

**BIOLOGICAL TECHNICAL REPORT FOR THE
STROUD ENERGY STORAGE PROJECT
CITY OF LANCASTER, CALIFORNIA**

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SECTION 1.0 – INTRODUCTION

Chambers Group, Inc. (Chambers Group) was retained by Stroud ESS, LLC. (Applicant) to conduct a literature review and reconnaissance-level survey for the proposed Stroud Energy Storage Project (Project). The survey identified vegetation communities, potential for the occurrence of special status species, habitats that could support special status wildlife species, and recorded all plants and animals observed or detected within the Project boundary. This biological technical report has been prepared for the Applicant to document the proposed Project is consistent with the City of Lancaster General Plan (City). Information contained in this document is in accordance with accepted scientific and technical standards that are consistent with the requirements of the California Department of Fish and Wildlife (CDFW) and the United States Fish and Wildlife Service (USFWS).

1.1 PROJECT OVERVIEW

Stroud ESS, LLC (Applicant) proposes to construct, own, and operate the Stroud Energy Storage Project (Project), a lithium-ion battery energy storage facility that will comprise lithium-ion battery modules installed in a battery energy storage facility capable of delivering up to 250 megawatts (MW) of energy storage capacity and associated ancillary services into the California electric grid. The Project will comprise battery modules installed racks housed in purpose-built outdoor Battery Energy Storage System (BESS) enclosures, associated equipment, a project substation, and a generation tie-line connecting the Project to the adjacent existing Southern California Edison (SCE) 230/500 kilovolt (kV) Antelope Substation.

The Project is proposed within a 9.7-acre area comprising of one parcel (3203-034-004) and then the associated gen-tie area consisting of a small portion of four separate parcels (3203-034-810, 3203-034-811, 3203-034-818, and 3203-034-806) in the City of Lancaster in Los Angeles County, California (Project site). A second gen-tie option is also proposed that would consist of a small portion of three separate parcels (3218-002-007, 3218-002-116, and 3218-002,005) in Los Angeles County, California.

The Project is located within the California Independent Service Operator (CAISO) Big Creek/Ventura Local Capacity Resource Area and will be charged from the CAISO grid via the Project’s interconnection to the Antelope Substation. Energy stored in the Project will then be discharged into the grid when the energy is needed, providing important electrical reliability services to the local area.

The Project will be monitored and operated remotely 24 hours per day, 7 days per week from an off-site control center with no permanent on-site operations and maintenance personnel. The Project will include a small office and storage structure equipped with restroom facilities for temporary operations and maintenance (O&M) personnel use. Operating staff, typically in crews of two to four staff members, will visit the site bi-weekly and as needed for project maintenance. The site will be fully fenced and will not be open to the public.

1.2 PROJECT SITE AND LOCATION

The approximately 9.7-acre Project site comprises of parcel (3203-034-004) and then the associated gen-tie area consisting of a small portion of four separate parcels (3203-034-810, 3203-034-811, 3203-034-818, and 3203-034-806), along West Avenue J less than one mile west of the Del Sur neighborhood in the City of Lancaster (City), Los Angeles County, California (see Figure 1). The Del Sur area is characterized by its minimal development and rural character. Unincorporated Antelope Valley (under

the jurisdiction of the County of Los Angeles) is located to the west, north and south, with urbanized Lancaster to the east. The Project site centroid is 34.411528°N, 118.173701°W on the Del Sur U.S. Geological Survey (USGS) 7.5- minute quadrangle (Township 07 North, Range 13 West, Section 19, SMB Meridian). The Project site is bordered to the north by West Avenue J and to the west by SCE's Antelope Substation. 90th Street West is located less than 1,500 feet east and 100th Street 0.74-mile further west of the Project site. Areas surrounding West Avenue J are underdeveloped and classified by the rural character. High voltage powerlines are located immediately adjacent to the Project site, which connect with SCE's Antelope Substation.

The Project site (see Figure 2) currently consists of a previously disturbed grassy lot. Land to the north, east, and south of the site is similarly undeveloped. The Antelope Substation is immediately west of the Project site. The City's General Plan designates land use within the Project site as Non-Urban Residential (see Figure 3). According to the City's Zoning Ordinance, the Project would be classified as a "electric distribution substation", which is defined as "a facility that contains an assembly of equipment that is part of a system for the distribution of electric power, where electric energy is received at a sub-transmission voltage and transformed to a lower voltage for distribution for general consumer use" (Title 17, Chapter 17.04.240). Furthermore, the Project site is zoned RR-2.5 Rural Residential (see Figure 3). Electric distribution substations are an allowable use within the Project site with issuance of a Conditional Use Permit (CUP) for parcels zoned for rural residential uses.

The Project site is characterized by the California Department of Conservation as "Grazing Land" and does not include Prime Farmland, Farmland of Statewide Importance, or Farmland of Local Importance. Surrounding the Project site there is land designated as Grazing Land and Urban/Built up land. However, there is no Prime Farmland or Farmland of Statewide Importance in the vicinity of the Project site. The closest land designated as Prime Farmland is located approximately 1.0 mile to the north of the Project site. There are no Williamson Act lands within the City. Additionally, no forested land exists in the area, as the Project site is surrounded by roads and undeveloped high desert.

1.3 PROJECT BACKGROUND

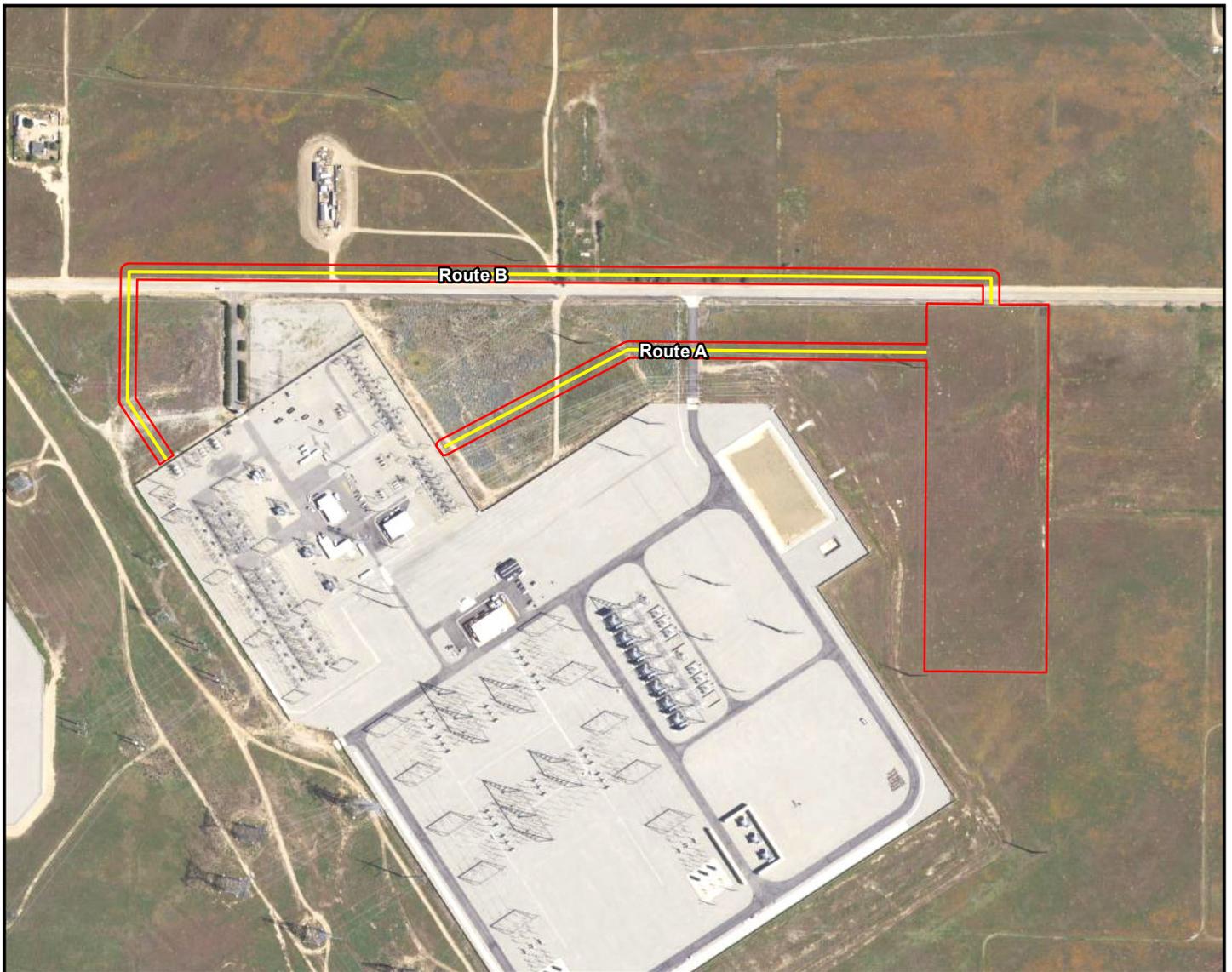
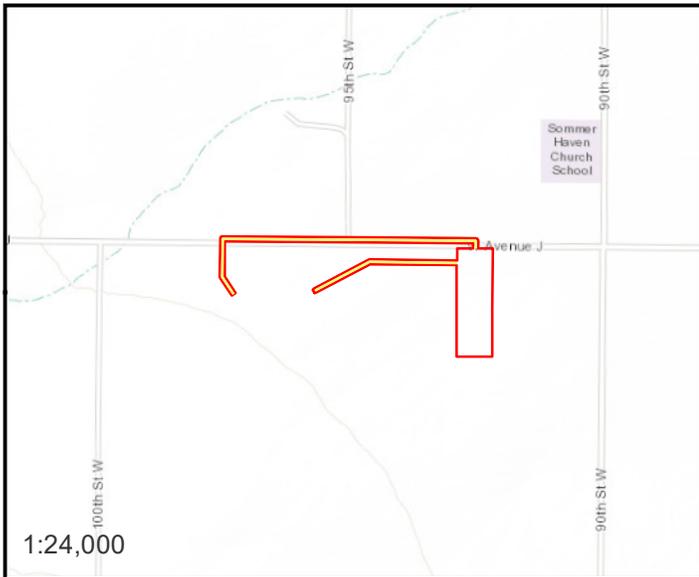
The Survey Area for the biological reconnaissance survey and burrowing owl habitat assessment included the Project boundary (the approximately 9.73-acre battery energy storage facility), the proposed gen-tie line portions and (1.81-acre Route A; 3.83-acre Route B) and respective buffers (25-feet on each side from centerline for a total of approximately 15.37-acres.

In 2022, Chambers Group conducted surveys within the previous proposed Project location and gen-tie lines that has since been redesigned for 2023 (Appendix D). Surveys conducted in 2022 included a reconnaissance survey, special status plant survey, and focused burrowing owl surveys. Reconnaissance-level biological surveys occurred on April 13, 2022, and May 10, 2022. Focused surveys included a special status plant survey on May 10, 2022, and four focused burrowing owl surveys on April 13, June 3, June 21, and July 13, 2022 (Chambers Group 2022a, 2022b, 2022c). Maps showing the extent of the previously surveyed areas in 2022 can be found in Appendix D. These survey areas covered the majority of the current proposed Project Survey Area.

In 2023, a burrowing owl habitat assessment in accordance with protocol set forth by the CDFW Staff Report on Burrowing Owl Mitigation (2012), was conducted within the Survey Area, in areas that were not previously surveyed for during the 2022 focused burrowing owl surveys. The results of this habitat assessment are provided in Section 3.7 of this report.

EXISTING CONDITIONS

The Survey Area has a total of approximately 15.37 acres dominated by low growing non-native herbaceous annual grasslands (i.e., Disturbed vegetation; 13.60 acres). Disturbed Rubber Rabbitbrush Scrub (7.84 acres total) is also located in a small patch in the northwest corner of the battery energy storage facility, and along the gen-tie Route A near the substation. A small patch of Tamarisk is located near the center of the gen-tie Route B along West Avenue J. Bare ground and developed areas make up approximately 0.75 acre along the gen-tie routes. The Survey Area contains primarily flat terrain with soils identified as well drained, sandy loam derived from granite (USDA 2023). Non-native vegetation cover is estimated at 90 percent. Evidence of off-road vehicle use, and illegal dumping is present intermittently throughout the Survey Area.



- Project Location
- Proposed 230 KV Gentic

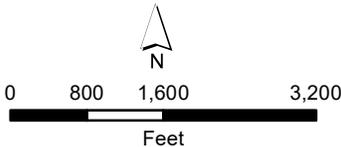


Figure 1
Stroud Energy Storage Project
Location and Vicinity

SECTION 2.0 – METHODOLOGY

2.1 LITERATURE REVIEW

Prior to performing the field survey, existing documentation relevant to the Survey Area was reviewed. The most recent records of the California Natural Diversity Database (CNDDDB) managed by CDFW (CDFW 2023), the USFWS Critical Habitat Mapper (USFWS 2023b) and the California Native Plant Society's Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California (CNPS 2023) were reviewed for the following quadrangles containing and surrounding the Survey Area: *Del Sur, Fairmont Butte, Green Valley, Lake Hughes, Lancaster West, Little Buttes, Ritter Ridge, Rosamond, and Sleepy Valley*, California USGS 7.5 minute quadrangles. These databases contain records of reported occurrences of federal- or state-listed endangered or threatened species, California Species of Concern (SSC), or otherwise special status species or habitats that may occur within or in the immediate vicinity of the Survey Area.

2.2 SOILS

Before conducting the surveys, soil maps for Los Angeles County were referenced online to determine the types of soil found within the Survey Area. Soils were determined in accordance with categories set forth by the United States Department of Agriculture (USDA) Soil Conservation Service and by referencing the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2023).

2.3 JURISDICTIONAL WATERS

Austin Burke conducted a general assessment of jurisdictional waters regulated by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW within the proposed Project area on March 3, 2023. Pursuant to Section 404 of the Clean Water Act, USACE regulates the discharge of dredged and/or fill material into waters of the United States (US). The State of California (State) regulates discharge of material into waters of the State pursuant to Section 401 of the Clean Water Act (CWA) and the California Porter-Cologne Water Quality Control Act (California Water Code, Division 7, §13000 et seq.). Pursuant to Division 2, Chapter 6, Sections 1600-1602 of the California Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife. The assessment was conducted by a desktop survey through the United States Geological Survey National Hydrography Dataset for hydrological connectivity.

For the purpose of determining hydrologic connectivity to a Traditional Navigable Water (TNW), the most recent records of the USFWS National Wetlands Inventory (NWI; USFWS 2023a) data, U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) blue-lined drainages, aerial imagery, and topographic maps were reviewed; and all features were inspected in the field on and off site for true connectivity. Potential USACE / RWQCB / CDFW jurisdictional areas identified during the literature search and aerial image analysis were field checked for the presence of definable channels, soils, wetland vegetation, riparian habitat, and hydrology. Each drainage was examined in the field, and the channel banks were examined for signs of flow, terraces, drift deposits and other indicators that would determine the location of the Ordinary High Water Mark (OHWM). Climate and flow frequency were taken under consideration during the survey effort. Data were collected using a combination of records entered into ESRI ArcGIS Collector and hand-written field notes.

Potential wetland habitats were evaluated using the methodology set forth in the *1987 Corps of Engineers Wetlands Delineation Manual* (1987 Wetland Manual; USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (version 2.0)* (2008 Arid West Supplement; USACE 2008). The methods set forth in the 1987 Wetland Manual and the 2008 Arid West Supplement involve the delineation of wetlands based on the presence of three wetland parameters: a predominance of hydrophytic vegetation, wetland hydrology, and hydric soils. These wetland parameters are discussed in greater detail below.

Hydrophytic Vegetation

Hydrophytic vegetation is defined as “the sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content” (USACE 1987). The potential wetland areas were surveyed by walking through the Survey Area and making observations of those areas exhibiting characteristics of jurisdictional wetlands.

Areas supporting plant life potentially indicative of wetlands were evaluated in the field according to current USACE wetland delineation procedures described in the 1987 Wetland Manual (USACE 1987) and the 2008 Arid West Supplement (USACE 2008). The dominant and subdominant plant species present in the sample pits of these potential wetland areas were identified and their wetland indicator status noted based on the current National Wetland Plant List (USACE 2021). The list was referenced to classify identified plants using the following categories: obligate wetland (OBL; almost always occurs in wetlands), facultative wetland (FACW; usually occurs in wetlands but occasionally found in non-wetlands), facultative (FAC; equally likely to occur in wetlands and non-wetlands), facultative upland (FACU; usually occurs in non-wetlands but occasionally found in wetlands), and obligate upland (UPL; almost always occurs in non-wetlands).

Hydric Soils

A hydric soil is a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (USACE 1987). Hydric soil indicators are formed predominantly by the accumulation or loss of iron, manganese, sulfur, or carbon compounds (USACE 2008) due to periods of anaerobic conditions in the soil. The hydric soil criterion is considered satisfied at a location if soils in the area can be inferred to have a high groundwater table, evidence of prolonged soil saturation, or any indicators suggesting a long-term reducing environment in the upper 18 inches of the soil profile are present.

Potential hydric soils were investigated within the Survey Area. Sample soil pit locations were selected, and a hole was dug to a typical depth of 18 inches (unless prevented by some occluding material) or occasionally deeper to determine soil color, evidence of soil saturation, depth to shallow groundwater, and indicators of a reducing soil environment (e.g., redox concentrations or pore linings, gleyed soils, hydrogen sulfide odor). Soil matrix colors were classified using the Munsell Soil-Color Charts (Munsell Color 2009).

Wetland Hydrology

The presence of wetland hydrology indicators confirm that inundation or saturation has occurred on a site but may not provide information about the timing, duration, or frequency of the event. Hydrology features are generally the most ephemeral of the three wetland parameters (USACE 2008).

Hydrologic information for the site was obtained by reviewing USGS topographic maps and by directly observing hydrology indicators in the field. The wetland hydrology criterion is considered satisfied at a location if, based upon the conclusions inferred from the field observations, an area has a high probability of being periodically inundated or has soils saturated to the surface at some time during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone (USACE 1987). If at least one primary indicator or at least two secondary indicators are found at a sample pit, the wetland hydrology criterion is considered satisfied.

2.4 BIOLOGICAL RECONNAISSANCE-LEVEL SURVEY

Chambers Group biologists Alisa Muniz, Austin Burke, and Eliana Maietta conducted the general reconnaissance survey within the 15.37-acre Survey Area to identify the potential for occurrence of special status species, vegetation communities, or habitats that could support special status wildlife species. The survey was conducted on foot, throughout the Survey Area between 0730 and 1130 hours on March 3, 2023. Weather conditions during the survey included temperatures ranging from 43 to 60 degrees Fahrenheit, with 5 percent cloud cover, no precipitation, and wind speeds ranging from 2 to 9 miles per hour during the survey. Photographs of the Survey Area were taken to document existing conditions (Appendix A).

2.4.1 Vegetation

Chambers Group biologist Alisa Muniz documented vegetation communities during the March 3, 2023, reconnaissance survey. Vegetation communities within the Survey Area were identified, qualitatively described, and mapped onto a high-resolution imagery aerial photograph. Plant communities were determined in accordance with the *Manual of California Vegetation, Second Edition* (Sawyer et al. 2009). Plant nomenclature follows that of *The Jepson Manual, Second Edition* (Baldwin et al. 2012). All plant species observed within the Survey Area were recorded. A comprehensive list of the plant species observed during the survey is provided in Appendix B.

2.4.2 Wildlife

All wildlife and wildlife signs observed and detected, including tracks, scat, carcasses, burrows, excavations, and vocalizations, were recorded. Additional survey time was spent in those habitats most likely to be utilized by wildlife (native vegetation, wildlife trails, etc.) or in habitats with the potential to support state- and/or federal-listed or otherwise special status species. Notes were made on the general habitat types, species observed, and the conditions of the Survey Area. A comprehensive list of the wildlife species observed during the survey is provided in Appendix C.

2.5 BURROWING OWL ASSESSMENT SURVEY

A burrowing owl assessment survey was conducted by Chambers Group biologists Alisa Muniz, Austin Burke, and Eliana Maietta throughout suitable habitat within Project site and 500-ft buffer in areas that were not surveyed during the 2022 surveys. The areas of overlap with the 2022 surveys included the northern half of the battery energy storage facility, the two proposed gen-tie routes and buffers along West Avenue J, and the southern burrowing owl survey buffer. The area targeted for 2023 that was not surveyed in 2022 included approximately 5.5 acres within the battery energy storage facility and 17.5 acres of the burrowing owl survey buffer around the southern portion of the battery energy storage facility for a total of approximately 23 acres.

The survey was conducted to determine the presence or absence of any burrowing owl, occupied burrows, potential burrows, areas where burrows are concentrated, owl sign (scat, burrows, carcasses, courtship rings, drinking depressions, etc.) within the Survey Area, in accordance with protocol set forth by the CDFW Staff Report on Burrowing Owl Mitigation (2012). The survey was conducted over the Survey Area using approximately 25- to 30-meter transects to achieve 100 percent coverage. Additionally, the 150-meter (500-foot) buffer zone was surveyed where habitat was present using 25- to 30-meter transects to account for any burrowing owl burrows or foraging habitat that may exist adjacent to the Survey Area. All sign of burrowing owl activity, locations of any owls, and all wildlife and sensitive species observed (visual, vocalizations, etc.) during the surveys were documented and their locations were mapped using GPS technology (ESRI ArcGIS Collector).

SECTION 3.0 – RESULTS

3.1 SOILS

After review of USDA Soil Conservation Service and by referencing the USDA NRCS Web Soil Survey (USDA 2023), it was determined that the Survey Area is located within the Antelope Valley Area, California area CA675. Based on the results of the database search, two soil types were observed in the Survey Area (Figure 2: USDA Soils Map).

- **Greenfield sandy loam (GsC), 2 to 9 percent slopes** occurs throughout the entire site. These soils are well drained and occur at elevations of 2,600 to 4,200 feet amsl. The soil profile is composed of sandy loam, stratified loamy sand to coarse sandy loam. These soils have a low runoff classification and are not subject to frequent flooding.
- **Greenfield sandy loam (GsA), 0 to 2 percent slopes** in the northern portion of the Survey Area. These soils are well drained and occur at elevations of 2,600 to 4,200 feet amsl. The annual mean precipitation for this soil type is 9 to 12 inches. The parent material is alluvium derived from granite. The soil profile is composed of sandy loam, stratified loamy sand to coarse sandy loam. These soils have a very low runoff classification, and the available water storage is classified as moderate. This is a well-drained soil with a water table approximately more than 80 inches below the surface.

3.2 JURISDICTIONAL WATERS

The Survey Area is within the Amargosa Creek Watershed (Hydrological Unit Code (HUC) – 10; HUC 1809020614) (Figure 3: Watersheds Map). This watershed covers an area of approximately 283 square miles (California Water Indicators Portal 2022), from Lake Palmdale in Palmdale, Los Angeles County to the west of the 170th Street West and West Avenue D intersection. The Survey Area is located north of the Portal Ridge Mountains (north of the Leona Valley), between 90th Street West to the east and 110th Street West to the west. No NWI or NHD mapped features are shown to occur within or immediately adjacent to the Survey Area (Figure 4).

No drainage features, wetlands, or non-jurisdictional features were observed within the Survey Area during the survey (Figure 5: Jurisdictional Waters Assessment). Therefore, no impacts to jurisdictional or non-jurisdictional features are anticipated to occur as a result of Project activities.

3.3 VEGETATION COMMUNITIES

Three upland vegetation communities and two land types were mapped within the Survey Area (Table 1). No wetland or riparian habitats were present on site. A map showing these different areas within the Survey Area is provided as Figure 6, and the communities are described in the following subsections.

Table 1: Vegetation Communities Occurring Within the Survey Area

Land Type (Vegetation Community/Other Area)	Survey Area (Acres)
Battery Energy Storage Facility	
Disturbed	9.64
Disturbed Rubber Rabbit Brush Scrub	0.09
Sub-Total	9.73
Gen-tie Route A	
Bare Ground	0.11
Developed	0.04
Disturbed	0.77
Disturbed Rubber Rabbitbrush Scrub	0.89
Sub-Total	1.81
Gen-Tie Route B	
Bare Ground	0.54
Developed	0.06
Disturbed	3.19
Tamarisk Stand	0.03
Sub-Total	3.83
Total	15.37

3.3.1 Disturbed Rubber Rabbitbrush Scrub

In Disturbed Rubber Rabbitbrush Scrub, as described by Sawyer et al. (2009), rubber rabbitbrush (*Ericameria nauseosa*) is dominant or co-dominant in the shrub canopy with big sagebrush (*Artemisia tridentata*), California buckwheat (*Eriogonum fasciculatum*), scalebroom (*Lepidospartum squamatum*), and bitterbrush (*Purshia tridentata*). Emergent trees may be present including California juniper (*Juniperus californica*) as well. Shrub canopy for this community is less than 10 feet in height. This community occurs in areas with well-drained sand and gravel soils at elevations below 10,500 feet.

Disturbed Rubber Rabbitbrush Scrub (0.09 acre) has a high percentage of non-native species (i.e., greater than 25 percent of the species cover). This community was found within the northeastern corner of the battery energy storage facility area, and (0.89 acre) within the gen-tie Route A for a total of 0.98 acre. The area along the gen-tie Route A north of the substation had denser rubber rabbitbrush and California buckwheat cover. The shrub cover was sparser in the northeastern corner of the proposed battery energy storage facility within the Survey Area. Native plants observed within this community on site include rubber rabbitbrush, California buckwheat, and sand-aster (*Corethrogyne filaginifolia*). Non-native species include red stemmed filaree (*Erodium cicutarium*) and brome grasses (*Bromus* spp.).

3.3.2 Disturbed

Disturbed areas are those areas that are either devoid of vegetation (previously cleared or graded) or those areas that have a high percentage of non-native weedy and ruderal species (i.e., greater than 25 percent of the species cover).

Disturbed areas compromise most of the Survey Area, approximately 13.60 acres. Native plants found within this community on site included fiddlenecks (*Amsinckia* sp.), California poppy (*Eschscholzia*

californica), dobie pod (*Tropidocarpum gracile*), small lupines (*Lupinus* spp.), and sand-aster. However, the majority of vegetation within the Disturbed areas of the Survey Area consisted of non-native plant species typical of this community, including brome grasses, red stemmed filaree, fescue (*Festuca myuros*), and prickly lettuce (*Lactuca serriola*).

3.3.3 Tamarisk Thickets

Tamarisk Thickets are typically found along arroyo margins, lake margins, ditches, washes, rivers, and other watercourses (Sawyer et al. 2009). Tamarisk species possess eco-physiological characteristics that make them remarkably formidable as invasive plants. They are long-lived shrubs or trees with extensive and deep root systems. They consume large quantities of water, possibly more than any other woody species in similar habitats, because they can obtain water at very low water potentials and have very high water-use efficiencies. They are highly tolerant of alkaline and saline habitats and can concentrate salts in their leaves (Sawyer et al. 2009). Mediterranean tamarisk (*Tamarix ramosissima*) or another *Tamarix* species is dominant in the shrub canopy. Emergent trees may be present at low cover, including Fremont cottonwood or willow species (*Salix* spp.). Shrubs are typically less than 8 meters in height with a canopy that is continuous or open. The herbaceous layer is sparse (Sawyer et al. 2009).

Tamarisk Thickets dominated by *Tamarix aphylla* was found along a dirt road north of the substation along West Avenue J. Approximately 0.03 acre of Tamarisk Thickets occurs along the gen-tie Route B portion of the Survey Area. This tamarisk is not associated with wetland or riparian habitat and can be avoided during Project construction.

3.3.4 Developed

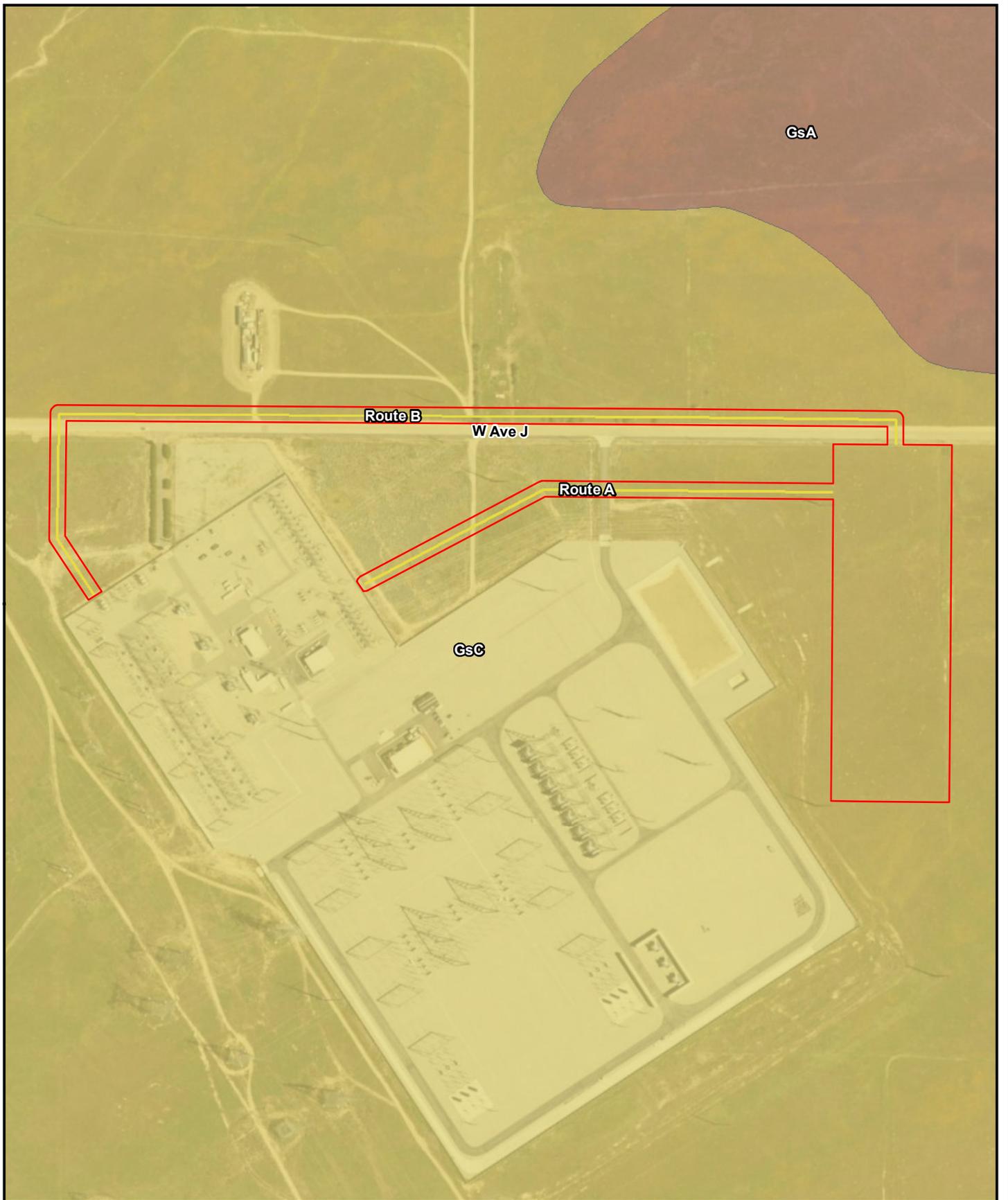
Developed areas are those where various forms of pavement or man-made earthen structures alter the soil surface. This surface is recorded as separate from bare ground due to the erosional, use and hydric properties associated with the feature. Due to the lack of permeability or intentionally restrictive design, these areas channel water run-off and can result in unique erosional management considerations.

Developed areas onsite (0.43 acre) consisted of paved roads (i.e., West Avenue J and entrance into substation) along the two gen-tie routes.

3.3.5 Bare Ground

Bare Ground areas are generally devoid of vegetation, but do not contain any form of desert pavement or former infrastructure. These areas are typically associated with areas that have been previously cleared by earth-moving machinery, are dirt access roads, and/or consist of naturally occurring areas devoid of vegetation. Compared to Developed areas, Bare Ground areas have higher water permeability and higher fossorial rodent habitat potential.

Bare Ground (0.65 acre) was found along the two gen-tie routes, primarily along West Avenue J and near the substation.



Project Location

 Proposed 230 KV Gentie

Soils

- GsA- Greenfield sandy loam,
 0 to 2 percent slopes
- GsC - Greenfield sandy loam,
 2 to 9 percent slopes

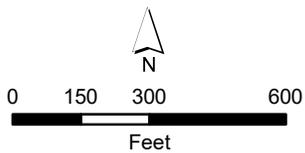
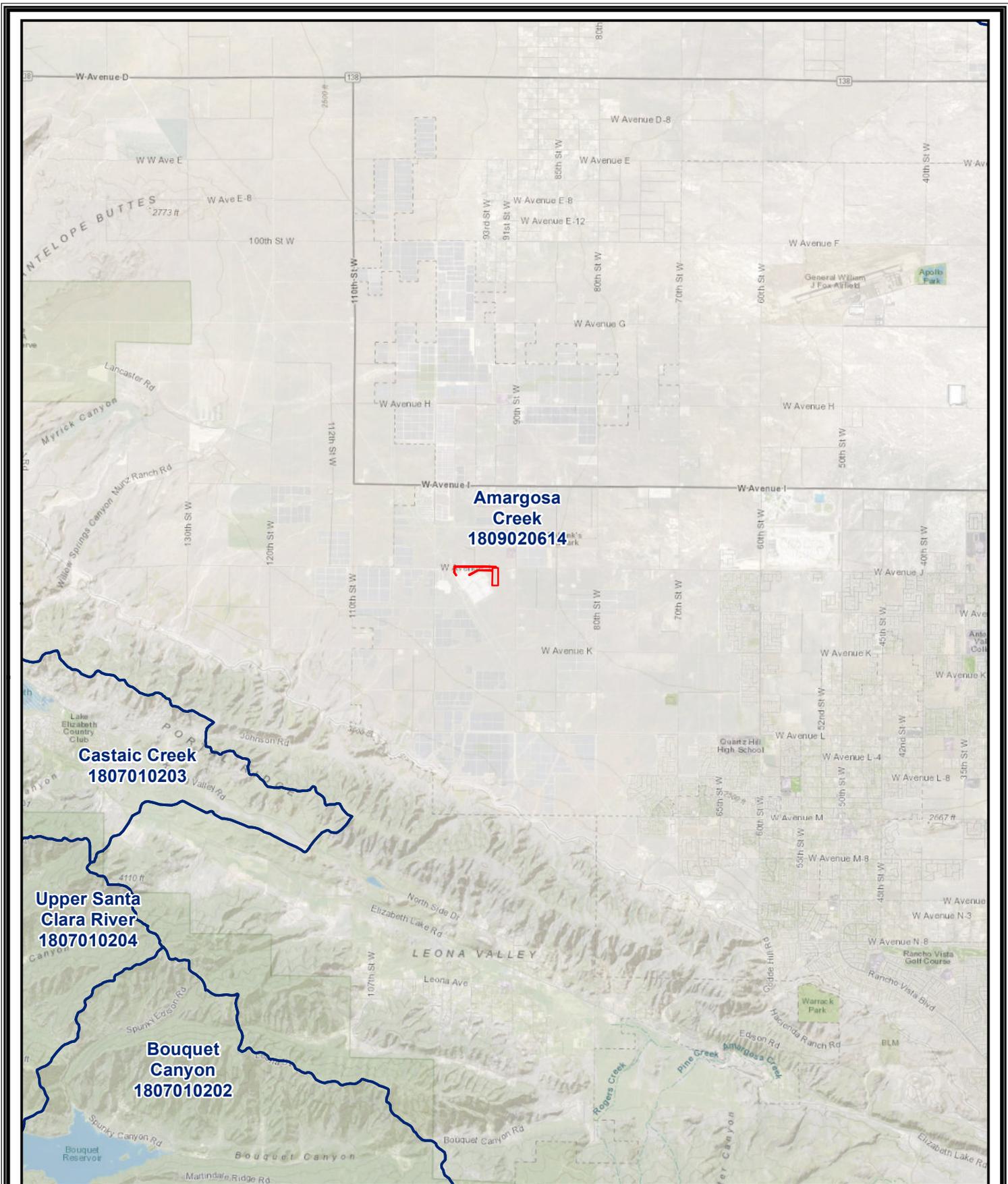


Figure 2
 Stroud Energy Storage Project
 Soils



- Project Location
- Watershed (HUC-10)

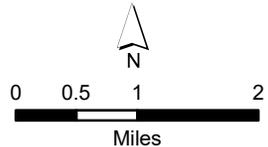
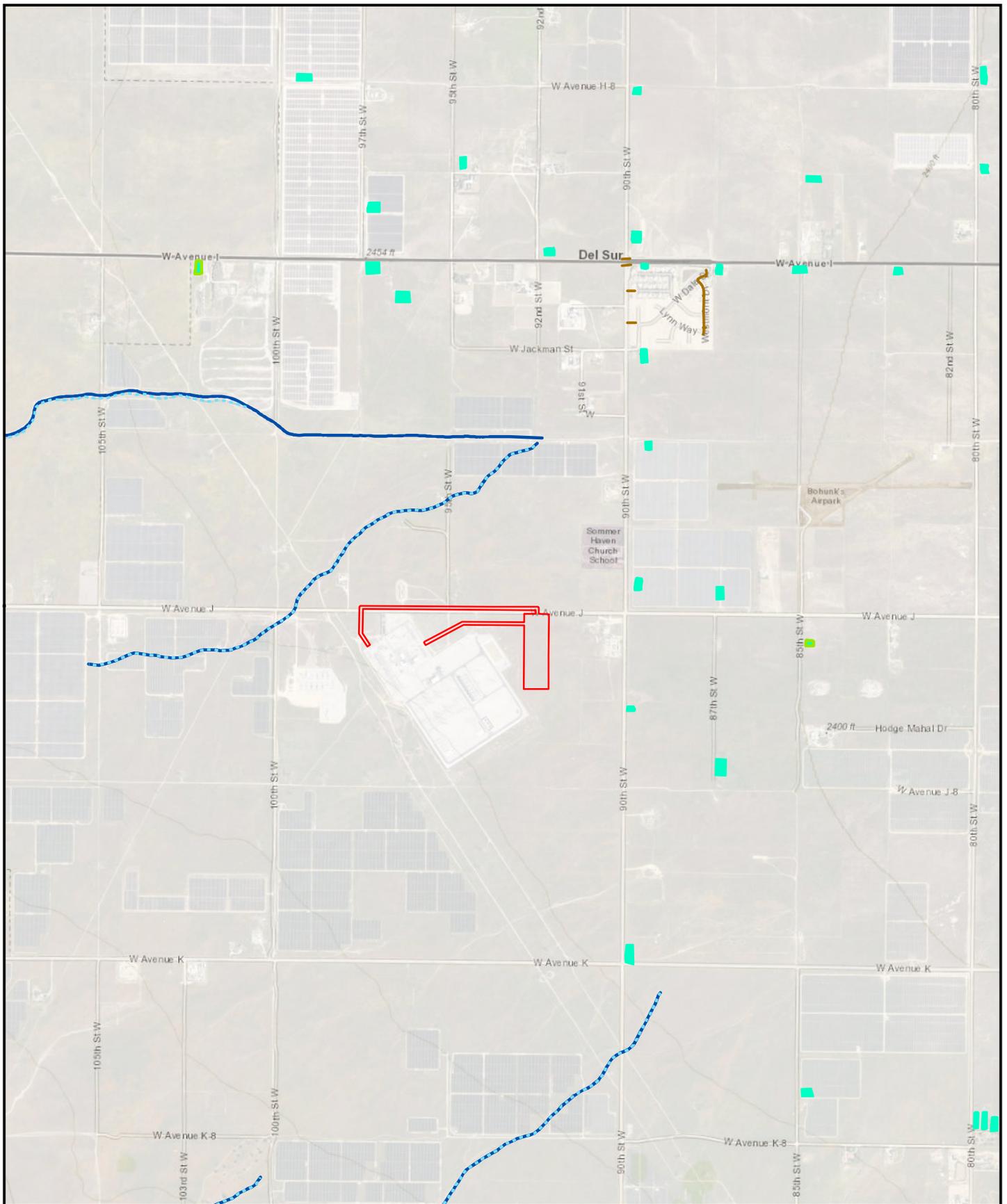
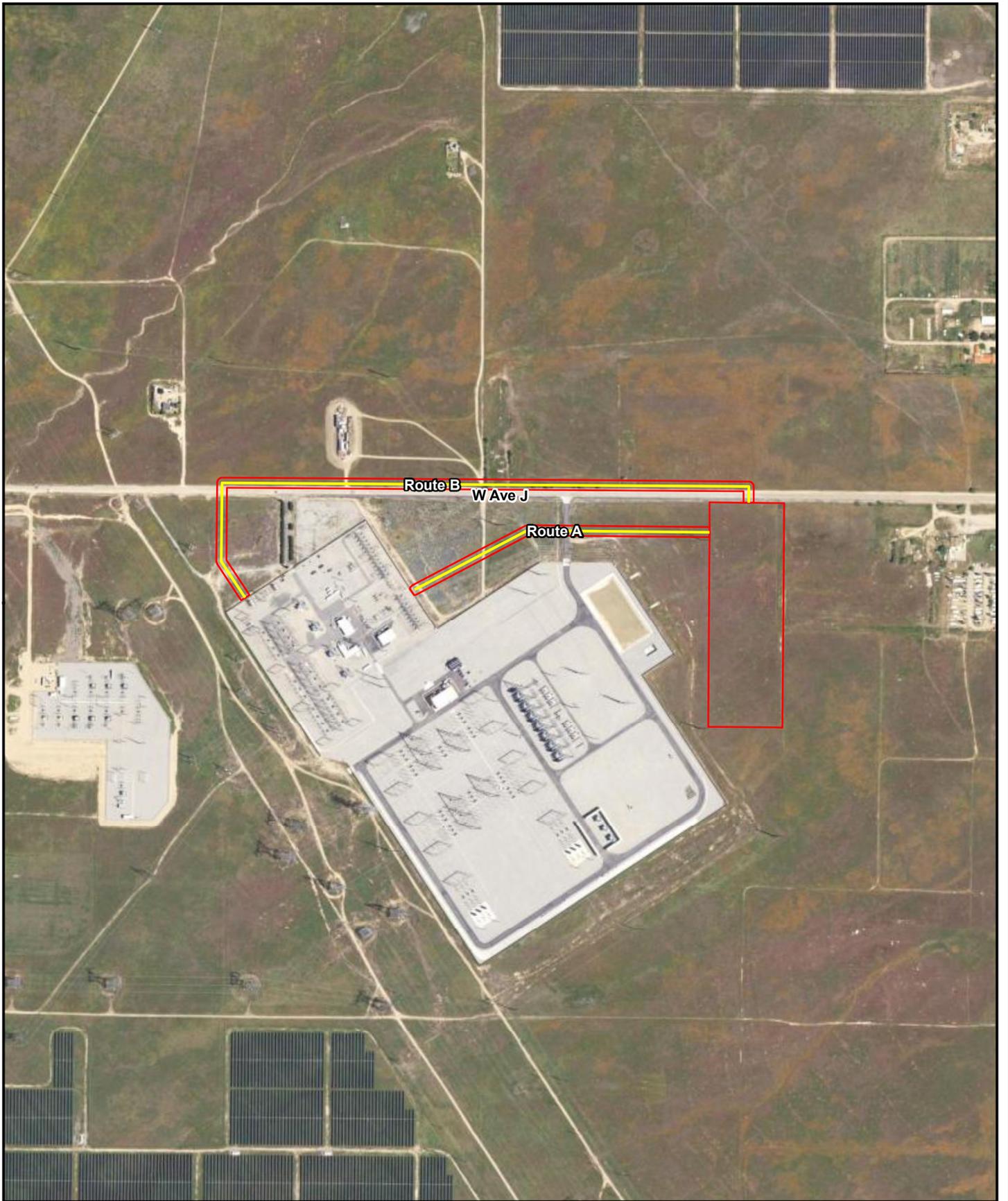


Figure 3
Stroud Energy Storage Project
Watershed



- Project Location
- NWI**
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- NHD**
- Pipeline
- Stream/River

Figure 4
 Stroud Energy Storage Project
 NWI and NHD



- Proposed 230 KV Gentie
- Project Location

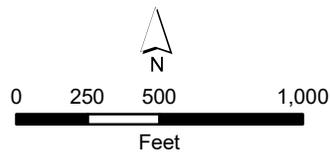
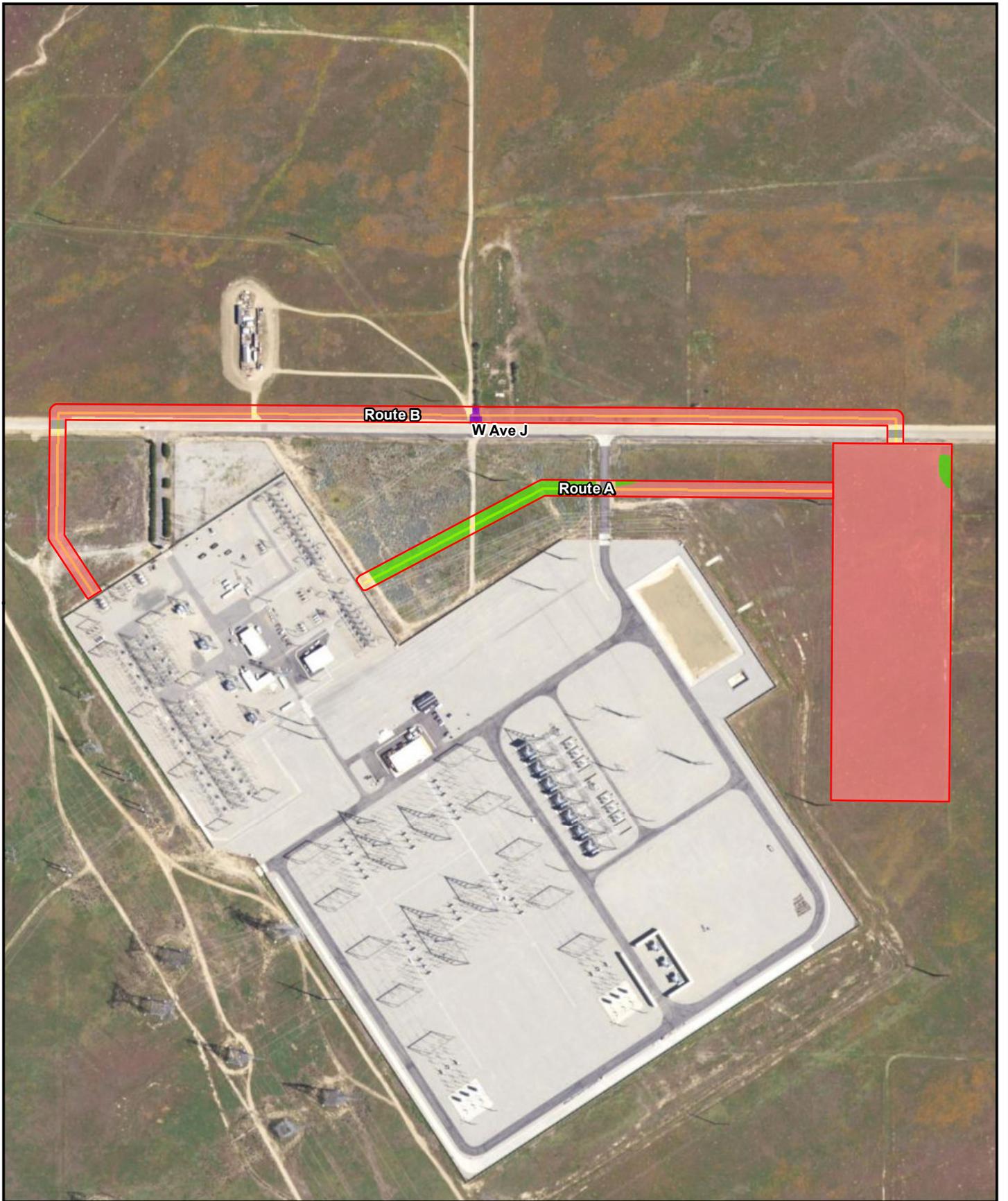


Figure 5
Stroud Energy Storage Project
Jurisdictional Waters Assessment



- Project Location
- Proposed 230 KV Gentie
- Vegetation Community**
- Bare Ground
- Developed
- Disturbed
- Disturbed Rubber Rabbitbrush Scrub
- Tamarisk Stand

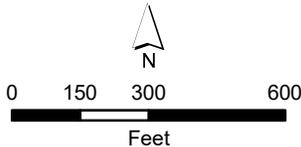


Figure 6
Stroud Energy Storage Project
Vegetation Communities

3.4 GENERAL PLANTS

A total of 20 plant species were observed during the surveys. Plant species observed or detected during the site survey were characteristic of the existing Survey Area conditions. No special status species were observed during the survey effort. A complete list of plants observed is provided in Appendix B.

3.5 GENERAL WILDLIFE

A total of 11 wildlife species were observed during the survey. Wildlife species observed or detected during the site survey were characteristic of the existing Survey Area conditions. Two special status species were observed during the survey. A complete list of wildlife observed is provided in Appendix C.

3.6 SPECIAL STATUS SPECIES

The following information is a list of abbreviations used to help determine the significance of biological special status resources potentially occurring on the Survey Area.

California Rare Plant Rank (CRPR)

- CRPR 1A = Plants presumed extinct in California.
- CRPR 1B = Plants rare and endangered in California and throughout their range.
- CRPR 2 = Plants rare, threatened or endangered in California but more common elsewhere in their range.
- CRPR 3 = Plants about which we need more information; a review list.
- CRPR 4 = Plants of limited distribution; a watch list.

CRPR Extensions

- 0.1 = Seriously endangered in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat).
- 0.2 = Fairly endangered in California (20-80 percent occurrences threatened).
- 0.3 = Not very endangered in California (less than 20 percent of occurrences threatened).

Federal

- FE = Federally listed; Endangered
- FT = Federally listed; Threatened
- FC = Federal Candidate for listing

State

- ST = State listed; Threatened
- SE = State listed; Endangered
- RARE = State-listed; Rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
- SSC = California Species of Special Concern
- WL = CDFW Watch List

The following information was used to determine the significance of biological resources potentially occurring within the Survey Area. The criteria used to evaluate the potential for special status species to occur on the Survey Area are outlined in Table 2.

Table 2: Criteria for Evaluating Special Status Species Potential for Occurrence (PFO)

PFO*	CRITERIA
Absent:	Species is restricted to habitats or environmental conditions that do not occur within the Survey Area.
Low:	Historical records for this species do not exist within the immediate vicinity (approximately 5 miles) of the Survey Area, and/or habitats or environmental conditions needed to support the species are of poor quality.
Moderate:	Either a historical record exists of the species within the immediate vicinity of the Survey Area (approximately 3 miles) and marginal habitat exists on the Survey Area, or the habitat requirements or environmental conditions associated with the species occur within the Survey Area, but no historical records exist within 5 miles of the Survey Area.
High:	Both a historical record exists of the species within the Survey Area or its immediate vicinity (approximately 1 mile), and the habitat requirements and environmental conditions associated with the species occur within the Survey Area.
Present:	Species was detected within the Survey Area at the time of the survey.

* PFO: Potential for Occurrence

3.6.1 Special Status Plant Species

Current database searches (CDFW 2023 and CNPS 2023) resulted in a list of four special status plant species documented to occur within five miles of the Survey Area. After the literature review, the reconnaissance-level survey, and the 2022 focused plant survey in the immediate vicinity (Chambers Group 2022b), it was determined that all four species are considered absent from the Survey Area. Factors used to determine the potential for occurrence included the quality of habitat, elevation, soil type, and the results of the reconnaissance and 2022 focused plant survey. In addition, the location of prior CNDDDB records of occurrence was used as additional data, but because the CNDDDB is a positive-sighting database, these data were used only in support of the analysis from the previously identified factors.

The following four plant species are considered **absent** from the Survey Area due to lack of suitable habitat, the species occurs outside the site’s elevation range, the species are typically found in alkaline soils which were not present on site, and/or because the survey was conducted during the appropriate blooming period when the species would have been conspicuous and was not detected. None of the four species were found during the 2022 special status plant and biological reconnaissance surveys (Chambers Group 2022b).

- alkali mariposa lily (*Calochortus striatus*) – CRPR 1B.2
- Pierson’s morning glory (*Calystegia peirsonii*) – CRPR 4.2
- slender mariposa lily (*Calochortus clavatus* var. *gracilis*) – CRPR 1B.2

- short joint beavertail (*Opuntia basilaris* var. *brachyclada*) – CRPR 1B.2

3.6.2 Special Status Habitats

Current database searches (CDFW 2023 and CNPS 2023) resulted in a list of one special status habitat, Valley Needlegrass Grassland, documented to occur within 5 miles of the Survey Area. After the literature review, the reconnaissance-level survey, it was determined that no native needle grass species were observed, and Valley Needlegrass Grassland is considered absent from the Survey Area.

3.6.3 Special Status Wildlife

A current database search (CNDDDB 2023; USFWS 2023c) resulted in a list of 34 federal- and/or state-listed endangered or threatened, Species of Concern, or otherwise special status wildlife species that may potentially occur within the Survey Area (Figure 7: CNDDDB and USFWS Occurrences Map). After a literature review, the reconnaissance-level survey, burrowing owl assessment survey, assessment of the various habitat types within the Survey Area, and the 2022 surveys (Chambers Group 2002a, 2022b, 2022c), it was determined that 30 special status wildlife species were considered absent from the Survey Area, three species has a low potential to occur, and one species have a high potential because it was detected near the Survey Area during the 2022 surveys. Factors used to determine potential for occurrence included the quality of habitat and the location of prior CNDDDB and USFWS records of occurrence.

The following 30 wildlife species are considered **Absent** from the Survey Area due to lack of suitable habitat present, the species falls outside the elevation range found on the Survey Area, no known occurrences have been recorded within five miles of the Survey Area, and/or the species was not observed during survey:

- tricolored blackbird (*Agelaius tricolor*) - **ST**, SSC
- southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) – **WL**
- northern California legless lizard (*Anniella pulchra*) – **SSC**
- California legless lizard (*Anniella* spp.) – **SSC**
- golden eagle (*Aquila chrysaetos*) – **FP**, **WL**
- California glossy snake (*Arizona elegans occidentalis*) – **SSC**
- Bell’s sage sparrow (*Artemisiospiza belli belli*) - **WL**
- long-eared owl (*Asio otus*) - **SSC**
- vernal pool fairy shrimp (*Branchinecta lynchi*) – **FT**
- mountain plover (*Charadrius montanus*) – **SSC**
- northern harrier (*Circus hudsonius*) – **SSC**
- Townsend’s big eared bat (*Corynorhinus townsendii*) – **SSC**
- western pond turtle (*Emys marmorata*) - **SSC**
- quino checkerspot butterfly (*Euphydryas editha quino*) - **FE**
- merlin (*Falco columbarius*) – **WL**
- unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*) – **FE**, **ST**, **FP**
- desert tortoise (*Gopherus agassizii*) – **FT**, **ST**
- California condor (*Gymnogyps californianus*) - **FE**
- bald eagle (*Haliaeetus leucocephalus*) – **SE**, **FP**
- southern grasshopper mouse (*Onychomys torridus ramona*) - **SSC**
- Tehachapi pocket mouse (*Perognathus alticola inexpectatus*) – **SSC**

- coast horned lizard (*Phrynosoma blainvillii*) – SSC
- white-faced ibis (*Plegadis chihi*) – WL
- coastal California gnatcatcher (*Polioptila californica californica*) – FT, SSC
- California red-legged frog (*Rana draytonii*) – FT, SSC
- American badger (*Taxidea taxus*) – SSC
- two-striped gartersnake (*Thamnophis hammondi*) – SSC
- Le Conte’s thrasher (*Toxostoma lecontei*) – SSC
- least Bell’s vireo (*Vireo bellii pusillus*) – FE, SE
- Mohave ground squirrel (*Xerospermophilus mohavensis*) – ST

The following two species have a **Low** potential to occur within the Survey Area:

- burrowing owl (*Athene cunicularia*) – SSC
- ferruginous hawk (*Buteo regalis*) – WL

The following species has **Low** potential to occur but was observed within 1-mile of the Survey Area in 2022:

Swainson’s hawk – ST

The Swainson’s hawk (*Buteo swainsoni*) is State Threatened (ST) species. The Swainson’s hawk is found in multiple habitats including plains, dry grasslands, and farmland (Audubon 2023c). This species has very limited breeding reported the Antelope Valley (CDFW 2006). Antelope valley Swainson’s hawks are historically known to nest in Joshua Tree woodlands and foraged in grasslands and native desert scrub communities. Currently, Swainson’s hawks nest in Joshua Tree woodlands, roadside ornamental trees, and trees surrounding agricultural areas (California Energy Commission 2010). Poor quality habitat to support prey species is present within the Survey Area and no potential nesting sites were identified within the Survey Area for the Project. One individual was observed flying approximately 1-mile northwest of the Survey Area during the 2022 biological reconnaissance survey of an adjacent area (Chambers Group 2022a). This individual was observed flying high overhead and did not appear to be actively foraging in the area and was not observed displaying courtship or nesting behaviors. A nesting pair of Swainson’s hawks was identified in a cottonwood tree adjacent to an orchard approximately 2.25 miles northwest of the gen-tie line Survey Area and 3.15 miles northwest of the Project boundary. This nest was revisited in 2016 and was not found in the area. Based on the poor quality habitat and existing development within 1-mile of the Survey Area (solar fields and substations), nesting and foraging opportunities are considered to be low potential to occur. No suitable nesting habitat is found within the Project boundaries and no potential nests were located within the Survey Area during the 2023 biological reconnaissance survey, the 2022 biological reconnaissance survey or the 2022 focused burrowing owl surveys. Although there is a potential for this species to fly/migrate over the area, nesting and foraging of this species on site is not anticipated.

The following species has a **High** Potential to occur since it was identified near the Survey Area during the 2022 surveys:

Loggerhead shrike – SSC

The loggerhead shrike (*Lanius ludovicianus*) is a California Species of Special Concern (SSC). The loggerhead shrike is a medium-sized shrike and is found in any kind of semi-open terrain with high

vantage points such as wires, posts, or other high perching areas (Audubon 2023b). In the deserts of southern California, this species nests in many substrates, especially spiny/thorny shrubs like mesquite and require impaling sites for prey manipulation and storage (fence, mesquite thorns, etc.). One individual was observed approximately 900 feet east of the Survey Area during the 2022 focused BUOW surveys foraging and perching along a fence line on the south side of West Avenue J (Chambers Group 2022c). Although potential foraging opportunities are present within the Survey Area, no suitable nesting habitat was found within the Survey Area. Therefore, impacts to this species are not anticipated.

3.6.4 United States Fish and Wildlife Service Critical Habitat

USFWS Critical Habitat is defined as areas of land, water, and air space containing the physical and biological features essential for the survival and recovery of endangered and threatened species. Designated Critical Habitat includes sites for breeding and rearing, movement or migration, feeding, roosting, cover, and shelter. Designated Critical Habitats require special management and protection of existing resources, including water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types. Designated Critical Habitat delineates all suitable habitat, occupied or not, that is essential to the survival and recovery of the species. According to the USFWS Critical Habitat WebGIS map, the Survey Area does not occur within designated Critical Habitat.

3.6.5 Wildlife Corridors

Wildlife corridors are areas that connect fragmented habitats. They serve as wildlife linkages (wildlife travel corridors) between otherwise fragmented patches of habitat caused by changes in vegetation communities, rugged terrain, and human disturbances. These linkages may be drainages, canyons, or ridgelines that provide access to foraging areas, water, breeding sites, and dispersal areas. These corridors provide cover and shelter during travel. Disturbance to wildlife corridors such as anthropogenic activity and development can cause harm to migrating species, cause species to exceed their population thresholds, and/or prevent healthy gene flow between populations.

The Survey Area is not located within a wildlife corridor. None of the proposed Project features are anticipated to be large enough to create a physical barrier to wildlife movement. The quality of habitat within the Survey Area is poor (primarily disturbed and ruderal habitat) and is surrounded by solar and substation developments. Higher quality habitat is found along the Portal Ridge Mountains approximately 2.5 miles to the south, and native habitat areas found along Willow Springs Canyon, Myrick Canyon, and the Antelope Valley California Poppy Preserve approximately 5 miles to the west/northwest.

3.7 BURROWING OWL ASSESSMENT SURVEY

The result of the burrowing owl survey is provided below.

3.7.1 Burrowing Owl Assessment Survey

Chambers Group biologists Alisa Muniz, Austin Burke, and Eliana Maietta conducted a burrowing owl assessment survey on March 3, 2023. The area targeted for 2023 that was not surveyed in 2022 included approximately 23 acres. The survey was conducted on foot between the hours of 0730 and 1130. Weather conditions during the survey included temperatures ranging from 43 to 60 degrees Fahrenheit,

with 5 percent cloud cover, no precipitation, and wind speeds ranging from 2 to 9 miles per hour during the survey.

Poor quality burrowing owl habitat was identified throughout the Survey Area. No burrowing owls or sign were found within the Survey Area or 500-foot buffer. No potential burrows were observed within the Survey Area. In addition, no burrowing owl individuals or sign were observed during focused surveys conducted by Chambers Group in 2022 (Chambers Group 2022c) that overlapped the majority of the proposed Project Survey Area. Based on the results of the 2022 surveys and the poor quality habitat and no owls or sign identified within the Survey Area, burrowing owls are not anticipated to occur within the Project. No impacts to burrowing owl are anticipated during proposed Project activities.

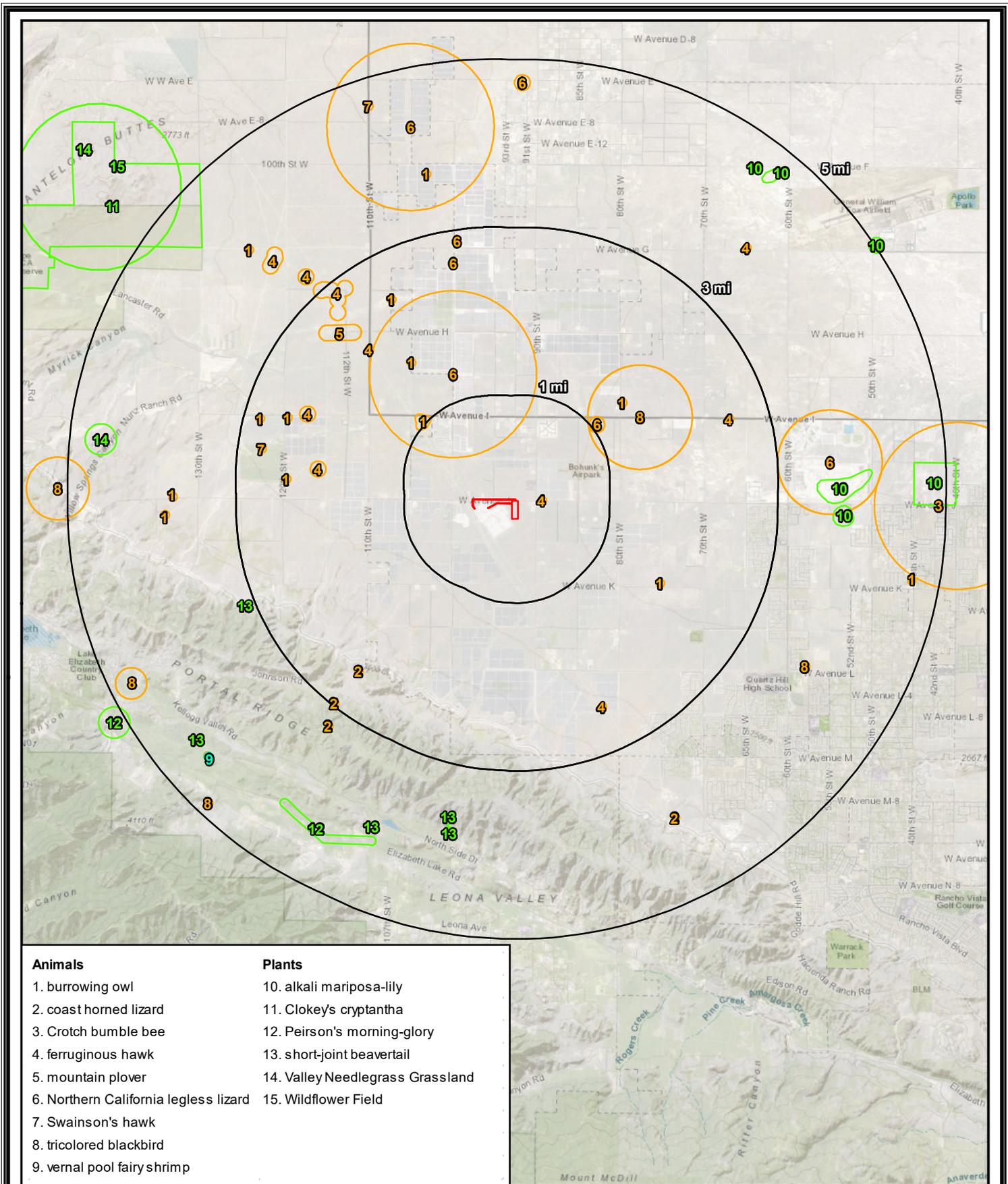
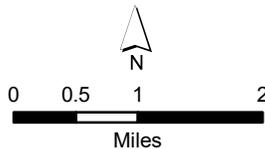


Figure 7
Stroud Energy Storage Project
CNDDDB and USFWS Occurrences

- ▭ Project Location
- ▭ USFWS Occurrences
- CNDDDB Occurrences**
- Animals
- Plants



SECTION 4.0 – CONCLUSIONS AND RECOMMENDATIONS

4.1 DRAINAGE FEATURES

No jurisdictional or non-jurisdictional features were observed within or directly adjacent to the Survey Area. In addition, no riparian, wetland, vernal pool habitats, or non-jurisdictional swale features were documented within the Survey Area. Impacts to RWQCB, USACE and CDFW jurisdictional waters are not anticipated as a result of the Project. Therefore, CWA Section 404, 401 Water Quality Certification, or Streambed Alteration Agreement permits are not required for Project activities.

4.2 SPECIAL STATUS PLANTS

After the literature review, the assessment of the various habitat types in the Survey Area, and the reconnaissance level survey, it was determined that all four special status plant species with a potential to occur are considered absent from the Survey Area. In addition, no special status plants were observed in the areas adjacent to the Survey Area during focused survey conducted Chambers Group in 2022 (Chambers Group 2022b). Therefore, these species are not anticipated to occur within the site and no additional surveys are required for these species.

4.2.1 Special Status Habitats

After the literature review and the reconnaissance-level survey, it was determined that any form of special status habitat is absent from the Survey Area.

4.3 SPECIAL STATUS WILDLIFE

Of the 34 special status wildlife species identified in the literature review, it was determined that 30 special status wildlife species were considered absent from the Survey Area, three species have a low potential to occur, and one species was considered to have a high potential to occur within the Survey Area.

While there is a historical record of a wintering ferruginous hawk observed immediately adjacent to the Survey Area, the observation is from 1998 when the area was much less developed. In addition, low quality foraging habitat and no suitable nesting habitat for this species was found within the Survey Area. Therefore, this species is considered to have a low potential to occur.

A loggerhead shrike was observed approximately 900 feet east of the Survey Area during the 2022 focused burrowing owl survey. However, the Survey Area contains only marginal foraging habitat and no suitable nesting habitat for this species. Therefore, these species are not anticipated to be impacted by Project activities.

The Swainson's hawk, a state threatened species, was observed flying overhead approximately 1-mile northwest of the Survey Area. Suitable nesting habitat is not found within the Survey Area. Although Swainson's hawks are known to prefer low vegetation that support abundant prey such as grasslands or alfalfa fields, this habitat does not exist within the Survey Area. Suitable foraging habitat within the Survey Area is considered low quality due to the disturbed habitat that exists and the surrounding development within 1 mile of the Survey Area. Although a Swainson's hawk nest was discovered approximately 2.25 miles to the west/northwest of the Survey Area in 2011, this location was revisited

in 2016 and was not found (CNDDDB 2023). Based on the Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties (California Energy Commission 2010), the agencies consider a nest site to be active if it was used at least once during the past five years (Swainson's hawks have high site fidelity and return year after year to the same breeding sites). More than 5 years have occurred since this location was considered active and no other locations have been identified within 5 miles of the site; therefore, associated impacts of this Project on Swainson's hawk are not anticipated to occur.

The Survey Area contains low quality habitat for the burrowing owl. This species has been recorded within two miles of the site and suitable habitat occurs throughout the Survey Area. However, no burrowing owl or burrowing owl sign were observed during the focused surveys conducted by Chambers Group in 2022 (Chambers Group 2022c) or during the habitat assessment survey conducted in 2023. Therefore, this species is not anticipated to occur within the site.

The burrowing owl is considered a CDFW SSC and is one of the species covered in the CNDDDB Special Animals List. The following avoidance measures for burrowing owl are set forth by CDFW Staff Report on Burrowing Owl Mitigation (2012). Avoidance (pre-construction) surveys shall be conducted no less than 14 days prior to initiating ground disturbance with one final survey conducted within 24 hours prior to ground disturbance for presence of burrowing owl or burrowing owl burrows located adjacent to or within the Survey Area, and to avoid negative impacts and direct take of burrowing owl.

4.4 MIGRATORY BIRD TREATY ACT, AS AMENDED (16 USC 703-711)

If construction activities occur during nesting season (February 1 to August 31 for passerines, and January 15 to September 15 for raptors), pre-construction surveys and biological monitoring should be conducted by a qualified biologist. The survey should occur no more than seven days prior to initiation of Project activities, and any occupied passerine and/or raptor nests occurring within or adjacent to the Project impact area should be delineated. To the maximum extent practicable, a minimum buffer zone around occupied nests should be maintained during physical ground-disturbing activities. The buffer zone should be sufficient in size to prevent impacts to the nest. Once nesting has ceased, the buffer may be removed. The qualified biologist should prepare a migratory nesting bird and raptor survey report to documents the results of pre-construction surveys and biological monitoring. No additional mitigation or avoidance measures are recommended for this Project.

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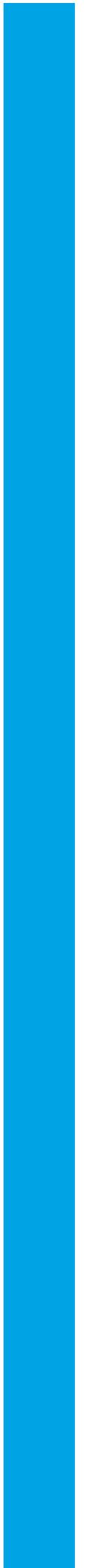
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APPENDIX A – SITE PHOTOGRAPHS



APPENDIX A - SITE PHOTOGRAPHS



Photo 1

Disturbed Rubber Rabbitbrush vegetation in the northeastern corner of the Survey Area, south of Avenue J. Photo facing southwest.



Photo 2

Disturbed vegetation in the southwestern corner of the southern portion of the Survey Area, south of Avenue J. Photo facing northeast.



Photo 3

Disturbed vegetation in southeastern portion of Survey Area. Photo facing northwest.



Photo 4

Disturbed vegetation along the western boundary portion of the Survey Area. Photo facing east.



Photo 5

Disturbed Rubber Rabbitbrush and a Developed dirt road along the gen-tie Route A, north of the sub-station and south of W Avenue J. Photo facing southwest.



Photo 6

Disturbed Rubber Rabbitbrush Scrub along central portion of gen-tie Route A. Photo facing northeast.



Photo 7

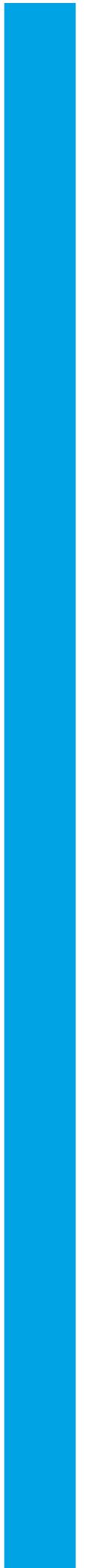
Disturbed vegetation, bare ground and Tamarisk Stand located along the north side of W Ave J along the gen-tie Route B. Photo facing east.



Photo 8

Disturbed vegetation and bare ground located at central area of gen-tie Route B (same location as Photo 7) along north side of W Avenue J. Photo facing west.

APPENDIX B – PLANT SPECIES OBSERVED



APPENDIX B – PLANT SPECIES OBSERVED

Scientific Name	Common Name
ANGIOSPERMS (EUDICOTS)	
ASTERACEAE	SUNFLOWER FAMILY
<i>Corethrogyne filaginifolia</i>	sand-aster
<i>Ericameria nauseosa</i>	rubber rabbitbrush
<i>Lactuca serriola</i> *	prickly lettuce
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia</i> sp.	fiddlenecks
BRASSICACEAE	MUSTARD FAMILY
<i>Hirschfeldia incana</i> *	shortpod mustard
<i>Sisymbrium altissimum</i> *	tumble mustard
<i>Tropidocarpum gracile</i>	slender dobie-pod
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Atriplex canescens</i>	four-wing saltbush
<i>Salsola australis</i> *	Russian-thistle
EUPHORBIACEAE	SPURGE FAMILY
<i>Croton setiger</i>	turkey-mullein
<i>Euphorbia albomarginata</i>	rattlesnake sandmat
FABACEAE	LEGUME FAMILY
<i>Lupinus</i> sp.	lupine
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
MELIACEAE	MAHOGANY FAMILY
<i>Melia azedarach</i> *	chinaberry tree
PAPAVERACEAE	POPPY FAMILY
<i>Eschscholzia californica</i>	California poppy
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i>	California buckwheat
ANGIOSPERMS (MONOCOTS)	
POACEAE	GRASS FAMILY
<i>Avena barbata</i> *	slender wild oat
<i>Bromus</i> sp.	brome
<i>Festuca myuros</i> *	fescue
<i>Schismus barbatus</i> *	Mediterranean schismus

*Non-Native Species, +Ornamental, Unlikely to be Invasive

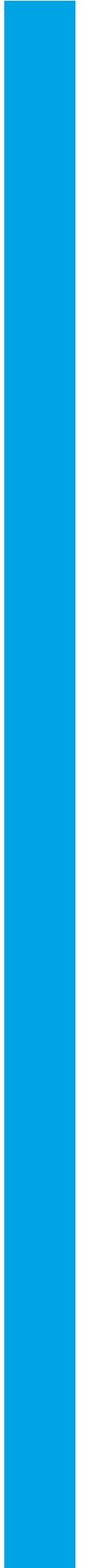
APPENDIX C – WILDLIFE SPECIES OBSERVED

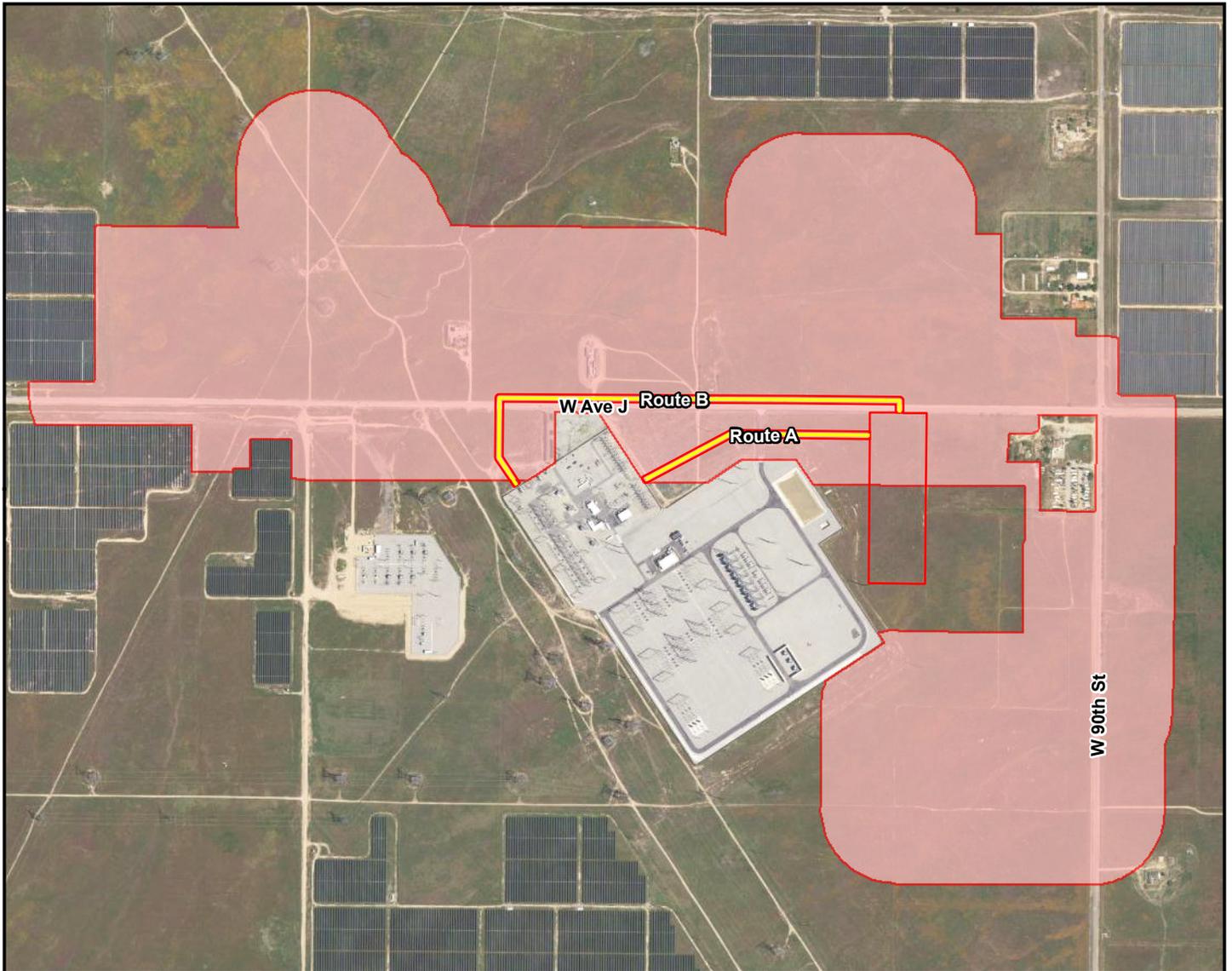
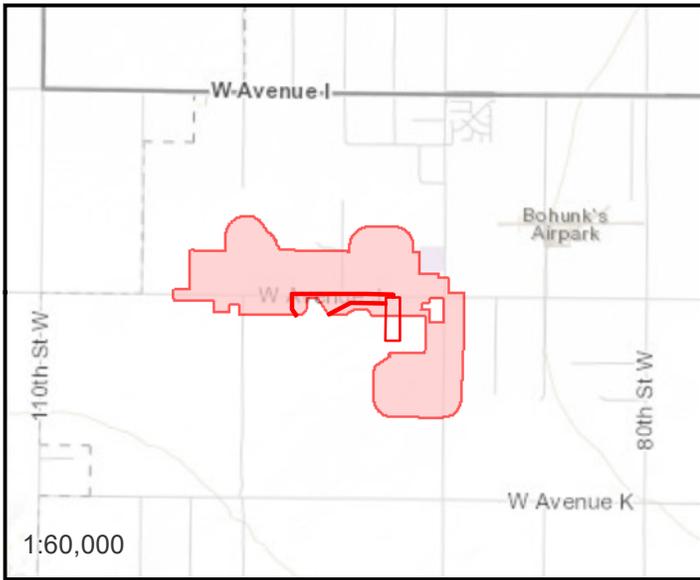


APPENDIX C – WILDLIFE SPECIES OBSERVED

Scientific Name	Common Name
CLASS AVES	BIRDS
TYRANNIDAE	TYRANT FLYCATCHERS
<i>Sayornis nigricans</i>	black phoebe
ALAUDIDAE	LARKS
<i>Eremophila alpestris</i>	horned lark
CORVIDAE	JAYS & CROWS
<i>Corvus corax</i>	common raven
TURDIDAE	THRUSHES
<i>Sialia currucoides</i>	mountain bluebird
<i>Turdus migratorius</i>	American robin
STURNIDAE	STARLINGS
<i>Sturnus vulgaris</i>	European starling
ICTERIDAE	BLACKBIRDS
<i>Sturnella neglecta</i>	western meadowlark
EMBERIZIDAE	EMBERIZIDS
<i>Chondestes grammacus</i>	lark sparrow
<i>Junco hyemalis</i>	dark-eyed junco
<i>Passerculus sandwichensis</i>	savannah sparrow
<i>Zonotrichia leucophrys</i>	white-crowned sparrow

APPENDIX D – 2023 Survey Areas





- Project Location
- Proposed 230 KV Gentie
- Areas Surveyed in 2022

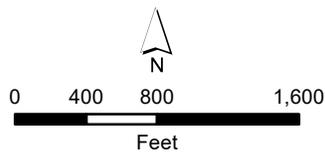
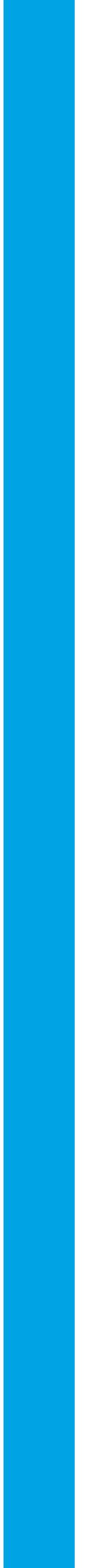


Figure 1
Stroud Energy Storage Project
Areas Surveyed in 2022

APPENDIX E – BURROWING OWL FOCUSED SURVEY REPORT



**BURROWING OWL FOCUSED SURVEY
REPORT FOR THE J90 SOUTH ENERGY
STORAGE PROJECT
CITY OF LANCASTER, CALIFORNIA**

Prepared for:

J90 ESS, LLC.
11455 El Camino Real, Suite 160
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Prepared by:

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October 2022

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SECTION 1.0 – INTRODUCTION

1.1 SUMMARY

Chambers Group, Inc. (Chambers Group) was retained by J90 ESS, LLC (Applicant) to conduct a focused burrowing owl (*Athene cunicularia*: BUOW) survey for the proposed J90 South Energy Storage Project (Project) in the City of Lancaster, within Los Angeles County, California. The Survey Area for this Project included the Project portion (the approximate 19.6-acre battery energy storage facility), the proposed generation-tie (gen-tie) line portion, and the 150-meter (500-foot) BUOW survey buffer totaling approximately 218 acres.

No BUOWs or BUOW sign were found within the Survey Area. No impacts to BUOW are anticipated.

The burrowing owl (BUOW) is considered a California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC) and is one of the species covered in the California Natural Diversity Database Special Animals List (CNDDDB 2021). The following avoidance measures for BUOW are set forth by California CDFW Staff Report on Burrowing Owl Mitigation (CDGW 2012). Avoidance (pre-construction) surveys shall be conducted no less than 14 days prior to initiating ground disturbance with one final survey conducted within 24 hours prior to ground disturbance for presence of BUOW or BUOW burrows located adjacent to or within the Survey Area, and to avoid negative impacts and direct take of BUOW.

Although no BUOW were observed on site, if BUOWs are identified on site during the avoidance (pre-construction) surveys, avoidance measures will be developed and implemented in compliance with CDFW Staff Report on Burrowing Owl Mitigation (2012).

To minimize potential impacts to BUOW and nesting birds protected under the Migratory Bird Treaty Act (MBTA), construction activities should take place outside of nesting season (typically February 1 through August 31 for passerines and typically January 15 to September 15 for raptors), to the greatest extent practicable. If construction activities occur during nesting season, pre-construction surveys and biological monitoring (as needed) should be conducted.

1.2 PROJECT OVERVIEW

The Applicant proposes to construct, own, and operate the J90 South Energy Storage Project (Project), a battery energy storage facility capable of delivering up to 400 megawatts (MW) of energy storage capacity and associated ancillary services into the California electric grid. The Project will comprise battery modules installed in racks housed in purpose-built outdoor Battery Energy Storage System (BESS) enclosures, associated equipment, a project substation, and a generation tie-line (gen-tie) connecting the Project to the adjacent existing Southern California Edison (SCE) Antelope Substation. Two possible routes for the gen-tie are proposed as Options A and B. Option A will run northwest from the western boundary of the Project site for approximately .1 mile (454 feet) and onto SCE's existing substation property and into a bay position designated by SCE. Option B will head north along the west side of 90th Street, then west along the south side of W Avenue J for a total of approximately 1.25 miles and onto SCE's existing substation property and to a bay position designated by SCE. The portions of the line adjacent to the right-of-way are proposed within areas that include franchise rights for electrical transmission infrastructure.

The Project is proposed within a 19.59-acre area comprising two parcels (Assessor Parcel Number [APN] 3203-034-010, 9.28 acres; and APN 3203-034-011, 10.31 acres) in the City of Lancaster. The Project is

located within the California Independent Service Operator (CAISO) Los Angeles Basin Local Capacity Resource Area and will be charged from the CAISO grid via the Project's interconnection to the Antelope Substation. Energy stored in the Project will then be discharged into the grid when the energy is needed, providing important electrical reliability services to the local area.

The Project will be monitored and operated remotely 24 hours per day, 7 days per week from an off-site control center with no permanent on-site operations and maintenance personnel. The Project will include a small office and storage structure equipped with restroom facilities for temporary operations and maintenance (O&M) personnel use. Operating staff, typically in crews of two to four staff members, will visit the site on an approximately bi-weekly basis as needed for project maintenance. The site will be fully fenced and will not be open to the public.

1.3 PROJECT SITE AND LOCATION

The approximately 19.6-acre Project site is located on two parcels, APNs 3203-034-010 and 3203-034-011 measuring 9.28 and 10.31 acres respectively, along 90th Street West near the Del Sur neighborhood in the City of Lancaster (City), Los Angeles County, California (Figure 1: Project Location and Vicinity Map). The Del Sur area is characterized by its minimal development and rural character. Unincorporated Antelope Valley (under the jurisdiction of the County of Los Angeles) is located to the west, north and south, with urbanized Lancaster to the east. The Project site centroid is 34.683361°N, 118.291653°W, on the *Del Sur*, California U.S. Geological Survey (USGS) 7.5-minute quadrangle (Township 07 North, Range 13 West, Section 19, SMB Meridian). The Project site is bordered to the east by 90th Street West. West Avenue J is located 0.46 miles north and West Avenue K is located 0.56 miles south of the Project site. Areas surrounding both West Avenue J and West Avenue K are underdeveloped and classified by the rural character. High voltage powerlines are located approximately 1,000 feet southwest of the Project site, which connect with SCE's Antelope Substation, located less than 500 feet northwest of the Project site. The elevation range at the Project site is approximately 2,430 feet above mean sea level (amsl).

The Project site currently consists of an undeveloped grassy lot and dirt access road. Land bordering the north and south of the site are similarly undeveloped. The City's General Plan designates land use within the Project site as Non-Urban Residential. According to the City's Zoning Ordinance, the Project would be likely classified as a "electric distribution substation", which is defined as "a facility that contains an assembly of equipment that is part of a system for the distribution of electric power, where electric energy is received at a sub-transmission voltage and transformed to a lower voltage for distribution for general consumer use" (Title 17, Chapter 17.04.240). Furthermore, the Project site is zoned RR-2.5 Rural Residential. Electric distribution substations are an allowable use within the Project site with issuance of a Conditional Use Permit (CUP) for parcels zoned for rural residential uses.

The Project site is characterized by the California Department of Conservation as "Grazing Land" and does not include Prime Farmland, Farmland of Statewide Importance, or Farmland of Local Importance. Surrounding the Project site there is land designated as Grazing Land and Urban/Built up land. However, there is no Prime Farmland or Farmland of Statewide Importance in the vicinity of the Project site. The closest land designated as Prime Farmland is located approximately 1.4 miles to the north of the Project site. There are no Williamson Act lands within the City. Additionally, no forested land exists in the area, as the Project site is surrounded by roads and undeveloped high desert.

EXISTING CONDITIONS

The Project site is dominated by approximately 17.18 acres of low growing non-native herbaceous annual grasslands (i.e., Disturbed California Poppy – Lupine Fields and Disturbed Fiddleneck Fields). A small patch (0.16 acre) of Disturbed Rubber Rabbitbrush Scrub is located on the southeastern corner of the Project site. The Project site is containing primarily flat terrain with soils identified as well drained, sandy loam derived from granite (USDA 2022). Non-native vegetation cover is estimated at 90 percent. Evidence of off-road vehicle use, and illegal dumping is present intermittently throughout the Project site.

SURVEY AREA

The Survey Area for the focused burrowing owl surveys included the Project site portion (the approximately 19.6-acre battery energy storage facility), the proposed gen-tie line portion, and an additional 150-meter (500-foot buffer) around suitable burrowing owl habitat for the Project site portion and the proposed gen-tie line portion, for a total of approximately 218 acres.

SECTION 2.0 – METHODS

2.1 BURROWING OWL

Focused BUOW surveys were conducted throughout suitable habitat during the BUOW breeding season (March 1 to August 31) by Chambers Group biologists. The surveys were conducted within the Survey Area which included the Project site portion, the gen-tie line portion, and a 150-meter (500-foot) buffer zone for the Project site portion and the proposed gen-tie line portion in accordance with protocol set forth by CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012).

The surveys were conducted to determine the presence or absence of any BUOW, occupied burrows, potential burrows, areas where burrows are concentrated, BUOW sign (scat, burrows, carcasses, courtship rings, drinking depressions, etc.) within the Survey Area. The survey was conducted over the entire Survey Area using approximately 25- to 30-meter transects to achieve 100 percent coverage. Additionally, the 150-meter (500-foot) buffer zone was surveyed where habitat was present using 25- to 30-meter transects to account for any BUOW burrows or foraging habitat that may exist adjacent to the Survey Area. All sign of BUOW activity, locations of any BUOWs, and all wildlife and sensitive species observed (visual, vocalizations, etc.) during the focused BUOW surveys were documented and their locations were mapped using Global Positioning System (GPS) technology (ESRI ArcGIS Collector).

SECTION 3.0 – RESULTS

Focused BUOW surveys were conducted on April 13, June 3, June 21, and July 13, 2022, by Chambers Group biologists Heather Franklin, Hannah Romano, Austin Burke, Paul Morrissey, and Mauricio Gomez. The survey was conducted on foot between the hours of 0700 and 1500 on April 13, 2022, between the hours of 0650 and 1300 on June 3, 2022, between the hours of 0700-1100 on June 21, 2022, and between the hours of 0700 and 1100 on July 13, 2022. Weather conditions during each survey included temperatures ranging from 39 to 89 degrees Fahrenheit, wind speeds between 0 and 24 miles per hour, with cloud cover ranging from 0 to 15 percent, and no precipitation. Representative site photos taken depicting current site conditions are included in Appendix A: Site Photographs. A summary of the burrowing owl surveys is shown in Table 3-1.

Table 3-1: Summary of Burrowing Owl Surveys

Survey Date	Biologists	Time Start/End	Temperature (°F) Start/End	Wind Speed (mph) Start/End	% Cloud Cover Start/End	Precipitation / Fog
Survey 1						
April 13, 2022	A. Burke H. Romano	0700/1500	39/66	20/24	0/0	None
Survey 2						
June 3, 2022	P. Morrissey M. Gomez	0650/1300	69/85	5-10/10-15	15/5	None
Survey 3						
June 21, 2022	H. Franklin M. Gomez	0700/1100	60/89	0/6-8	0/5	None
Survey 4						
July 13, 2022	H. Franklin A. Burke	0700/1100	69/85	3-5/5-10	0/0	None

3.1 VEGETATION

The Survey Area is dominated by non-native herbaceous annual grasslands. Non-native herbaceous grassland communities include primarily Disturbed Fiddleneck Field, with lesser amounts of Disturbed, and Disturbed California Poppy – Lupine Fields. A small patch of Disturbed Rubber Rabbitbrush Scrub is located on the southeastern corner of the Project site portion of the Survey Area and north of the SCE Antelope Substation within the gen-tie line portion of the Survey Area. A patch of Tamarisk Thickets bordered the east side of 90th Street West, within the gen-tie line portion of the Survey Area.

Moderate quality suitable habitat is found within the open and flat areas throughout the Survey Area located within the Disturbed, Disturbed Fiddleneck Field, Disturbed Rubber Rabbitbrush Scrub, and Disturbed California Poppy – Lupine Fields vegetation communities.

A total of 27 plant species were documented during the survey. Plant species observed or detected during the site survey were characteristic of the existing Survey Area site conditions. No special status plant species were observed during the survey efforts. A complete list of plants observed or detected within the Survey Area are included in Appendix B: Plant Species List.

3.2 WILDLIFE

A total of 18 wildlife species were observed during the surveys. Wildlife species observed or detected during the survey were characteristic of the existing Survey Area conditions. One special status species, loggerhead shrike (*Lanius ludovicianus*), was observed during the survey efforts. A single great-horned owl (*Bubo virginianus*) was flushed out of the Tamarisk Thickets located within the gen-tie line portion of the Survey Area. Although the great-horned owl was flushed out of the tamarisk, it remained in the general vicinity of the tamarisk. No impacts to the Tamarisk Thickets located along 90th Street West are anticipated. A complete list of wildlife species observed or detected within the Survey Area are included in Appendix C: Wildlife Species List.

3.2.1 Burrowing Owl

The burrowing owl (BUOW) is considered a CDFW Species of Special Concern (SSC). They nest in underground burrows, typically abandoned by other animals such as ground squirrels, and other large mammals. The BUOW prefers open, flat, and grassland habitat.

No BUOWs or BUOW sign were found within the Survey Area. No impacts to BUOW are anticipated.

3.2.2 Other Sensitive Species

Loggerhead shrike - SSC

The loggerhead shrike (*Lanius ludovicianus*) is a California Species of Special Concern (SSC). One individual was observed foraging and perching along a fence line on the south side of Avenue J, approximately 25 feet south of the proposed gen-tie line within the Survey Area during the April 13, 2022, focused BUOW survey. The loggerhead shrike is a medium-sized shrike and is found in any kind of semi-open terrain with high vantage points such as wires, posts, or other high perching areas (Audubon 2022). In the deserts of southern California, this species nests in many substrates, especially spiny/thorny shrubs like mesquite and require impaling sites for prey manipulation and storage (fence, mesquite thorns, etc.). Potential

foraging opportunities are present within the Survey Area. No nests were found in the ornamental trees and Tamarisk Thickets within the gen-tie line portion of the Survey Area during the focused burrowing surveys. Suitable nesting habitat within the Project site boundary does not exist.

SECTION 4.0 – MITIGATION AND MONITORING

4.1 MITIGATION AND MONITORING

The Survey Area contains low to moderate suitable habitat for the burrowing owl. This species has been recorded within two miles of the site and suitable habitat occurs throughout the Survey Area. However, no burrowing owl or burrowing owl sign were observed during the focused BUOW surveys. Therefore, this species is not anticipated to occur within the site. Although no burrowing owls were observed, a single great-horned owl was observed in the Tamarisk Thickets located within the gen-tie line portion of the Survey Area, along 90th Street West.

The burrowing owl (BUOW) is considered a CDFW SSC and is one of the species covered in the CNDDDB Special Animals List (CNDDDB). The following avoidance measures for BUOW are set forth by CDFW Staff Report on Burrowing Owl Mitigation (2012). Avoidance (pre-construction) surveys shall be conducted no less than 14 days prior to initiating ground disturbance with one final survey conducted within 24 hours prior to ground disturbance for presence of BUOW or BUOW burrows located adjacent to or within the Survey Area, and to avoid negative impacts and direct take of BUOW.

Although no BUOW were observed on site, if BUOWs are identified on site during the avoidance (pre-construction) surveys, avoidance measures will be developed and implemented in compliance with CDFW Staff Report on Burrowing Owl Mitigation (2012). These measures would include the following:

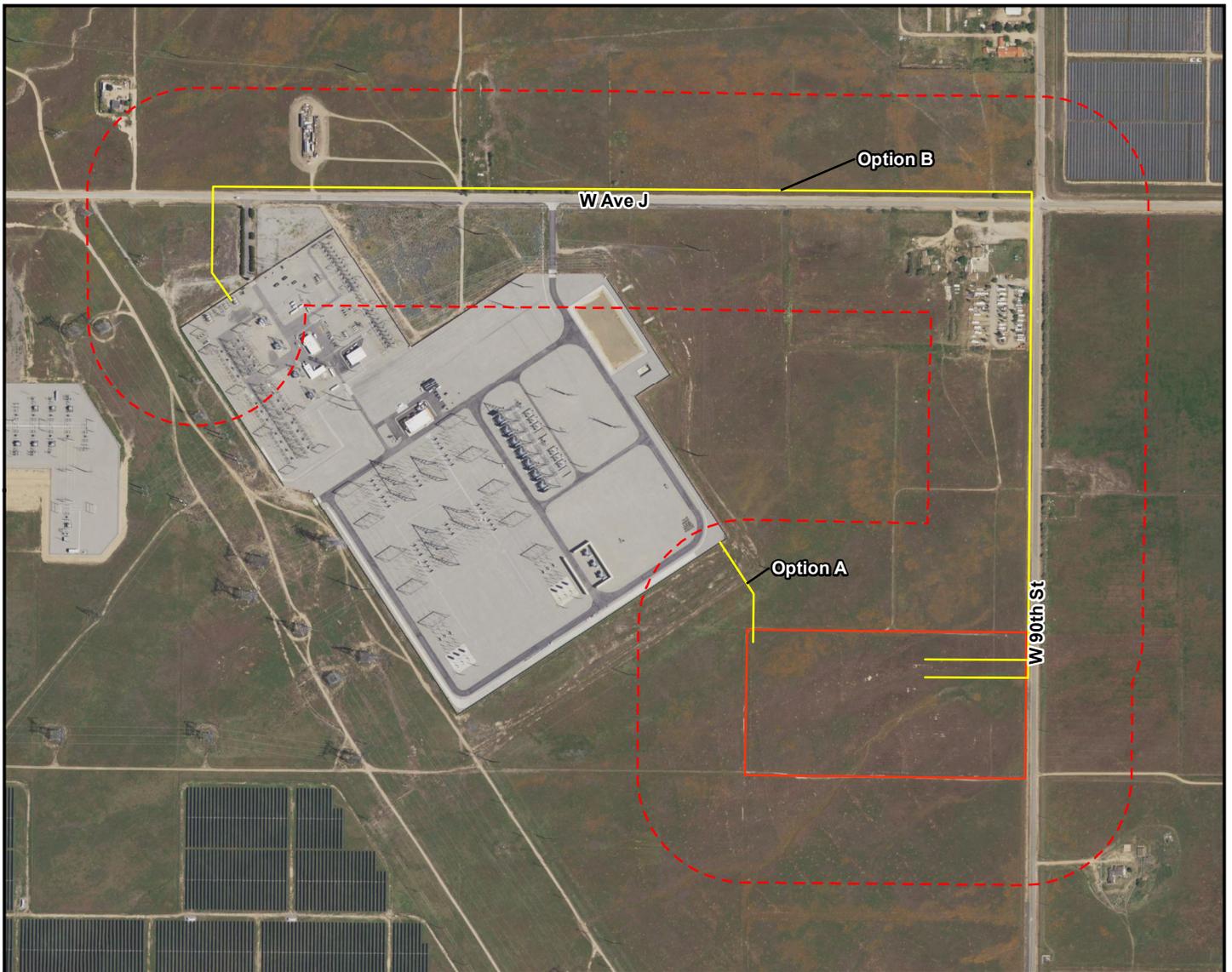
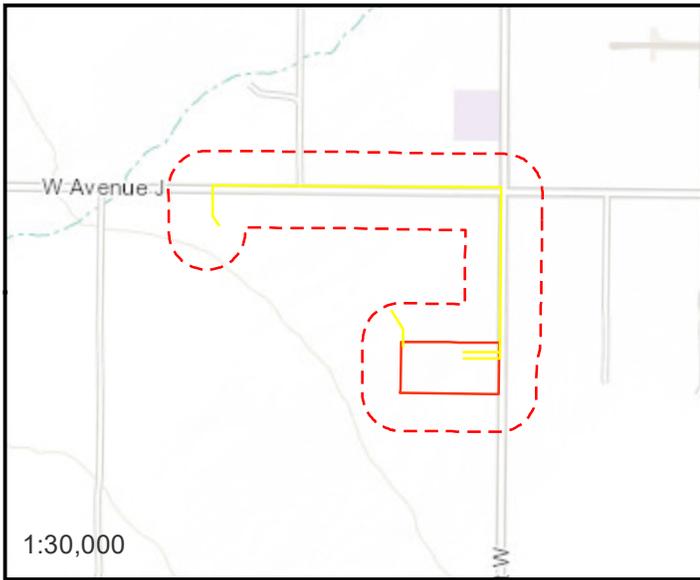
- Avoid disturbing occupied burrows during the nesting period, from 1 February through 31 August.
- Avoid impacting burrows occupied during the non-breeding season by migratory or non-migratory resident burrowing owls.
- Avoid direct destruction of burrows through chaining (dragging a heavy chain over an area to remove shrubs), disking, cultivation, and urban, industrial, or agricultural development.
- Develop and implement a worker awareness program to increase the on-site worker's recognition of and commitment to burrowing owl protection.
- Place visible markers near burrows to ensure that farm equipment and other machinery does not collapse burrows.
- Do not fumigate, use treated bait or other means of poisoning nuisance animals in areas where burrowing owls are known or suspected to occur (e.g., sites observed with nesting owls, designated use areas).
- Restrict the use of treated grain to poison mammals to the months of January and February.

Tamarisk Thickets, telecommunication poles, and transmissions towers are present within the gen-tie line portion of the Survey Area that have the potential to support nests. To avoid the destruction of active nests and to protect the reproductive success of birds protected by Migratory Bird Treaty Act, nesting bird surveys shall be performed prior to the scheduled construction in the proposed Project site and surrounding area during the nesting season for birds (typically February 1 through August 31) and raptors (typically January 15 to September 15).

In the event that active nests are discovered, a suitable buffer should be established around such active nests and no construction within the buffer allowed until a qualified biologist has determined that the nest is no longer active (e.g., the nestlings have fledged and are no longer reliant on the nest). No ground disturbing activities shall occur within this buffer until the qualified biologist has confirmed that

breeding/nesting is complete, and the young have fledged the nest. The buffer should be maintained during physical construction activities. Once nesting activities have ceased (chicks have fledged the nest and are independent of the parent birds), the buffer may be removed.

No additional mitigation or avoidance measures are recommended for this Project.



- Project Boundary
- Gen-Tie Route Options
- - - BUOW Survey Area

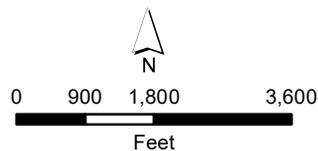


Figure 1
J90 South Energy Storage
Project Location and Vicinity

SECTION 5.0 – REFERENCES

Audubon Society

- 2009 *Guide to North American Birds: Loggerhead shrike.*
<https://www.audubon.org/field-guide/bird/loggerhead-shrike>.
Accessed September 2022.

California Department of Fish and Wildlife (CDFW)

- 2012 Staff Report on Burrowing Owl Mitigation. State of California Natural Resources Agency. California Department of Fish and Wildlife. March 2012.
- 2021 California Natural Diversity Database (CNDDDB). February 2021 Special Animals List. California Department of Fish and Wildlife. Sacramento, CA.

U.S. Department of Agriculture (USDA)

- 2022 Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Official Soil Series Descriptions [Online Edition]. Website <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx> [Accessed September 2022].

APPENDIX A – SITE PHOTOGRAPHS



APPENDIX A – SITE PHOTOGRAPHS



Photo 1.

General overview of the burrowing owl (BUOW) suitable habitat within the Project site portion of the Survey Area. Photo is facing west.



Photo 2.

General overview of the eastern edge of the Project site portion within the Survey Area. Photo is facing north.



Photo 3.

General overview of the BUOW suitable habitat just west of 90th Street West. Photo is facing west.



Photo 4.

General overview of Disturbed Rubber Rabbitbrush Scrub located on the southeastern corner of the Project site portion within the Survey Area. Photo is facing southwest.



Photo 5.

Photograph taken facing south from eastern end of the generation-tie line portion of the Survey Area. Photo shows Tamarisk Thickets along the eastern end of 90th Street West.



Photo 6.

Photograph taken facing east along West Avenue J, just north of the Southern California Edison Antelope Substation, for the proposed generation-tie line.

APPENDIX B – PLANT SPECIES LIST

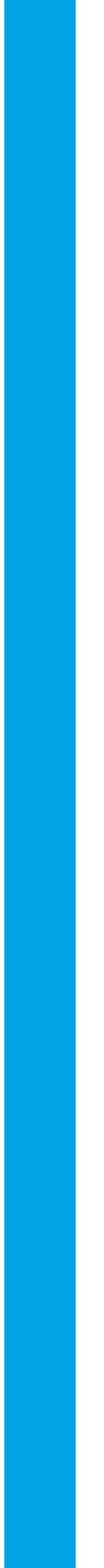


APPENDIX B - PLANT SPECIES LIST

Scientific Name	Common Name
GYMNOSPERMS	
CUPRESSACEAE	CYPRESS FAMILY
<i>Juniperus</i> sp.*	juniper
ANGIOSPERMS (EUDICOTS)	
APOCYNACEAE	DOGBANE FAMILY
<i>Asclepias erosa</i>	desert milkweed
ASTERACEAE	SUNFLOWER FAMILY
<i>Ericameria linearifolia</i>	interior goldenbush
<i>Ericameria nauseosa</i>	rubber rabbitbrush
<i>Gnaphalium palustre</i>	lowland cudweed
<i>Lasthenia californica</i>	California goldfields
<i>Lasthenia coronaria</i>	royal goldfields
<i>Uropappus lindleyi</i>	silver puff
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia intermedia</i>	Rancher's fiddleneck
<i>Cryptantha intermedia</i>	clearwater cryptantha
<i>Echium candicans</i> *	pride of Madeira
BRASSICACEAE	MUSTARD FAMILY
<i>Hirschfeldia incana</i> *	shortpod mustard
EUPHORBIACEAE	SPURGE FAMILY
<i>Euphorbia polycarpa</i>	smallseed sandmat
FABACEAE	LEGUME FAMILY
<i>Lupinus bicolor</i>	miniature lupine
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
OROBANCHACEAE	BROOM-RAPE FAMILY
<i>Castilleja exserta</i>	purple owl's-clover
PAPAVERACEAE	POPPY FAMILY
<i>Eschscholzia californica</i>	California poppy
PLANTAGINACEAE	PLANTAIN FAMILY
<i>Penstemon centranthifolius</i>	scarlet bugler
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i>	California buckwheat
TAMARICACEAE	TAMARISK FAMILY
<i>Tamarix ramosissima</i> *	Mediterranean tamarisk
ANGIOSPERMS (MONOCOTS)	
POACEAE	GRASS FAMILY
<i>Avena barbata</i> *	slender wild oat
<i>Bromus diandrus</i> *	ripgut grass

Scientific Name	Common Name
<i>Bromus hordeaceus</i> *	soft chess
<i>Bromus tectorum</i> *	cheat grass
<i>Festuca myuros</i> *	rat-tail fescue
<i>Hordeum vulgare</i>	barley
THEMIDACEAE	BRODIAEA FAMILY
<i>Dipterostemon capitatus</i>	blue dicks
*Non-Native Species	

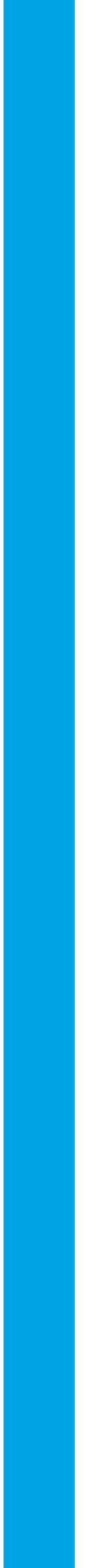
APPENDIX C – WILDLIFE SPECIES LIST



APPENDIX C – WILDLIFE SPECIES LIST

Scientific Name	Common Name
CLASS REPTILIA	REPTILES
CROTALIDAE	PIT VIPERS
<i>Crotalus helleri</i>	southern pacific rattlesnake
CLASS AVES	BIRDS
ACCIPITRIDAE	HAWKS, KITES, EAGLES
<i>Buteo jamaicensis</i>	red-tailed hawk
ODONTOPHORIDAE	NEW WORLD QUAIL
<i>Callipepla californica</i>	California quail
COLUMBIDAE	PIGEONS & DOVES
<i>Streptopelia decaocto</i>	Eurasian collared-dove
<i>Zenaida macroura</i>	mourning dove
TYTONIDAE	BARN OWLS
<i>Tyto alba</i>	barn owl
STRIGIDAE	TRUE OWLS
<i>Bubo virginianus</i>	great horned owl
TYRANNIDAE	TYRANT FLYCATCHERS
<i>Sayornis saya</i>	Say's phoebe
<i>Tyrannus verticalis</i>	western kingbird
ALAUDIDAE	LARKS
<i>Eremophila alpestris</i>	horned lark
HIRUNDINIDAE	SWALLOWS
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow
CORVIDAE	JAYS & CROWS
<i>Corvus corax</i>	common raven
MIMIDAE	MOCKINGBIRDS, THRASHERS
<i>Mimus polyglottos</i>	northern mockingbird
LANIIDAE	SHRIKES
<i>Lanius ludovicianus</i>	loggerhead shrike
PARULIDAE	WOOD WARBLERS
<i>Setophaga coronata</i>	yellow-rumped warbler
ICTERIDAE	BLACKBIRDS
<i>Sturnella neglecta</i>	western meadowlark
EMBERIZIDAE	EMBERIZIDS
<i>Passerculus sandwichensis</i>	savannah sparrow
FRINGILLIDAE	FINCHES
<i>Carpodacus mexicanus</i>	house finch

APPENDIX D – FOCUSED BURROWING OWL DATA SHEETS



BURROWING OWL FOCUSED SURVEY FORM

BIOLOGIST (S): Austin Burke, Hannah Romano		DATE: 04/13/2022	
PROJECT NAME AND NUMBER: J90 South Energy Storage Project, Lancaster. Project #21343			
PROJECT LOCATION: Los Angeles County, Lancaster, CA			
SURVEY TYPE: Burrow Survey <input checked="" type="checkbox"/> BUOW Focused Survey <input checked="" type="checkbox"/> BUOW Precon Survey <input type="checkbox"/>	TIME OF DAY: Dawn <input type="checkbox"/> Dusk <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	FOCUSED SURVEY: 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> N/A <input type="checkbox"/>	
START TIME: 7:00 AM		END TIME: 1500	
Temperature Start: 39 F End: 66 F	Cloud Cover Start: 0% End: 0%	Wind Speed/Direction Start: 20 mph End: 24 mph	Precipitation Start: 0% End: 0%
Adjacent Land Uses: SCE Antelope Substation, solar farms, and some residential properties.			
General Site Conditions (topography, soils, vegetation/plant communities): The Project site is relatively flat. The soils were mostly sandy. Vegetation communities include: non-native grassland, ornamental landscaping, bare ground, and disturbed/developed areas. The dominant community on the site is non-native grassland.			
Animal Species Present (observed, detected, activity): Common raven, savannah sparrow, house finch, California quail, western kingbird, western meadowlark, loggerhead shrike, red-tailed hawk, mourning dove, yellow-rumped warbler, great horned owl, northern mockingbird, and southern pacific rattlesnake.			
Plant Species Present: narrowleaf goldenbush, rubber rabbitbush, western marsh cudweed, California goldfields, royal goldfields, silver puffs, desert milkweed, Rancher's fiddleneck, clearwater cryptantha, shortpod mustard, Juniper sp., smallseed sandmat, Miniature lupine, red-stemmed filaree, pride of India, purple owl's-clover, California poppy, slender wild oat, rippgut grass, soft chess, foxtail chess, cheatgrass , common barley, rat-tail fescue, scarlet bugler, California buckwheat, Mediterranean tamarisk, and blue dicks.			

Existing structures present? Visible site disturbances? If yes, describe.

No existing structures are present within the proposed Option areas. There are power lines that run northwest from the substation that are in close proximity to a few of the northwestern parcels. Two parcels butt up against residential properties. There are also some dirt roads that run directly through a few of the parcels as well. Option 1 and Option 3 do not have any visible site disturbances.

- No BUOW or burrows with BUOW sign were observed.

BURROW/BURROWING OWL OBSERVATIONS

Sign ID: _____ N/A _____

General location: _____

GPS coordinates: Lat _____ Long _____ **Aspect:** _____

Dimensions: H _____ W _____ D _____ **Can you see the end of the burrow?** Yes No

Sign: Whitewash Pellets Feathers Prey remains Shell fragments Decoration Other

Number of BUOWs: Adult _____ Juvenile _____ **Pair observed?** Yes No

Behaviors: Foraging Feeding Resting Preening Courtship Alarm Territorial defense Other

Added to Collector? Yes No **Photos taken?** Yes No

Additional details/Notes:

Sign ID: _____ N/A _____

General location: _____

GPS coordinates: Lat _____ Long _____ **Aspect:** _____

Dimensions: H _____ W _____ D _____ **Can you see the end of the burrow?** Yes No

Sign: Whitewash Pellets Feathers Prey remains Shell fragments Decoration Other

Number of BUOWs: Adult _____ Juvenile _____ **Pair observed?** Yes No

Behaviors: Foraging Feeding Resting Preening Courtship Alarm Territorial defense Other

Added to Collector? Yes No **Photos taken?** Yes No

Additional details/Notes:

Sign ID: _____ N/A _____

General location: _____

GPS coordinates: Lat _____ Long _____ **Aspect:** _____

Dimensions: H _____ W _____ D _____ **Can you see the end of the burrow?** Yes No

Sign: Whitewash Pellets Feathers Prey remains Shell fragments Decoration Other

Number of BUOWs: Adult _____ Juvenile _____ **Pair observed?** Yes No

Behaviors: Foraging Feeding Resting Preening Courtship Alarm Territorial defense Other

Added to Collector? Yes No **Photos taken?** Yes No

Additional details/Notes:

BURROWING OWL FOCUSED SURVEY FORM

BIOLOGIST (S): P. Morrissey and M. Gomez		DATE: 6/13/22	
PROJECT NAME AND NUMBER: J-90 BESS BUOW Survey 21343			
PROJECT LOCATION: Lancaster, CA			
SURVEY TYPE: Burrow Survey <input type="checkbox"/> BUOW Focused Survey <input checked="" type="checkbox"/> BUOW Precon Survey <input type="checkbox"/>	TIME OF DAY: Dawn <input type="checkbox"/> Dusk <input type="checkbox"/> N/A <input checked="" type="checkbox"/>		FOCUSED SURVEY: 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input checked="" type="checkbox"/> ^{not 3} 4 <input type="checkbox"/> N/A <input type="checkbox"/>
START TIME: 0650		END TIME: 1300	
Temperature Start: 69°F End: 85°F	Cloud Cover Start: 15% End: 5%	Wind Speed/Direction Start: 5-10 mph End: 10-15	Precipitation Start: 0% End: 0%
Adjacent Land Uses: Open land, residential homes, RV park, abandoned homes, and SCE substation.			
General Site Conditions (topography, soils, vegetation/plant communities): Flat, disturbed fiddleneck field with a patch of rabbit rubber brush.			
Animal Species Present (observed, detected, activity): CA quail, common raven, house finch, western meadowlark, northern mockingbird, western kingbird, horned lark			
Plant Species Present: rabbit rubber brush, bromus spp., scholar ^{at} mustard, short-pod			
Existing structures present? Visible site disturbances? If yes, describe. Yes, outside of project areas which include telecom poles, transmission towers, and substation.			

BURROW/BURROWING OWL OBSERVATIONS

Sign ID: 3-01

General location: South of West Avenue J

GPS coordinates: Lat 34.659037 Long -118.296397 Aspect: 322 NW

Dimensions: H 4.5 in W 3 in D N/A Can you see the end of the burrow? Yes No

Sign: Whitewash Pellets Feathers Prey remains Shell fragments Decoration Other

Number of BUOWs: Adult 0 Juvenile 0 Pair observed? Yes No

Behaviors: Foraging Feeding Resting Preening Courtship Alarm Territorial defense Other

Added to Collector? Yes No Photos taken? Yes No

Additional details/Notes:
Potential old whitewash, however, not active. Burrow is collapsed and entrance covered in webs/weeds.

Sign ID: _____

General location: _____

GPS coordinates: Lat _____ Long _____ Aspect: _____

Dimensions: H _____ W _____ D _____ Can you see the end of the burrow? Yes No

Sign: Whitewash Pellets Feathers Prey remains Shell fragments Decoration Other

Number of BUOWs: Adult _____ Juvenile _____ Pair observed? Yes No

Behaviors: Foraging Feeding Resting Preening Courtship Alarm Territorial defense Other

Added to Collector? Yes No Photos taken? Yes No

Additional details/Notes:

Sign ID: _____

General location: _____

GPS coordinates: Lat _____ Long _____ Aspect: _____

Dimensions: H _____ W _____ D _____ Can you see the end of the burrow? Yes No

Sign: Whitewash Pellets Feathers Prey remains Shell fragments Decoration Other

Number of BUOWs: Adult _____ Juvenile _____ Pair observed? Yes No

Behaviors: Foraging Feeding Resting Preening Courtship Alarm Territorial defense Other

Added to Collector? Yes No Photos taken? Yes No

Additional details/Notes:

BURROWING OWL FOCUSED SURVEY FORM

BIOLOGIST (S): H. Franklin and M. Gomez		DATE: 6/21/2022	
PROJECT NAME AND NUMBER: J-90 BESS BUOW Survey - 21343			
PROJECT LOCATION: Lancaster, CA			
SURVEY TYPE: Burrow Survey <input type="checkbox"/> BUOW Focused Survey <input checked="" type="checkbox"/> BUOW Precon Survey <input type="checkbox"/>	TIME OF DAY: Dawn <input type="checkbox"/> Dusk <input type="checkbox"/> N/A <input checked="" type="checkbox"/>		FOCUSED SURVEY: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 4 <input type="checkbox"/> N/A <input type="checkbox"/>
START TIME: 0700		END TIME: 1100	
Temperature Start: 0700 60°F End: 89°F	Cloud Cover Start: 0% End: 5%	Wind Speed/Direction Start: 0 End: 6-8 mph	Precipitation Start: 0% End: 0%
Adjacent Land Uses: open land, residential homes/properties, RV park, abandoned properties, and SCE substation.			
General Site Conditions (topography, soils, vegetation/plant communities): Flat, disturbed fiddleneck field with patches of rabbit rubber brush.			
Animal Species Present (observed, detected, activity): HOPI, CORA, WEXI, MODO, EUCD, RTHA, BAOW, NOMO,			
Plant Species Present: rabbit rubber brush, bromus spp, selago mustard, short-pod			
Existing structures present? Visible site disturbances? If yes, describe. Yes, outside of project options which include transmission towers, telecom lines, solar panels, and substation.			

BURROW/BURROWING OWL OBSERVATIONS

Sign ID: 0

General location: _____

GPS coordinates: Lat _____ Long _____ Aspect: _____

Dimensions: H _____ W _____ D _____ Can you see the end of the burrow? Yes No

Sign: Whitewash Pellets Feathers Prey remains Shell fragments Decoration Other

Number of BUOWs: Adult _____ Juvenile _____ Pair observed? Yes No

Behaviors: Foraging Feeding Resting Preening Courtship Alarm Territorial defense Other

Added to Collector? Yes No Photos taken? Yes No

Additional details/Notes:

NO BUOW or BUOW sign observed.

Sign ID: 0

General location: _____

GPS coordinates: Lat _____ Long _____ Aspect: _____

Dimensions: H _____ W _____ D _____ Can you see the end of the burrow? Yes No

Sign: Whitewash Pellets Feathers Prey remains Shell fragments Decoration Other

Number of BUOWs: Adult _____ Juvenile _____ Pair observed? Yes No

Behaviors: Foraging Feeding Resting Preening Courtship Alarm Territorial defense Other

Added to Collector? Yes No Photos taken? Yes No

Additional details/Notes:

Sign ID: 0

General location: _____

GPS coordinates: Lat _____ Long _____ Aspect: _____

Dimensions: H _____ W _____ D _____ Can you see the end of the burrow? Yes No

Sign: Whitewash Pellets Feathers Prey remains Shell fragments Decoration Other

Number of BUOWs: Adult _____ Juvenile _____ Pair observed? Yes No

Behaviors: Foraging Feeding Resting Preening Courtship Alarm Territorial defense Other

Added to Collector? Yes No Photos taken? Yes No

Additional details/Notes:

BURROWING OWL FOCUSED SURVEY FORM

BIOLOGIST (S): Austin Burke, Heather Franklin		DATE: 07/13/2022	
PROJECT NAME AND NUMBER: J90 South Energy Storage Project, Lancaster. Project #21343			
PROJECT LOCATION: Los Angeles County, Lancaster, CA			
SURVEY TYPE: Burrow Survey <input checked="" type="checkbox"/> BUOW Focused Survey <input checked="" type="checkbox"/> BUOW Precon Survey <input type="checkbox"/>	TIME OF DAY: Dawn <input type="checkbox"/> Dusk <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	FOCUSED SURVEY: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	
START TIME: 7:00 AM		END TIME: 1100	
Temperature Start: 69 F End: 85 F	Cloud Cover Start: 0% End: 0%	Wind Speed/Direction Start: 3-5 mph End: 5-10 mph	Precipitation Start: 0% End: 0%
Adjacent Land Uses: SCE Antelope Substation, solar farms, and some residential properties.			
General Site Conditions (topography, soils, vegetation/plant communities): The Project site is relatively flat. The soils were mostly sandy. Vegetation communities include: non-native grassland, ornamental landscaping, bare ground, and disturbed/developed areas. The dominant community on the site is non-native grassland.			
Animal Species Present (observed, detected, activity): Common raven, savannah sparrow, house finch, western kingbird, western meadowlark, mourning dove, northern mockingbird, northern rough-winged swallow and Say's phoebe.			
Plant Species Present: narrowleaf goldenbush, rubber rabbitbush, western marsh cudweed, California goldfields, royal goldfields, silver puffs, desert milkweed, Rancher's fiddleneck, clearwater cryptantha, shortpod mustard, Juniper sp., smallseed sandmat, Miniature lupine, red-stemmed filaree, pride of India, purple owl's-clover, California poppy, slender wild oat, rippgut grass, soft chess, foxtail chess, cheatgrass, common barley, rat-tail fescue, scarlet bugler, California buckwheat, Mediterranean tamarisk, and blue dicks.			

Existing structures present? Visible site disturbances? If yes, describe.

No existing structures are present within the proposed Option areas. There are power lines that run northwest from the substation that are in close proximity to a few of the northwestern parcels. Two parcels butt up against residential properties. There are also some dirt roads that run directly through a few of the parcels as well. Option 1 and Option 3 do not have any visible site disturbances.

- No BUOW or burrows with BUOW sign were observed.

BURROW/BURROWING OWL OBSERVATIONS

Sign ID: _____ N/A _____

General location: _____

GPS coordinates: Lat _____ Long _____ **Aspect:** _____

Dimensions: H _____ W _____ D _____ **Can you see the end of the burrow?** Yes No

Sign: Whitewash Pellets Feathers Prey remains Shell fragments Decoration Other

Number of BUOWs: Adult _____ Juvenile _____ **Pair observed?** Yes No

Behaviors: Foraging Feeding Resting Preening Courtship Alarm Territorial defense Other

Added to Collector? Yes No **Photos taken?** Yes No

Additional details/Notes:

Sign ID: _____ N/A _____

General location: _____

GPS coordinates: Lat _____ Long _____ **Aspect:** _____

Dimensions: H _____ W _____ D _____ **Can you see the end of the burrow?** Yes No

Sign: Whitewash Pellets Feathers Prey remains Shell fragments Decoration Other

Number of BUOWs: Adult _____ Juvenile _____ **Pair observed?** Yes No

Behaviors: Foraging Feeding Resting Preening Courtship Alarm Territorial defense Other

Added to Collector? Yes No **Photos taken?** Yes No

Additional details/Notes:

Sign ID: _____ N/A _____

General location: _____

GPS coordinates: Lat _____ Long _____ **Aspect:** _____

Dimensions: H _____ W _____ D _____ **Can you see the end of the burrow?** Yes No

Sign: Whitewash Pellets Feathers Prey remains Shell fragments Decoration Other

Number of BUOWs: Adult _____ Juvenile _____ **Pair observed?** Yes No

Behaviors: Foraging Feeding Resting Preening Courtship Alarm Territorial defense Other

Added to Collector? Yes No **Photos taken?** Yes No

Additional details/Notes: