native
Malacothrix coulteri	Snakeheads	Native
Malacothrix glabrata	Desert dandelion	Native
Sonchus asper	Spiny sow-thistle	Naturalized
Sonchus oleraceus	Common sow-thistle	Naturalized
Stephanomeria exigua	Small wirelettuce	Native
Taraxacum officinale	Common dandelion	Naturalized
BORAGINACEAE	**Borage family**	
Amsinckia menziesii	Common fiddleneck	Native
Amsinckia tessellata	Bristly fiddleneck	Native
Cryptantha angustifolia	Red-root cryptantha	Native
Cryptantha micrantha	Winged-nut cryptantha	Native
Pectocarya linearis	Slender pectocarya	Native
Pectocarya sp.	Combseed	Native
Phacelia cicutaria	Caterpillar phacelia	Native
BRASSICACEAE	**Mustard family**	
Capsella bursa-pastoris	Shepherd's purse	Naturalized
Descurainia pinnata	Tansy mustard	Native
Guillenia lasiophylla	California mustard	Native
Lepidium lasiocarpum	Pepperweed	Native
Sisymbrium irio	London rocket	Natralized
CHENOPODIACEAE	**goosefoot family**	
Atriplex hymenelytra	Desert holly	Native (CDNPA Protection)
Atriplex lentiformis	Big saltbush	Native

Table C. Vascular Plants Observed within the Hinkley Compressor Station Botanical Survey Area During April 2024 Surveys

Scientific Names[1]	Common Names	Status[1]
Atriplex polycarpa	Allscale	Native
Chenopodium album	White goosefoot	Naturalized
Salsola tragus	Russian thistle	Naturalized
FABACEAE	**Legume family**	
Astragalus didymocarpus	Two-seeded milkvetch	Native
Lupinus bicolor	Miniature lupine	Native
Senna armata	Senna	Native
GERANIACEAE	**Geranium family**	
Erodium cicutarium	Red-stemmed filaree	Naturalized
MALVACEAE	**Mallow family**	
Eremalche exilis	White mallow	Native
Malva parviflora	Cheeseweed	Naturalized
Sphaeralcea ambigua	Apricot mallow	Native
OLEACEAE	**ash family**	
Fraxinus sp.	Ash tree	Non-native
ONAGRACEAE	**Evening primrose family**	
Eremothera boothii	Booth's desert evening primrose	Native
PAPAVERACEAE	**Poppy family**	
Eschscholzia minutiflora	Small-flowered California poppy	Native
PLANTAGINACEAE	**Plantain family**	
Plantago ovata	Ovate plantain	Native
Veronica arvensis	No common name	Naturalized
POLEMONIACEAE	**Phlox family**	
Gilia sp.	Gilia	Native
POLYGONACEAE	**Buckwheat family**	
Chorizanthe rigida	Rigid spineflower	Native
Eriogonum gracillimum	Rose-and-white buckwheat	Native
Eriogonum trichopes	Little desert buckwheat	Native
Polygonum sp.	Knotweed	Naturalized
SALICACEAE	**Willow family**	
Salix exigua	Narrow-leaved willow	Native
SOLANACEAE	**Nightshade family**	
Lycium pallidum var. *oligospermum*	Rabbit thorn	Native
TAMARICACEAE	**Tamarisk family**	
Tamarix ramosissima	Salt cedar	Naturalized
Tamarix aphylla	Athel tamarisk	Naturalized
ULMACEAE	**Elm family**	
Ulmus sp.	Elm	Non-native landscape species
ZYGOPHYLLACEAE	**Caltrop family**	
Larrea tridentata	Creosote bush	Native

Table C. Vascular Plants Observed within the Hinkley Compressor Station Botanical Survey Area During April 2024 Surveys

Scientific Names[1]	Common Names	Status[1]
MONOCOTS		
POACEAE	**Grass family**	
Bromus catharticus	Rescue grass	Naturalized
Bromus madritensis	Foxtail chess	Naturalized
Cynodon dactylon	Bermuda grass	Naturalized
Hordeum murinum ssp. *leporinum*	Hare barley	Naturalized
Poa annua	Annual bluegrass	Naturalized
Schismus barbatus	Mediterranean grass	Naturalized
Stipa hymenoides	Indian rice grass	Native
THEMIDACEAE	**Brodiaea family**	
Dipterostemon [=*Dichelostemma*] *capitatus* ssp. *pauciflorus*	Few-flowered bluedicks	native
TYPHACEAE	**Cattail family**	
Typha sp.	Cattail	native

Notes:

[1] Taxonomic nomenclature and status are based on the March 2024 Jepson Online Interchange for California Floristics. Accessed at: http://ucjeps.berkeley.edu/interchange/ (September 9-16, 2024).