

Appendix B Biological Technical Report

BIOLOGICAL TECHNICAL REPORT FOR THE WESTSIDE TREND EXPLORATION WELL PROJECT

KERN COUNTY, CALIFORNIA

Project No. 2302-0472

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TABLE OF CONTENTS

1.0 INTRODUCTION 1-1

 1.1 PURPOSE AND NEED 1-1

 1.2 FEDERALLY LISTED SPECIES 1-1

 1.3 STATE LISTED SPECIES 1-1

2.0 DESCRIPTION OF THE PROPOSED ACTION 2-2

 2.1 PROJECT LOCATION 2-2

 2.1.1 Proposed Project 2-2

3.0 EXISTING ENVIRONMENTAL CONDITIONS 3-3

 3.1 PHYSICAL SETTING 3-3

 3.2 GEOLOGY AND CLIMATE 3-3

 3.3 RIVERS AND STREAMS 3-3

 3.4 CURRENT LAND USE 3-3

 3.5 LANDCOVER TYPES 3-4

 3.5.1 Annual (non-native) Grassland 3-4

4.0 THREATENED, ENDANGERED, OR PROPOSED THREATENED, SPECIES 4-5

 4.1 DESKTOP ANALYSIS 4-5

 4.2 CRITICAL HABITAT 4-16

 4.3 SPECIES ACCOUNTS 4-16

 4.4 BIOLOGICAL SURVEYS 4-16

5.0 HABITAT DISTURBANCE AND IMPACTS 5-17

 5.1 HABITAT DISTURBANCE 5-17

 5.2 DIRECT AND INDIRECT IMPACTS TO THREATENED AND ENDANGERED SPECIES
 5-17

 5.2.1 Plant Species 5-17

 5.2.2 Wildlife Species 5-17

 5.2.3 Cumulative Impacts 5-18

6.0 DETERMINATION EFFECTS TO LISTED SPECIES 6-19

 6.1 LISTED PLANT SPECIES 6-19

 6.1.1 California Jewelflower (*Caulanthus californicus*) 6-19

 6.1.2 San Joaquin Woollythreads (*Monolopia congdonii*) 6-19

 6.1.3 Kern Mallow (*Eremalche parryi* ssp. *kernensis*) 6-19

 6.2 SENSITIVE PLANT SPECIES 6-20

 6.2.1 Recurved larkspur (*Delphinium recurvatum*) 6-20

 6.2.2 Lemmon's jewelflower (*Caulanthus lemmonii*) 6-20

 6.3 LISTED WILDLIFE SPECIES 6-20

 6.3.1 Blunt-nosed Leopard Lizard (*Gambelia sila*) 6-20

 6.3.2 San Joaquin antelope squirrel (*Ammospermophilus nelsoni*) 6-20

 6.3.3 San Joaquin Kit Fox (*Vulpes macrotis mutica*) 6-21

 6.3.4 Swainson's Hawk (*Buteo swainsoni*) 6-21

 6.3.5 California condor (*Gymnogyps californianus*) 6-21

 6.3.6 Giant kangaroo rat (*Dipodomys ingens*) 6-21

 6.3.7 Temblor legless lizard (*Anniella alexanderae*) 6-22

 6.3.8 Crotch's bumblebee (*Bombus crotchii*) 6-22

 6.3.9 Monarch butterfly (*Danaus plexippus*) 6-22

6.4 SENSITIVE WILDLIFE SPECIES	6-23
6.4.1 Burrowing Owl (<i>Athene cunicularia</i>)	6-23
6.4.2 Western spadefoot (<i>Spea hammondi</i>)	6-23
6.4.3 California glossy snake (<i>Arizona elegans occidentalis</i>)	6-23
6.4.4 American Badger (<i>Taxidea taxus</i>)	6-23
6.4.5 Western mastiff bat (<i>Eumops perotis</i>).....	6-24
6.4.6 San Joaquin Coachwhip (<i>Masticophis flagellum ruddocki</i>)	6-24
6.4.7 Short-nosed Kangaroo Rat (<i>Dipodomys nitratoides brevinasus</i>).....	6-24
6.4.8 Pallid bat (<i>Antrozous pallidus</i>)	6-24
6.4.9 Golden eagle (<i>Aquila chrysaetos</i>).....	6-24
7.0 MINIMIZATION AND AVOIDANCE MEASURES	7-25
8.0 REFERENCES	8-34

1.0 INTRODUCTION

1.1 PURPOSE AND NEED

Bidr, LLC. is proposing the Westside Trend Exploration Well Project (Project), located in western Kern County, California (**Appendix A. Figure 1**). This Project will involve the drilling of an exploration well.

1.2 FEDERALLY LISTED SPECIES

Based on both a literature review of database queries and field investigations, which will be discussed in sections below, it has been determined that the following federally listed wildlife and plant species have a potential to occur or have been reported within the general region of the Project area:

- Blunt-nosed leopard lizard (*Gambelia sila*) – Federally Endangered (FE), Fully Protected (FP)
- California condor (*Gymnogyps californianus*) – FE
- California jewelflower (*Caulanthus californicus*) – FE
- Giant kangaroo rat (*Dipodomys ingens*) – FE
- Kern mallow (*Eremalche kernensis*) – FE
- Monarch butterfly (*Danaus plexippus*)- California overwintering population –Federally Candidate Endangered (FCE)
- San Joaquin kit fox (*Vulpes macrotis mutica*) – FE
- San Joaquin woollythreads (*Monolopia congdonii*) – FE

1.3 STATE LISTED SPECIES

Several of the Federally listed species mentioned above are also listed in the State of California. Wildlife and plant species that are state listed and have the potential to occur or have been reported within the general region of the Project area are listed below:

- Blunt-nosed leopard lizard (*Gambelia sila*) – State Endangered (SE),(FP)
- California jewelflower (*Caulanthus californicus*) – SE
- Crotch's bumblebee (*Bombus crotchii*) – State Candidate Endangered (SCE)
- Giant kangaroo rat (*Dipodomys ingens*) – SE
- San Joaquin antelope squirrel (*Ammospermophilus nelsoni*) – State Threatened (ST)
- San Joaquin kit fox (*Vulpes macrotis mutica*) – ST
- Swainson's hawk (*Buteo swainsoni*) – ST
- Temblor legless lizard (*Anniella alexandrerae*) – State Candidate Endangered (SCE)

2.0 DESCRIPTION OF THE PROPOSED ACTION

2.1 PROJECT LOCATION

The Project area, as identified in **Appendix A Figure 1**, encompasses approximately 2.1 acres within the San Joaquin Valley in the western portion of Kern County. The Project site is located approximately 10 miles south of Blackwell's Corner and approximately 8 miles west of Highway 33 and 7th Standard Road. The Project occurs within the northern half of APN 085-170-09 and is located in Section 29, Township 28 South, Range 20 East, towards the northwest corner of Carneros Rock United States Geological Survey 7.5-minute quadrangle (USGS quad). The elevation profile of the Project site is approximately 318 to 326 meters (1,045 to 1,071 feet). The Project site is west of the Belridge Oilfield.

2.1.1 Proposed Project

The Project involves the drilling of an exploration well. The well site will be located in annual grassland habitat that is heavily influenced by the presence of grazing cattle, adjacent to a dirt road.

3.0 EXISTING ENVIRONMENTAL CONDITIONS

3.1 PHYSICAL SETTING

The Project location is in Kern County, within the central region of California and the third largest county in the state, consisting of approximately 8,202 square miles. The geography of Kern County consists of a diverse landscape of agricultural lands, mountains, and deserts. Kern County's location warrants itself to oil and gas exploration, which includes development activities to support such an industry. Kern County is the most productive county in California with almost 80.6 million barrels being produced in 2020 (CEC, 2023). Adjacent property uses include existing oil and gas leases approximately 3-4 miles from the Project and grazing land surrounding the Project site.

3.2 GEOLOGY AND CLIMATE

The Project occurs within a flat landscape ranging from approximately 318 meters to approximately 326 meters (1,045 feet to 1,071 feet). The soil classification mapped within the Project boundaries includes Panoche clay loam (USDA, 2023). Bacon Hills is approximately 2 miles east and Carneros Rocks and Carneros Canyon are approximately 2 miles south of the Project. The Project site is just east of the foothills of the Temblor Range.

The Project occurs within areas subject to various phases of the Mediterranean climate, which is characterized by warm, dry summers and mild, wet winters. The average rainfall in the Buttonwillow area of Kern County (20 miles east of Project location) is 5.56 inches (NOAA, 2023). The average temperature in the Buttonwillow area is 64-degrees Fahrenheit (NOAA, 2023). Annual high temperatures for the Buttonwillow area during summer months are between 91 and 98-degrees Fahrenheit. Annual low temperatures during the winter months are between 35 and 45-degrees Fahrenheit (NOAA, 2023).

3.3 RIVERS AND STREAMS

No naturally occurring rivers, streams or lakes were observed within the Project boundaries. The nearest aquatic feature, Carneros Creek, is approximately 0.2-mile west of the Project. Carneros Creek is defined by the National Hydrology Dataset (NHD) as an intermittent stream/river and by the National Wetland Inventory (NWI) as an intermittent riverine feature. An intermittent system may contain flowing water for only part of the year. When water is not flowing it may remain in isolated areas or dry up completely (ERMA, 2023). There are several other flowlines and unnamed intermittent and ephemeral water features surrounding the Project area (**Appendix A Figure 3**). However, no Project activities are planned within any aquatic features. No disturbance or impact is anticipated to any of the above-mentioned aquatic features.

3.4 CURRENT LAND USE

The Project occurs approximately 6 miles southwest of the North Belridge Oilfield and 3 miles northwest of the Chico-Martinez Oilfield, both of which are active oilfields. Oil production activities and infrastructure, such as above-ground tanks, above and below-ground pipelines, and

both paved/unpaved roads are present within the oilfields. In the more immediate area around the Project site, land use is dominated by dirt roads and cattle grazing.

3.5 LANDCOVER TYPES

The habitat within the Project area consists of annual (non-native) grassland (**Appendix B Project Photos**). A detailed description of the dominant habitat community and landcover observed is provided below.

3.5.1 Annual (non-native) Grassland

Dominant species in this habitat are typically introduced, non-native grasses (Kie, 2005). An annual grassland community is characterized by a sparse to dense cover of low (<1 meter) annual grasses and native and non-native herbaceous species (Sawyer and Keeler-Wolf, 2009). Shrubs and sub-shrubs are sometimes scattered in grasslands but do not dominate the vegetation. This vegetation type may be classified as *Avena spp.* - *Bromus spp.* Herbaceous Semi-Natural Alliance (Wild oats and annual brome grasslands) according to the online Manual of California Vegetation (California Native Plant Society, 2023b).

4.0 THREATENED, ENDANGERED, OR PROPOSED THREATENED, SPECIES

4.1 DESKTOP ANALYSIS

A desktop analysis was conducted to identify any threatened, endangered or special-status species of flora and fauna that may be present within or surrounding the Project area. A query for Carneros Rocks and eight surrounding USGS quads (Las Yeguas Ranch, Shale Point, Blackwells Corner, Lost Hills, Belridge, Reward, McKittrick Summit, and Simmler) was conducted using the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Data Base (CNDDDB), California Native Plant Society (CNPS) Rare Plant Inventory List, United States Fish and Wildlife Service's (USFWS) Information for Planning and Conservation (iPaC) planning tool, and USFWS Critical Habitat Report. The sensitive plants and wildlife that have the potential to occur within or near the Project area are presented in Tables 4-1 and 4-2. Additionally, **Appendix A Figure 2** depicts all CNDDDB occurrences within three miles of the Project area.

Table 4-1. Threatened, endangered, and/or special-status plant species with the potential to occur within or near the Project area.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Probability of Occurrence
<i>Allium howellii</i> var. <i>howellii</i> Howell's onion	-/4.3	Valley and foothill grassland, grassy slopes; sometimes within clay or serpentinite soils; 50-2200 m.	Mar-Apr	Low– No records of the species within the Project's quad. Clay soil is present in the Project area. There is a record of the species 9 miles northwest of the Project (Calflora, 2023).
<i>Amsinckia furcata</i> Forked fiddleneck	-/4.2	Cismontane woodland, valley and foothill grassland, semi-barren loose, shaly slopes; 50-1000 m.	Feb-May	Low – Potential habitat is present. No recorded occurrences within the Project quad. The nearest occurrence is in the Carrizo Plain National Monument.
<i>Androsace elongate</i> ssp. <i>acuta</i> California androsace	-/4.2	Slopes within Chapparal, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, foothill woodland; 150-1305 m.	Mar-Jun	Absent – No recorded observations within the Project area or quad. Records of the species are primarily in areas with foothills.
<i>Antirrhinum ovatum</i> Oval-leaved snapdragon	-/4.2	Chapparal, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland, on gentle and open slopes, disturbed areas, sometimes gypsum, often in alkaline soils and sometimes in clay soils; 200-1000 m.	May-Nov	Moderate – There is a record of this species 4.8 miles north of the Project area (CCH1, 2023). Clay soil is present. Slopes are not present within the Project area but are in the surrounding area.
<i>Atriplex coronata</i> var. <i>coronata</i> Crownscale	-/4.2	Chenopod scrub, valley and foothill grassland, vernal pools, alkaline and clay soils; 1-590 m.	Mar-Oct	Low – Multiple occurrences near McKittrick, Reward and Lost Hills. Clay soils and grassland habitat are present, however, no records within Project location or quad.

Table 4-1. Threatened, endangered, and/or special-status plant species with the potential to occur within or near the Project area.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Probability of Occurrence
<i>Atriplex coronata</i> var. <i>vallicola</i> Lost Hills crownscale	-/1B.2	Chenopod scrub, valley and foothill grassland, freshwater wetlands, dry ponds, alkaline soils; 50-635 m.	Apr-Sep	Absent – Wetlands, vernal pools/ponds are not present within the Project site. No occurrences of species in Project quad.
<i>Atriplex flavida</i> Carrizo Plain crownscale	-/1B.3	Chenopod scrub, valley and foothill grassland, vernal pools in alkaline soils; 585-605 m.	Mar-Jul	Absent – No records of this species in Kern County. Project site is not within elevation range for the species.
<i>Canbya candida</i> White pygmy-poppy	-/4.2	Joshua tree woodland, desert scrub, pinyon and juniper woodland in granitic, gravelly and sandy soils; 600-1450 m.	Mar-Jun	Absent – Habitat is not present within the Project site. Project site is outside of the elevation range for the species.
<i>Caulanthus californicus</i> California jewelflower	FE, SE/1B.1	Chenopod scrub, valley and foothill grassland, pinyon and juniper woodland, flats, slopes, within non-alkaline, sandy substrate; 61–1000 m.	Feb-May	Low – No records within Project quad. Grassland habitat is present. Records near Lost Hills, Carrizo Plain, and McKittrick.
<i>Caulanthus lemmonii</i> Lemmon's jewelflower	-/1B.2	Pinyon and juniper woodland, valley and foothill grassland; 80-1580 m.	Feb-May	Low – No records within the Project area or quad. Habitat is present. Records within the McKittrick Summit and Reward quads.
<i>Clarkia xantiana</i> ssp. <i>parviflora</i> Kern Canyon clarkia	-/4.2	Chenopod scrub, cismontane woodland, valley and foothill grassland, roadsides, slopes, rocky and sandy soils; 700-3620 m.	May-Jun	Absent – Project is outside of elevation range for species.
<i>Delphinium recurvatum</i> Recurved larkspur	-/1B.2	Chenopod scrub, cismontane woodland, valley and foothill grassland; within alkaline substrate; 3-790 m.	Mar-June	Moderate – Habitat present. However, requires poorly drained, fine, alkaline soils and <i>Atriplex</i> scrubs (Jepson, 2023). Project area has non-alkaline soils and no <i>Atriplex</i> scrubs.
<i>Eremalche parryi</i> ssp. <i>kernensis</i> Kern mallow	FE/1B.2	Chenopod scrub, pinyon and juniper woodland, valley and foothill grassland; dry, open sandy to clay soils; often at edge of balds; alkali flats; 70-1290 m.	Jan-May	Moderate – Species record 8 miles southeast of Project site, and various records near Belridge. Project site has clay soils and grassland. No records within Project location or quad.
<i>Eriastrum hooveri</i> Hoover's eriastrum	FD/4.2	Chenopod scrub, valley and foothill grassland, pinyon juniper woodland; within alkaline gravelly substrate; 50-915 m.	Mar-July	Low- No gravelly substrate observed within the Project area. No records within the Project quad, but multiple records in surrounding quads.

Table 4-1. Threatened, endangered, and/or special-status plant species with the potential to occur within or near the Project area.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Probability of Occurrence
<i>Eriogonum gossypinum</i> Cottony buckwheat	-/4.2	Chenopod scrub and valley and foothill grassland within clay substrate; 100-550 m.	Mar-Sep	Moderate – Grassland habitat and clay substrate is present. Record of species 2.7 miles east of the Project site.
<i>Eriogonum nudum var. indictum</i> Protruding buckwheat	-/4.2	Chaparral, chenopod scrub, cismontane woodland in clay and serpentinite soils; 150-1463 m.	May-Oct	Absent – Habitat is not present within the Project area.
<i>Eriogonum temblorense</i> Temblor buckwheat	-/1B.2	Valley and foothill grassland, clay and sandstone; 300-1000 m.	May-Sep	Absent– Grassland habitat and clay soil are present within the Project site. Multiple records in Carneros Rock quad near Carneros Canyon. However, records are in hillier areas.
<i>Eryngium spinosepalum</i> Spiny-sepaed button-celery	-/1B.2	Valley and foothill grassland, usually occurs in wetlands, vernal pools; 80-975 m.	Apr-Jun	Absent – Wetlands are not present within the Project site. Quad with nearest record is in Simmler.
<i>Eschscholzia hypocoides</i> San Benito poppy	-/4.3	Chaparral, cismontane woodland, valley and foothill grassland, grassy areas in woodlands and chaparral, clay and serpentine soils; 200-1500 m.	Mar-Jun	Absent – Project is outside of the California Floristic Province, Inner South Coast Ranges, in which the species is found.
<i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i> Tejon poppy	-/1B.1	Chenopod scrub, valley and foothill grassland; 160-1000 m.	Mar-May	Absent – Project is outside known range of Western Transverse Ranges and Tehachapi Mountain area (Jepson eFlora, 2023). No records within the Project area.
<i>Eschscholzia rhombipetala</i> Diamond-petaled California poppy	-/1B.1	Valley and foothill grassland in alkaline and clay soils; 0-975 m.	Mar-Apr	Absent – No records within the Project area or quad. Records are within the foothills of the Coast Range.
<i>Fritillaria agrestis</i> Stinkbells	-/4.2	Chaparral, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland, clay and serpentine (sometimes) soils; 10-1555 m.	Mar-Jun	Absent – Outside of the known range (Calflora 2023).
<i>Lasthenia chrysantha</i> Alkali-sink goldfields	-/1B.1	Vernal pools, alkaline; 0-200 m.	Feb-Apr	Absent – No habitat present within the Project area. Project is outside of elevation range for the species.
<i>Lasthenia ferrisiae</i> Ferris' goldfields	-/4.2	Vernal pools, wetlands usually in alkaline or clay substrate; 20-700m	Feb-May	Absent – No wetland habitat present, not reported within general area. None

Table 4-1. Threatened, endangered, and/or special-status plant species with the potential to occur within or near the Project area.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Probability of Occurrence
				have been observed within the Project area.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	-/1B.1	Playas, marshes and swamps, vernal pools, coastal salt marsh, freshwater wetlands, alkali sink, wetland-riparian; 1-1220 m.	Feb-Jun	Absent – No wetland habitat present, not reported within general area. None have been observed within the Project area.
<i>Layia heterotricha</i> Pale-yellow layia	-/1B.1	Cismontane woodland, coastal scrub. Pinyon and juniper woodland, valley, and foothill grasslands, sometimes in alkaline or clay substrate; 300-1705m	Mar-Jun	Absent – Outside of the known range (CalFlora, 2023).
<i>Layia munzii</i> Munz's tidy-tips	-/1B.1	Chenopod scrub, valley and foothill grassland in alkaline clay soils; 150-700 m.	Mar-Apr	Absent – No records within Carneros Rocks (Project) quad. Alkaline soil is not present within the Project site. Grassland and clay soil present within the Project site.
<i>Lepidium jaredii</i> ssp. <i>jaredii</i> Jared's pepper-grass	-/1B.2	Valley and foothill grassland in alkaline and adobe soils, washes and slopes, alluvial fans; 335-1005 m.	Mar-May	Absent – Project site is within the geographic range for the species, but outside of the elevation range. Soil preference and microhabitat are not present.
<i>Madia radiata</i> Showy golden madia	-/1B.1	Cismontane woodland, valley and foothill grassland, grassy and open slopes; 25-1215 m.	Mar-May	Absent – Project is outside of the California Floristic Province, Inner South Coast Ranges, in which the species is found.
<i>Monolopia congdonii</i> San Joaquin woollythreads	FE/1B.2	Chenopod scrub and valley and foothill grassland in sandy soils; 60-800 m.	Feb-May	Moderate – Padre has observed a population of the species approximately 2.6 miles north of the Project.
<i>Puccinellia simplex</i> California alkali grass	-/1B.2	Chenopod scrub, meadow and seep, valley and foothill grassland, vernal pool, saline flats, and mineral springs; 2 – 930 m.	Mar- May	Absent – No habitat present. Occurs in saline flats, mineral springs which Project lacks. No recorded observations within the Project area.
<i>Stylocline citroleum</i> Oil neststraw	-/1B.1	Open, stable, often crusted sand, clay, dry drainage edges, between <i>Atriplex</i> shrubs, chenopod scrub; coastal scrub; clay; 50-400 m.	March-April	Absent – Scrub habitat not present. No occurrences in the Project quad.

Table 4-1. Threatened, endangered, and/or special-status plant species with the potential to occur within or near the Project area.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Probability of Occurrence
<i>Trichostema ovatum</i> San Joaquin bluecurls	-/4.2	Chenopod scrub and valley and foothill grassland; 65-320 m.	April-Oct	High- Habitat present. No occurrences in the Project quad. The closest occurrence is 21 miles east (CNDDDB) A species in the same genus <i>T. lanceolatum</i> was observed during surveys at the Project. <i>T. ovatum</i> was not observed.

Listing Status/Rare Plant Rank Codes:

CCH = Consortium of California Herbaria
 CNNDDB = California Natural Diversity Database Info (CDFW)
 FD = Federally delisted (USFWS)
 FE = Federally-listed Endangered (USFWS)
 SE = State-listed Endangered (CDFW)

CNPS (California Native Plant Society) Codes, California Rare Plant Rank:

1B = Plants Rare, Threatened, or Endangered in California and Elsewhere
 4 = Watch List: Limited Distribution
 0.1 = Seriously Threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
 0.2 = Fairly Threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
 0.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

Table 4-2. Threatened, endangered, and/or sensitive wildlife species with the potential to occur within or near the Project area.

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
Invertebrates			
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT/-/-	Valley and foothill grassland, vernal pool, and wetland. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains in astatic rain-filled pools. Inhabits small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Absent-No habitat present or reported within the general area. Project site lacks vernal pools and wetlands.
<i>Bombus crotchii</i> Crotch bumble bee	-/SCE/-	The Sierra-Cascade crest west to the coast of California and south to Mexico. Live in shrublands and grasslands and nest underground. Food plants include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Lupinus</i> , <i>Salvia</i> , <i>Eriogonum</i> , <i>Asclepias</i> , <i>Eschscholzia</i> , <i>Chaenactis</i> , and <i>Medicago</i> (Williams et al 2014).	Moderate- Food plant and associated genera are present within the general area of the Project site. Nearest record is 8 miles south of the Project site (CNDDDB, 2023).
<i>Danaus plexippus</i> Monarch butterfly – California overwintering population	FCE/-/-	Overwintering population. Closed-cone coniferous forests along the coast from northern Mendocino to Baja California, Mexico. Roost in wind-protected trees groves of Eucalyptus, Cypress, and Monterey pine, with water and nectar nearby. Require flowering plants for adult food source and milkweed (<i>Asclepias</i> spp.) plants for egg laying and larva food source.	Low-Project area is outside of winter range. Species could potentially migrate near the Project area. No milkweed is present within the Project site. None have been observed within the Project area.
<i>Euproserpinus euterpe</i> Kern primrose sphinx moth	FT/-/-	Occurs only in association with its host plant, elderberry (<i>Sambucus</i> spp.) in which they lay their eggs on.	Absent – Outside of known range (USFSW, 2019).
Amphibians			
<i>Ambystoma californiense</i> California tiger salamander- central California DPS	FT/ST/WL	Require underground refuges, especially ground squirrel burrows as upland habitat for aestivation and vernal pools or other season water sources for breeding.	Absent – Project site is east of the Central Valley range (border of San Luis Obispo and western Kern County). No aquatic habitat present.

Table 4-2. Threatened, endangered, and/or sensitive wildlife species with the potential to occur within or near the Project area.

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
<i>Rana draytonii</i> California red-legged frog	FT-/SSC	Occurs in or near quiet permanent water of streams, marshes, ponds, lakes and other quiet bodes of water. In summer, frogs estivate in small mammal burrows, leaf litter, or other moist sites in or near (within a few hundred feet of) riparian areas.	Absent – Project site is outside of the geographic range for this species. No aquatic habitat present.
<i>Spea hammondi</i> Western spadefoot	-/SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands; vernal pools are essential for breeding and egg-laying.	Low – Grassland habitat is present with the Project area. Project area lacks vernal pools. Intermittent aquatic habitat could be present in the general area (Carneros Creek and other unnamed creeks). The closest record of this species is approximately 5.4 miles north of the Project from 2011 (CNDDDB 2023). None have been observed within the Project area.
Reptile			
<i>Anniella alexanderae</i> Temblor legless lizard	-/SCE/SSC	East of the Temblor Mountain Range in western Kern County and western Fresno County. They require loose soil, sand or leaf litter, within a variety of open habitats. They prefer soils with a high moisture content. Typically found in alkali desert scrub habitat (Center for Biological Diversity, 2021)	Low – Project site is within the known range of the species. Potential habitat is present, however preferred habitat (alkali desert scrub) is not present within the Project area but is found in the general area. Several ephemeral drainages run near the Project area. Loamy soil may be present within the Project area. Nearest record is 10 miles west of the Project site (CNDDDB 2023).
<i>Anniella grinelli</i> Bakersfield legless lizard	-/SSC	Found in the southern San Joaquin Valley; in the east side of the Carrizo Plain and within Bakersfield city limits. They occur in sparsely vegetated areas with moist, loose soil. Use leaf litter, rocks and logs for refuge.	Absent- Project site is outside of known range of this species.
<i>Arizona elegans occidentalis</i> California glossy snake	-/SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalists reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Moderate – Potential habitat is present. Nearest record is 11 miles north of the Project site from 2014 (CNDDDB, 2023). None were observed on the Project site.

Table 4-2. Threatened, endangered, and/or sensitive wildlife species with the potential to occur within or near the Project area.

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
<i>Emys marmorata</i> northwestern pond turtle	-/-SSC	Require aquatic habitats such as ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation below 6000 ft elevation. Require sites for basking and sandy banks or open grassy fields as upland habitat for egg-laying (up to .5 km from water).	Absent- Aquatic habitat is not present within the Project site.
<i>Gambelia sila</i> Blunt-nosed leopard lizard	FE/SE/FP	Chenopod scrub; resident of sparsely vegetated alkali and desert scrub habitats in areas of low relief; seeks cover in mammal burrows, under shrubs or structures such as fence posts.	Moderate – Potential habitat is present; however, BNLL protocol-level surveys were conducted in 2023 and resulted in negative findings. BNLL are known to occur within 3 miles of the Project site.
<i>Masticophis flagellum ruddocki</i> San Joaquin coachwhip	-/-SSC	Open, dry habitats with little or no tree cover. Found in valley grassland and saltbush scrub in the San Joaquin Valley. Requires mammal burrows for refuge and oviposition sites.	Moderate – Habitat present in and around the Project area.
<i>Phrynosoma blainvillii</i> Coast horned lizard	-/-SSC	Found in a wide variety of habitats such as alkali desert scrub, grassland blue oak woodland, but most common in lowlands along sandy washes with scattered low bushes. Require ant hills (specialized ant diet) with logs or rocks for basking and cover (Laudenslayer & Parisi, 2007).	Absent– Grassland habitat present. Specific habitat requirements are not present. The nearest record is 9.4 miles southwest of the Project area.
Bird			
<i>Agelaius tricolor</i> Tricolored blackbird	-/ST/BLM S, SSC, RWL, BCC, MBTA	Highly colonial species. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony. Forages in agricultural fields and grassland habitat.	Absent – Foraging grassland habitat present; however, no suitable nesting habitat is present. No suitable water sources are present in or near the Project area. The nearest CNDDDB record is 4.5 miles northeast of the Project (CNDDDB 2023).
<i>Aquila chrysaetos</i> Golden eagle	-/-FP, BE&GEP, CMBPA	Rolling foothills, mountain areas, sage-juniper flats, and desert. Nests in large trees in open areas or canyons.	Low –Foraging habitat present, but no nesting habitat within the Project area.

Table 4-2. Threatened, endangered, and/or sensitive wildlife species with the potential to occur within or near the Project area.

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
<i>Athene cucularia</i> Burrowing owl	-/-BLM, SSC, CMBPA	Found in a variety of habitats. Open dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation in areas where fossorial mammals are already present.	High – Suitable habitat present. The nearest record is 10 miles north of the Project site (CNDDDB 2023).
<i>Buteo swainsoni</i> Swainson's hawk	-/ST/ CMBPA	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Moderate – Foraging habitat present; however, no nesting habitat was observed.
<i>Charadrius montanus</i> Mountain plover	-/-SSC	Prefers short vegetation with bare ground and flat topography, prefers grazed areas with burrowing rodents in grasslands, plowed fields, grain fields and sod farms.	Moderate – Project is within wintering range and preferred habitat is present. The nearest record is approximately 10 miles north of the Project site.
<i>Charadrius nivosus nivosus</i> Western snowy plover	FT/-/SSC	Needs gravelly, sandy or friable soils for nesting on sandy beaches, salt pond levees and shores of large alkali lakes.	Absent – Habitat is not present within the Project site.
<i>Empidonax traillii extimus</i> Southwestern willow flycatcher	FE/SE/-	Riparian woodlands in southern California.	Absent – Habitat is not present within the Project site.
<i>Falco mexicanus</i> Prairie falcon	-/-W/L	Dry, open habitats. Nests on cliffs. Forages far from breeding sites, even to marshlands and ocean shores.	Absent – Habitat is not present within the Project site.
<i>Gymnogyps californianus</i> California condor	FE/SE/ FP, CMBPA	Requires large areas of remote country for foraging, roosting, and nesting. Roosts on large trees or snags or on isolated rocky outcrops and cliffs. Forages in open grasslands and oak savanna foothills.	Low – Foraging habitat is present. Nesting habitat is not present within the Project site. Project area is not in Critical Habitat for the species.
<i>Haliaeetus leucocephalus</i> Bald eagle	-/-/FP, BE&GEPA, CMBPA	Requires large area with good food base, perching areas and nesting sites. Typically found nesting near rivers, lakes, and marshes. May be found foraging in dry areas such as farmland and urban habitat.	Absent – No habitat present.

Table 4-2. Threatened, endangered, and/or sensitive wildlife species with the potential to occur within or near the Project area.

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
<i>Toxostoma lecontei</i> Le Conte's thrasher	-/SSC	Desert wash and desert scrub; commonly nests in dense spiny shrub or densely branched cactus in desert wash.	Absent – Scrub habitat not Present with the Project site.
Mammal			
<i>Ammospermophilus nelsoni</i> San Joaquin (Nelson's) antelope squirrel	-/ST/-	Western San Joaquin Valley from 200-1200 feet elevation. On dry, sparsely vegetated loam soils, dig burrows or use kangaroo rat burrows; need widely scattered shrubs, forbs, and grasses in broken terrain with gullies and washes.	High – Species has been observed within the general area. Habitat is present within the Project area.
<i>Antrozous pallidus</i> Pallid bat	-/SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts need to be protected from high temperatures and are very sensitive to disturbance.	Low – Grassland habitat for foraging is present. Roosts sites are not present within Project site, however, there is a nearby record approximately 2 miles southwest of the Project in a rocky area (CNDDDB, 2023).
<i>Dipodomys ingens</i> Giant kangaroo rat	FE/SE/-	Grassland habitat on the western side of the San Joaquin Valley, marginal habitat in alkali scrub. Need level terrain and sandy loam soils for burrowing.	Low – Grassland habitat is present, and Project is within species range. No burrow precincts or other evidence of species presence (caches, cleared plant litter around burrows) were observed at the site.
<i>Dipodomys nitratooides nitratooides</i> Short-nosed kangaroo rat	-/SSC	Western side of San Joaquin valley in grassland and desert scrub (especially <i>Atriplex</i>) habitat. Friable soils, flat to gently sloping areas.	Moderate – Grassland habitat is present within the Project site. Nearest record is approximately 10 miles east of the Project site (CNDDDB, 2023).
<i>Dipodomys nitratooides nitratooides</i> Tipton kangaroo rat	FE/SE/-	Saltbush scrub and sink scrub communities in the Tulare Lake Basin of the southern San Joaquin Valley.	Absent – No scrub habitat is present within the Project site.
<i>Eumops perotis californicus</i> Western mastiff bat	-/SSC, WBWG:H	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, etc.; roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Low – No suitable roosting habitat present.

Table 4-2. Threatened, endangered, and/or sensitive wildlife species with the potential to occur within or near the Project area.

Species	Federal Status/State Status/Other Status	Habitat	Probability of Occurrence
<i>Sorex ornatus relictus</i> Buena Vista Lake ornate shrew	FE/-/SSC	Marshlands and riparian areas in the Tulare Basin. Prefer moist soil and use stumps, logs and litter for cover.	Absent – Habitat is not present within the Project site. The Project area is outside of the designated Critical Habitat for this species.
<i>Taxidea taxus</i> American badger	-/-/SSC	Found in many habitats. Most abundant in drier open stages of most shrubs, forest, and herbaceous habitats. Needs sufficient food and open areas. Preys on burrowing rodents and digs burrows.	Moderate – Suitable habitat is present within the Project site. The nearest record is approximately 14 miles south of the Project site (CNDDDB, 2023).
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	FE/ST/-	Chenopod scrub and valley and foothill grassland; annual grasslands or grassy open stages with scattered shrubby vegetation.	High – Habitat is present within the Project site. There have been multiple records in the general area (CNDDDB, 2023).
<p>Federal Status/State Status/Other Status Codes:</p> <p>BE&GEPA = Bald Eagle and Golden Eagle Protection Act CMBPA = California Migratory Bird Protection Act CNDDDB = California Natural Diversity Database Info (CDFW) FE = Federally listed Endangered (USFWS) FP = Fully protected under Fish and Game Code (CDFW) FT = Federally listed Threatened (USFWS) FCE = Federally Candidate Endangered (USFWS) SE = State-listed Endangered (CDFW) ST = State-listed Threatened (CDFW) SCE = State Candidate Endangered (CDFW) SSC= Species of Special Concern (CDFW) WL = State Watch List (CDFW) WBWG = Western Bat Working Group H = Highest priority</p>			

4.2 CRITICAL HABITAT

A review of the USFWS Critical Habitat Report search determined that no critical habitat occurs within or near the Project site. Species with designated Critical Habitat included in the desktop analysis include Buena Vista Lake ornate shrew, California condor, southwestern willow flycatcher, western snowy plover, California red-legged frog, California tiger salamander, Kern primrose sphinx moth (proposed), and vernal pool fairy shrimp. Of these species, the California condor has the potential to use the Project area for foraging habitat. The Project is outside of Critical Habitat for the California condor.

4.3 SPECIES ACCOUNTS

Results of the CNDDDB, IPaC, and CNPS quad query indicated that 33 plants that are either state listed, federally listed and/or have CNPS rare plant ranks have the potential to occur within the Project site (see Table 4-1). Twelve plants in Table 4-1 were determined to have a potential of occurrence between high, moderate, and low levels within the Project. Twenty-one plants such as California androsace, Lost Hills crowscale, Carrizo Plain crowscale, white pygmy-poppy, Kern Canyon clarkia, protruding buckwheat, Temblor buckwheat, spiny-sepaled button-celery, San Benito poppy, Tejon poppy, diamond-petaled California poppy, stinkbells, alkali-sink goldfields, Ferris's goldfields, Coulter's goldfields, pale-yellow layia, Munz's tidy tips, Jared's pepper grass, showy golden madia, California alkali grass, and oil neststraw were deemed absent or unlikely to occur within the Project. These species are unlikely to occur due to lack of habitat, absence of preferred soil, or the Project site being outside their known geographic or elevation range and are not discussed further in this report. Plants that are designated under the CNPS Ranks 3 or 4 are on review and watch lists will also not be discussed further in this report.

Results of the CNDDDB and USFWS IPaC searches indicated that 34 species of wildlife with various special-status designations have the potential to occur within or surrounding the Project site (see Table 4-2). Of these 34 species, nine species have been ruled out as unlikely to occur due to the absence of suitable habitat or the Project site being outside of the known range for the species, which includes: vernal pool fairy shrimp, Kern primrose sphinx moth, California tiger salamander, Bakersfield legless lizard, northwestern pond turtle, western snowy plover, prairie falcon, bald eagle, tricolored blackbird, LeConte's thrasher, Tipton kangaroo rat, Buena Vista Lake ornate shrew. These species will not be discussed further in this report.

4.4 BIOLOGICAL SURVEYS

The Project well sites and vicinity potentially support sensitive fauna and flora known to occur in the region. Padre conducted botanical surveys and protocol-level blunt-nosed leopard lizard surveys in 2023 at the Project site. During the course of the surveys, no sensitive species were observed within the Project area. Very few small mammal burrows were observed within the Project area. No potential dens (San Joaquin kit fox, American badger) were observed during the surveys. Field surveys consisted of walking meandering transects within the Project site. The botanical survey report and BNLL survey report are included in **Appendix C and D**.

5.0 HABITAT DISTURBANCE AND IMPACTS

5.1 HABITAT DISTURBANCE

Project work is planned on existing habitat and will include ground disturbance activities, including vegetation removal and grading. Access to the Project site will occur by traveling on existing access roads directly adjacent to the Project site.

5.2 DIRECT AND INDIRECT IMPACTS TO THREATENED AND ENDANGERED SPECIES

5.2.1 Plant Species

Direct impacts to listed plant species include the loss of dormant seed banks that may be present in the soil, and loss of suitable topsoil and mycorrhizal fungi. The most common type of mycorrhizal fungi is arbuscular mycorrhizal fungi (AM) and although some plants do not need AM fungi to survive, others can be quite dependent on it for optimal growth rate, vigor, and longevity. In addition, native plants are known to be more mycotrophic (dependent on mycorrhiza) than weedy species (Chaudhary and Griswold, 2001). No sensitive or listed plant species have been observed within the Project area by Padre Associates. Botanical surveys were conducted during the growth season after a high rain year. Therefore, it was a highly productive year for vegetation and good conditions were present for plants to grow and bloom. No observations of listed or sensitive plant species were recorded within the Project area in the CNDDDB query of the Project quad. With implementations of avoidance measures, direct impacts are anticipated to be less than significant to sensitive plant species.

Indirect impacts include the establishment of non-native "weedy" succession plant species at sites where vegetation has been removed and bare soils are present. However, several of these "weedy" plant species have become naturalized throughout the region, such as several non-native mustards and grass species, and are already dominant naturalized species known to occur throughout the area. Several of these plant species are listed on the California Invasive Plant Inventory (CIPI) with various ratings of invasiveness: limited, moderate, or high. *Bromus madritensis* ssp. *rubens* is considered invasive; however, it has become naturalized and has become part of the herbaceous understory of habitats such as Allscale Scrub. This species and the other invasive species do well in disturbed areas. *B. madritensis* and *B. diandrus* are both fire promoters. However, with implementations of avoidance measures, indirect impacts are anticipated to be less than significant to sensitive plant species.

5.2.2 Wildlife Species

Direct impacts to wildlife species include mortality from vehicle strikes, harassment due to increased levels of human disturbance during Project activities, crushing of collapsed burrows and dens if present, and temporary loss of habitat during vegetation removal activities. Nesting birds may be disturbed if present within the vegetation to be removed.

Through the use of proper minimization and avoidance measures listed in Section 7.0 of this report, these direct impacts will be significantly reduced and/or eliminated completely. In addition, the use of a qualified biologist(s) onsite during initial vegetation removal and ground disturbance activities can ensure that these measures are being employed and that any new and

unforeseen impacts can be addressed and avoided. The implementation of avoidance measures is anticipated to result in less than significant direct impacts to sensitive wildlife species.

Indirect impacts on wildlife species upon completion of the vegetation removal include increased predation due to the loss of vegetation and burrows/dens for escape during foraging activities. Vegetation removal may also be a loss of food sources for some species. The implementation of avoidance measures is anticipated to result in less than significant indirect impacts on sensitive wildlife species.

5.2.3 Cumulative Impacts

Vegetation removal may likely have some short-term impacts; however, the removal of non-native grasses and forbs could benefit the local ecosystem. The Project footprint is anticipated to be approximately 2.1 acres of habitat in an area with vast surrounding habitat. Therefore, other undisturbed habitat will remain in the area, and the planned Project activities are not anticipated to result in any significant cumulative impacts.

6.0 DETERMINATION EFFECTS TO LISTED SPECIES

6.1 LISTED PLANT SPECIES

California jewelflower, Kern mallow and San Joaquin woollythreads are the only federal and/or state-listed plant species with the potential to occur within the Project site. Below is a determination effect for each plant species.

6.1.1 California Jewelflower (*Caulanthus californicus*)

California jewelflower is known to occur in chenopod scrub, pinyon-juniper woodlands, and valley-foothill grasslands with sandy soils (CNPS, 2023). Previous sightings of California jewelflower indicated that the herbaceous cover is usually dense (USFWS, 1998). California jewelflower was not observed within the Project area or the survey buffer. The Project site is in an area that is regularly grazed by cattle. Over-grazing and heavy grazing contribute to the presence of bare soil which allows invasive species to colonize an area (Buck-Diaz et al, 2011). A known threat that has contributed to the decline of California jewelflower is competition with non-native grasses (CDFW, 2023). Therefore, due to the extensive grazing of the Project area and surroundings, California jewelflower could possibly have been extirpated from the area if a population was ever present. The Project site is not within a quad where the species is presumed to be extant (CNPS, 2023). California jewelflower has a low potential of occurrence within the Project Site due to the negative findings during botanical surveys and level of disturbance via cattle grazing. Therefore, the Project is expected to have a less than significant to no effect on California jewelflower.

6.1.2 San Joaquin Woollythreads (*Monolopia congdonii*)

San Joaquin woollythreads is an annual herb from the family Asteraceae and occurs in chenopod scrub and valley and foothill grasslands (CNPS, 2023). San Joaquin woollythreads occurs on sandy, sandy loam, or silty soils with neutral to subalkaline pH that were deposited in geologic times by flowing water. Occurrences have been reported at elevations ranging from approximately 60 to 800 meters (197 to 2625 feet; ESRP, 2023). This species was not observed during botanical surveys of the Project site or buffer. A known population was observed in bloom in 2023 by Padre, approximately 2.6 miles north of the Project site. The known population is in a similar habitat type as the Project site. San Joaquin woollythreads typically prefer open areas with sandy soils. According to the USDA Web Soil Survey, the Project location does not contain the preferred sandy soil. With the soil makeup, the negative findings during the botanical surveys and the level of disturbance via cattle grazing, there is a low potential of occurrence for San Joaquin woollythreads within the Project site. Therefore, the Project is expected to have a less than significant to no effect on San Joaquin woollythreads.

6.1.3 Kern Mallow (*Eremalche parryi* ssp. *kernensis*)

Kern mallow has been reported from elevations ranging from approximately 240 to 1524 meters (720 to 4,572 feet), from alkaline to non-alkaline soils. The plant is commonly found under and among *Atriplex spinifera* (spiny saltbush) and *Atriplex polycarpa* (allscale saltbush), and at higher elevations is found in gravelly and shale type soils under and among *Juniperus californicus* (California juniper) (USFWS, 2013). While there is potential habitat for Kern mallow within the Project area, it was not observed during botanical surveys conducted at the Project site or within

the buffer. The nearest record from CNDDDB is 8 miles southeast of the Project from 1986. The Project site is not within a quad where the species is presumed to be extant (CNPS, 2023). With the negative survey findings and level of disturbance due to cattle grazing, there is a low potential of occurrence of Kern mallow within the Project site. Therefore, Project activities are expected to have a less than significant to no effect on Kern mallow.

6.2 SENSITIVE PLANT SPECIES

Other sensitive plant species, plant species not listed under the ESA/CESA, with the potential to occur within the Project site are discussed below. Additionally, species profiles have been included in Appendix A.

6.2.1 Recurved larkspur (*Delphinium recurvatum*)

The recurved larkspur typically occurs in alkaline soils within chenopod scrub, cismontane woodland, and valley and foothill grassland at elevations below 790 meters (2,607 feet; CNPS 2023). Recurved larkspur was not detected during botanical surveys of the Project area. As none have been detected during surveys, it is unlikely the plant occurs in high concentrations within the Project area; therefore, Project impacts are not expected to occur to recurved larkspur.

6.2.2 Lemmon's jewelflower (*Caulanthus lemmonii*)

Lemmon's jewelflower is known to occur in pinyon-juniper woodland and valley and foothill grassland within elevations between 264 to 5,214 feet (80 and 1,580 meters; CNPS, 2023). The Project Site has potential habitat for this species in valley and foothill grasslands, however none were detected during botanical or biological surveys of the Project Site. As none were detected during surveys, it is unlikely the plant occurs in high concentrations within the Project area; therefore, Project impacts are not expected to occur to Lemmon's jewelflower.

6.3 LISTED WILDLIFE SPECIES

Blunt-nosed leopard lizard, San Joaquin antelope squirrel, San Joaquin kit fox, Swainson's hawk, California condor, giant kangaroo rat, Temblor legless lizard (state candidate), Crotch's bumblebee (state candidate), and monarch butterfly (federal candidate) are the federally and/or state listed species with the potential to occur within the Project site. Below is a determination effect for each wildlife species.

6.3.1 Blunt-nosed Leopard Lizard (*Gambelia sila*)

This species of lizard was historically located in the San Joaquin Valley inhabiting non-native grassland and alkali sink scrub communities, characterized by poorly drained, alkaline, and saline soils (ESRP, 2023). Blunt-nosed leopard lizard (BNLL) protocol-level surveys were conducted for the Project by Padre in 2023 and resulted in negative findings. However, BNLL are known to occur in the general area and have been observed by Padre at various locations within 3 miles of Project site. The 2023 BNLL Survey Report is included as Appendix D. Implementation of avoidance measures would result in impacts being less than significant to BNLL.

6.3.2 San Joaquin antelope squirrel (*Ammospermophilus nelsoni*)

San Joaquin antelope squirrel (SJAS) is known to occur throughout various areas within western Kern County. Suitable habitat is present within the Project area, however, very few small

mammal burrows were observed within the Project site and survey buffer. This does not mean that SJAS cannot move into the Project area, however it may indicate that they are not currently present. SJAS have been observed by Padre on dirt and gravel roads on the way to the Project (within 1-3 miles) and at a nearby Project in similar habitat (approximately 2.5 miles north). With the implementation of minimization and avoidance measures, Project impacts are expected to be less than significant to SJAS.

6.3.3 San Joaquin Kit Fox (*Vulpes macrotis mutica*)

The San Joaquin kit fox (SJKF) is adapted to arid habitats such as the alkali scrub and arid grasslands throughout the San Joaquin Valley floor and into the surrounding foothills and adjoining valleys of the interior Coast Ranges (USFWS, 2010). No direct observations of SJKF occurred during surveys conducted at the Project location. No potential dens were observed within the Project area or survey buffer. The Project does occur within known SJKF population areas and SJKF could traverse throughout the Project area at any time. However, with the implementation of the minimization and avoidance measures, the Project impacts are anticipated to be less than significant to SJKF.

6.3.4 Swainson's Hawk (*Buteo swainsoni*)

The natural foraging habitat for the Swainson's hawk is open areas of grassland with sparse shrubs. They will also forage in agriculture fields of various crops. No Swainson's hawks were observed during surveys conducted at the Project location. The nearest CNDDDB record of Swainson's hawk is approximately eleven miles northeast of Project area. No nesting habitat occurs within the Project site. Although no direct observations of Swainson's hawk have occurred during biological surveys, the species may traverse though the area to forage. With the implementation of the minimization and avoidance measures, the Project activities are not anticipated to adversely affect this species.

6.3.5 California condor (*Gymnogyps californianus*)

California condors require cavities in cliffs for nesting sites (USFWS, 1996). Foraging habitat includes grasslands, oak savannahs, and chaparral. Roosting may occur in large trees, rocky outcrops, or cliff cavities (USFWS, 1996). Nesting and roosting habitat are not present within the Project site. No condors were observed during various surveys of the Project site and buffer. Although no direct observation of California condors has occurred during biological surveys, the species may traverse the site at any time. However, with the implementation of minimization and avoidance measures, Project impacts are expected to be less than significant to California condors.

6.3.6 Giant kangaroo rat (*Dipodomys ingens*)

Giant kangaroo rats (GKR) are found in grassland habitats along the western edge of the San Joaquin Valley (from Fresno to Kern counties) and in the Carrizo Plan and Cuyama Valley in San Luis Obispo County (USFWS, 2023). GKR dig distinct burrow precincts that may have multiple openings. They typically also dig a vertical burrow without a dirt apron that acts as a seed cache. The Project site is outside of the six geographic units in which GKR are confirmed to still occur (USFWS, 2023); however, it is within the overall range of the species. No GKR were observed during surveys at the Project site. No burrows or seed caches characteristic of GKR

were observed within or surrounding the Project site. With the implementation of minimization and avoidance measures, the Project activities are not anticipated to adversely affect this species.

6.3.7 Temblor legless lizard (*Anniella alexanderae*)

The Temblor legless lizard (TLL) is a candidate species for listing as Endangered under the California Endangered Species Act (CESA). The species uses ground surface, loam and/or silty soil, leaf litter, and debris for feeding and cover (CDFW, 2022). The TLL is known to occur in alkali desert scrub and annual grasslands east of the Temblor Mountain Range (CDEFW, 2022). The species is known to occur at elevations ranging from 168 to 466 meters (551 to 1,529 feet) (CDFW, 2022). Temblor legless lizards were not observed during surveys at the Project site. There is some research that may suggest grasses and forbs are non-optimal habitat for legless lizards, and shrubs are preferred (Kuhn et al, 2005). Plants such as matchweed and alkali goldenbush within the Project Area, may present a similar cover, or play a similar role as shrubs; however, there is a very low density of shrub like plants in the Project area. Additionally, the top 16 inches of soil within the Project Area is categorized as clay loam (USDA, 2023). The clay content in the soil may be too compact for legless lizards to burrow in. With the absence of sandy soils and scrub habitat, the Project Site represents poor quality habitat for Temblor legless lizard. Since the Project site is within the range for Temblor legless lizards and they are an elusive species for which little is known, additional surveys and measures may be recommended by agencies (i.e. CalGEM, CDFW). With the implementation of recommendations and minimization and avoidance measures, the Project activities are anticipated to be less than significant to TLL.

6.3.8 Crotch's bumblebee (*Bombus crotchii*)

Crotch's bumblebee is a candidate species for listing as Endangered under the California Endangered Species Act (CESA). This species is nearly endemic to California with a historic range that includes the southern California coast, coast range, central valley, and adjacent foothills (The Xerces Society, 2018). It requires floral resources, underground nests, and overwintering habitat in open grassland and scrub communities. This species is a generalist forager and visits a wide variety of flowering plants during flight season, which is February to October. Crotch's bumblebee were not observed during surveys at the Project site, however potential habitat is present within the general area. As the species has not been observed during multiple visits throughout the flight season, it is unlikely that the species occurs in high numbers at the Project site. With the implementation of avoidance and minimization measures, Project impacts are anticipated to be less than significant for this species.

6.3.9 Monarch butterfly (*Danaus plexippus*)

The monarch butterfly is a candidate species for federal listing under Endangered Species Act (ESA). The species of butterfly lives in diverse habitats including meadows, fields, gardens, and open woodlands. No monarch butterflies were observed during surveys at the Project site, however with migration happening in the fall season, the species may be seen within the Project area at any time. The monarch's host plant, milkweed (*Asclepias*), was not observed during surveys within the Project area. With the implementation of avoidance and minimization measures, Project impacts are anticipated to be less than significant for this species.

6.4 SENSITIVE WILDLIFE SPECIES

Sensitive wildlife species with the potential to occur within the Project site are discussed below including a determination effect for each sensitive wildlife species.

6.4.1 Burrowing Owl (*Athene cunicularia*)

The western subspecies of burrowing owl is found west of the Great Plains from Canada to Mexico (ESRP, 2023). Suitable habitat, grassland, is present within the Project area. However, no suitable burrow refugia for burrowing owl were observed within the Project site. Burrowing owls were not observed during any of the surveys of the Project area or buffer. The nearest CNDDDB record is 10 miles from the Project site. With the implementation of the minimization and avoidance measures, Project impacts are anticipated to be less than significant for burrowing owls.

6.4.2 Western spadefoot (*Spea hammondi*)

Western spadefoot toads primarily occur in grasslands and occasionally valley foothill woodlands. Grasslands with vernal pools are optimal habitat for the species (CDFW, 2000). Western spadefoot toads remain dormant in burrows for up to nine months of the year, especially during a long dry-season. The spadefoot toad requires an upland habitat, for feeding and constructing burrows (or utilizing mammal burrows) and a wetland habitat, for breeding. Western spadefoot toads were not observed during any of the surveys of the Project area or buffer. Optimal habitat (vernal pools) is not present within the Project site. Few small mammal burrows for refuge were observed within the Project area and buffer. Intermittent drainages are present in the general area surrounding the Project. Therefore, the western spadefoot toad could traverse throughout the Project area or use it for foraging habitat. However, with the implementation of the minimization and avoidance measures, the Project impacts are anticipated to be less than significant for this species.

6.4.3 California glossy snake (*Arizona elegans occidentalis*)

The California glossy snake (*Arizona elegans occidentalis*) is a non-venomous species found primarily in arid and semi-arid regions of the southwestern United States. It is known as a California Species of Special Concern. It inhabits various habitats, including desert scrub, grasslands, rocky slopes, and sandy areas. No California glossy snakes were observed during surveys within the Project area or buffer. Implementation of avoidance measures would result in impacts being less than significant to no effect to the California glossy snake.

6.4.4 American Badger (*Taxidea taxus*)

The American badger is a California Species of Special Concern, which typically inhabits areas without trees, including grasslands, farmland, and scrublands, with friable soils (Williams, 1986 and Sullivan, 1996). Badgers dig elliptical shaped burrows with 8-to-12-inch openings, which they utilize for cover, sleeping, hunting, caching food and breeding (Williams, 1986). No American badgers or badger dens were observed during the various surveys of the Project area and buffer. Project impacts are expected to be less than significant to American badger with the implementation of minimization and avoidance measures.

6.4.5 Western mastiff bat (*Eumops perotis*)

The western mastiff bat is a year-round resident in California occurring from San Diego County to the Oregon border at low to mid-elevations along the west side of the Sierra Nevada range (Zeiner et al,1990). Individuals have been known to travel > 15 miles to feeding grounds (Vaughan, 1959). Feeding occurs most frequently over desert washes, grasslands, or meadows, but also feed above forest canopy. The species requires rock crevices, buildings, trees, or tunnels for roosting (Zeiner et al, 1990). No roosting habitat occurs within the Project site. Although no direct observations of western mastiff bat have occurred during biological surveys, the species may traverse though the area to forage. With the implementation of the minimization and avoidance measures, the Project activities are anticipated to be less than significant for this species.

6.4.6 San Joaquin Coachwhip (*Masticophis flagellum ruddocki*)

The San Joaquin coachwhip is typically found in valley grassland and saltbush scrub habitats and prefer areas with little to no tree cover (Thomson et al, 2016). No San Joaquin coachwhips have been observed during any of the surveys of the Project area or buffer. With the implementation of the minimization and avoidance measures, Project impacts are anticipated to be less than significant for San Joaquin coachwhip.

6.4.7 Short-nosed Kangaroo Rat (*Dipodomys nitratooides brevinasus*)

Short-nosed kangaroo rats utilize flat and gently sloping terrain (USFWS, 1998). They are often found in grasslands with scattered shrubs and desert shrublands with friable soils for burrow excavation. Burrow complexes typically have multiple entrances to evade predators. Suitable habitat for the species is present within the grassland habitat at the Project. However, very few small mammal burrows were observed within the Project area and buffer. No short-nosed kangaroo rats were observed during surveys at the Project. Project impacts are expected to be less than significant to short-nosed kangaroo rat with the implementation of minimization and avoidance measures.

6.4.8 Pallid bat (*Antrozous pallidus*)

Pallid bats are most commonly found in open, dry habitats with rocky areas for roosting and may be found throughout the state of California (Zeiner et al, 1990). Roosting habitat is not present within the Project area. However, the nearest CNDDDB record of the species is approximately 2 miles southeast of the Project site in a rocky area. Therefore, the species may utilize the Project area for foraging habitat. Project impacts are anticipated to be less than significant for the species with the implementation of avoidance and minimization measures.

6.4.9 Golden eagle (*Aquila chrysaetos*)

This eagle is generally found in open mountains, foothills, plains and open country. No golden eagles were observed during surveys conducted at the Project location. There are no current CNDDDB records of the species in the general area. No nesting habitat occurs within the Project site. Although no direct observations of golden eagle have occurred during biological surveys, the species may traverse though the area to forage. With the implementation of the minimization and avoidance measures, the Project activities are not anticipated to adversely affect this species.

7.0 MINIMIZATION AND AVOIDANCE MEASURES

This Section presents the proposed avoidance and minimization measures for listed species potentially occurring in the Project area. The following avoidance and minimization measures are proposed to avoid and minimize temporary disturbance of special-status species and degradation of the habitats used by these species:

MM BIO-1: Biological Pre-activity Surveys and Biological Monitoring. A pre-disturbance biological survey will be conducted by a Qualified Biologist. A Qualified Biologist is defined as a person with a combination of academic qualifications (minimum of 4 years of university or college education in biological sciences, zoology, wildlife biology, ecology, botany, or environmental science), professional field experience conducting biological surveys, and demonstrated knowledge and skills (i.e., field experience) related to the species and habitats present on the project activity site and the specific focused or protocol-level surveys conducted. The purpose of the pre-disturbance surveys is to confirm the potential presence and/or absence of any protected status species listed as threatened or endangered under the federal Endangered Species Act, threatened or endangered under the California Endangered Species Act, or designated as fully-protected in the California Fish and Game Code, and to confirm the presence and/or absence of any non-protected status sensitive species considered under California Environmental Quality Act.

The pre-disturbance biological survey will consist of walking belt transects to accomplish 100% coverage of the project site plus a 250-foot buffer. All direct and indirect observations of special-status biological resources will be recorded using a handheld GPS and on field forms. Habitat will be evaluated by the Qualified Biologist to determine the potential for biological resource monitoring and/or surveys for species that are seasonal or require focused surveys during specified periods (e.g., special-status plants, blunt-nosed leopard lizard).

The pre-disturbance biological survey report will include a map of the proposed project construction boundary, biological survey area, special-status species observations (when observed), areas of potential and/or occupied habitat (if any), areas identified for avoidance, and a list of all applicable mitigation measures that will be implemented for the respective project activity site.

MM BIO-2: Nesting Bird Preconstruction Surveys. A pre-disturbance active bird nest survey will be conducted by a Qualified Biologist no more than 10 days prior to the start of any ground disturbance that will take place during the bird nesting season (February 1 through August 31). Surveys will follow USFWS and CDFW guidance and/or protocols, as applicable. If ground-disturbing activities were initiated prior to, and continue into, the nesting season without a break in activity of more than 1 week, no nesting bird survey is necessary. If no active nests or nesting birds are identified during the pre-disturbance survey, then ground-disturbing activities may proceed, and no further mitigation measures will be required for nesting birds.

If active nests are identified, the following measure will be included as part of the pre-disturbance active bird nest survey report.

Active bird nest(s) will be avoided by establishing a minimum 250-foot non-disturbance buffer for passerine species, a minimum 500-foot buffer for non-listed raptor nest(s), or a minimum 0.5-mile buffer around any federal or state-listed raptor nest(s) until the breeding season has

ended. Non-disturbance buffers can be removed when a Qualified Biologist has determined that the birds have fledged, are no longer reliant on the nest or parental care for survival and adult birds are no longer occupying the nest, or the nest is no longer active (e.g., failed). Reduced non-disturbance buffers may be implemented if a Qualified Biologist concludes that work within the buffer area will not be likely to cause disturbance to or abandonment of the nest (e.g., when the disturbance area is concealed from a nest site by topography, when work activities will have a limited duration within the buffer area, or when the species has been known to tolerate higher levels of disturbance). If reduced non-disturbance buffers are implemented, a Qualified Biologist will monitor the active nest(s) before and during construction to establish a baseline for nest behavior and determine whether construction activities are adversely affecting the nest. The pre-disturbance monitoring of the nest site will occur on at least two occasions of at least one hour each during anticipated work hours prior to construction to establish a behavioral baseline. If behavioral changes are observed, the work causing that change will cease within the buffer area until the nest has fledged or is determined by the Qualified Biologist to no longer be active. The Qualified Biologist shall have the authority to halt or redirect construction activities to protect nesting birds from project activities. Any reduction of buffer areas for State or federal listed species during the nesting season must be authorized by CDFW and/or USFWS.

MM BIO-3: Worker Environmental Awareness Project. A Worker Environmental Awareness Project (WEAP) will be presented to all personnel that may access the Project Site, prior to beginning work on the Project site. The WEAP training will be given by trained personnel (e.g., Qualified Biologist or assigned Company Environmental Specialists). WEAP trainings will cover an overview of the laws and regulations governing the protection of biological resources; a description of protected (i.e., ESA/CESA threatened, endangered, candidate, and other special status) species known to occur or with the potential to occur in the Project Area. The training should include a discussion of the sensitive and protected species and their biology and general behavior, distribution and habitat needs, sensitivity to human activities, and Project-specific protective measures. It will also discuss species status and legal protections, define what is habitat and disturbance, and present biological resource protection measures. Materials will be provided to assist workers in recognizing protected and sensitive species. The training will include avoidance and minimization measures to protect biological resources, the identification of environmentally sensitive areas and avoidance buffers, and how to report biological resources if observed on site. The training of personnel should be documented using sign-in sheets.

MM BIO-4: San Joaquin Kit Fox Avoidance. If the pre-disturbance biological survey identifies the presence of any potential, known or natal San Joaquin kit fox den, the following measures will be implemented and documented in the pre-disturbance survey report.

1. Potential kit fox dens will be clearly identified on project maps, marked in the field, and a 50-foot no work buffer will be demarcated using stakes and flagging or similar materials to prevent inadvertent damage to the potential den. Alternatively, if a potential den cannot feasibly be avoided at such distance, the den may be monitored and blocked or excavated in accordance with the Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox prior to or during Ground Disturbance (USFWS, 2011). All potential dens that will be destroyed by a Project activity or ground disturbance will be fully excavated after monitoring conducted by a Qualified Biologist shows that it is not occupied by a listed or otherwise protected species.

2. If kit fox activity or sign is detected at any den including atypical dens (e.g., pipes, culverts), the den location will be identified as a “known” kit fox den in accordance with USFWS guidelines (USFWS, 2011). A minimum 100-foot no work buffer from any disturbance area will be maintained for known dens.

3. During pupping season (January 1 through August 31 or until pups are no longer dependent on adults), a minimum 500-foot no work buffer (distance at which construction noise attenuates to approximately 60 dBA) from any disturbance area will be maintained from occupied natal dens.

4. No excavation (or other project-related destruction) of a known or natal den will occur without prior written guidance from USFWS.

5. All pipes (greater than 3.5 inches in diameter) used during project activities should be capped. Stored pipes greater than 3.5 inches that cannot be visually inspected to verify that no wildlife are present will need to be monitored by a Qualified Biologist prior to use or movement. All trenches and excavations should be covered or ramped (1:1 slope) prior to prevent wildlife entrapment.

6. If take (as defined in FESA and/or CESA) of SJKF cannot be avoided, Bidr shall consult with USFWS and/or CDFW to obtain necessary authorization and shall implement all associated conditions, including any required take avoidance or minimization measures, of such authorization. If den exclusion or destruction is permitted under FESA, a Qualified Biologist will supervise any such activity.

MM BIO-5: San Joaquin Antelope Squirrel Avoidance. If the pre-disturbance biological survey identifies burrows within the Project site that are characteristic of or may be used by San Joaquin antelope squirrel (SJAS), the following avoidance methods for SJAS should be implemented:

1. Pre-activity surveys for SJAS will occur prior to the start of ground disturbance using 10-30 meter spacing.
2. SJAS Surveys will be conducted when temperatures range from 50-90°F. If sunny conditions are not present, surveys should not be conducted if temperatures are below 60 degrees Fahrenheit.
3. Surveyors will scan the survey areas with binoculars and listen for vocalizations. Visual and audible observations will be recorded and mapped.
4. All active SJAS burrows shall clearly be marked with flagging or staking, and ground-disturbing activities shall observe a minimum 50-foot no work buffer from each active burrow.
5. In areas where SJAS have been observed, suspected to occur, or observed within 50 feet, three days of SJAS surveys during the appropriate temperatures are recommended, prior to the start of ground disturbance activities.
6. Vegetation clearing will be completed after three days of no SJAS observations.
7. All holes, trenches, and other openings with a one-inch or greater in diameter must be covered during the day unless workers are in the immediate area working. If

covering holes is not feasible while workers are taking required breaks, then the monitoring biologist will walk the area to discourage SJAS from entering the work area until workers return. All holes must be covered overnight.

MM BIO-6: Blunt-nosed Leopard Lizard Avoidance. BNLL protocol-level surveys were conducted for the Project Location in 2023 and resulted in negative findings. The Well Site within the Project Location was fenced using exclusion fencing to exclude BNLL from moving into the area. If the integrity of the exclusion fence is not maintained (free of holes, gaps, burrowing under fencing material, etc.), then Padre recommends additional BNLL surveys, if work has not begun by September 29, 2024. Since the Project Location is within known BNLL habitat, the following measures are recommended:

1. Project employees and contractors will receive formal training prior to working at the Project Site including attending a sensitive species education program developed by trained biologists, focusing on BNLL and any other sensitive species that may occur in the Project areas. At a minimum, the program will cover species distribution, identification characteristics, sensitivity to human activities, legal protection, penalties for violation of state and federal laws, reporting requirements, and project mitigation measures. The training will also cover these avoidance recommendations:
2. Vehicles will observe a 10-mph speed limit within 2 miles of the nearest BNLL observation site. The speed limit will be imposed on all dirt and gravel roads leading to the Project Site to allow all Project personnel adequate reactionary time to stop their vehicle/equipment safely if a BNLL is observed on any of the access roads.
3. To prevent attracting wildlife to the Project areas, trash and food items will be kept in closed containers and removed daily. Trash and food items may attract BNLL predators, such as coyotes, foxes, and ravens. All trash and food items must be removed from the Project Site at the end of the workday and be kept in covered containers at all times.
4. A 360-degree inspection of all vehicles and equipment will be conducted prior to moving and operation to ensure that no BNLL or other wildlife is present beneath the tires, tracks, and/or undercarriage of vehicles/equipment. If a BNLL is observed beneath vehicles/equipment, the individual will be allowed to leave of its own accord and will not be harassed in any way.
5. Vehicles will use existing and/or designated roads and avoid any cross-country travel, outside of the exclusion fence. No vehicles or equipment may access overland routes until a biologist has cleared the route for travel and has confirmed no burrows are present.
6. To prevent entrapment of BNLL and other wildlife, any trenches or pits created during Project activities more than 2 feet deep will be either covered at night or earthen or wooden escape ramps will be provided. Before work continues in these areas, trenches and pits will be inspected by a biologist to ensure that no animals are present. Any open excavations shall be covered with appropriately sized plywood (or other similar cover types) with soil used to seal the edges. Any gaps or openings around

the edge of the plywood must be sealed with soil or another material to deter BNLL and other wildlife from entering the excavation.

7. Spills of hazardous materials will be immediately cleaned up to prevent exposure to BNLL and other wildlife.
8. All observations or suspected observations of BNLL and/or other wildlife will be reported to the biological monitor immediately. If any BNLL and/or other wildlife are observed within the Project Site, all work activities that may harm or injure an individual will be halted immediately, until the animal leaves of its own accord. Under no circumstance will an animal be harassed or chased from the Project Site.
9. An exclusion zone of 50-feet shall be established around all active burrows. No ground disturbance or use of heavy equipment/vehicles shall occur within this exclusion zone. An exclusion zone of 250-feet shall be established around all known BNLL burrows.

MM BIO-7: Giant Kangaroo Rat Avoidance. During the pre-construction biological survey, biologists should look for burrows that are characteristic of giant kangaroo rat. If any potential giant kangaroo rat burrows are observed, further measures should be taken to determine the presence of giant kangaroo rat within the Project Area. If giant kangaroo rat are determined to be present within the Project Area, CDFW and USFWS should be consulted to decide the next steps.

MM BIO-8: Burrowing Owl Avoidance. If the pre-disturbance survey identifies the presence of an occupied burrowing owl burrow, the following measures will be implemented and included in the pre-disturbance biological survey report:

1. Occupied burrowing owl burrows will not be disturbed during the burrowing owl nesting season (February 1 through August 31). The non-disturbance buffer distances shown in Table 4 below, in accordance with CDFW (2012), will be maintained between all disturbance areas and burrowing owl nesting sites.

Table 4. Recommended Non-Disturbance Buffers for Burrowing Owl Based on Project Activity Impact Level (CDFW, 2012).

Time of Year	Level of Disturbance		
	Low	Medium	High
April 1–Aug 15	656 feet (200 meters (m))	1,640 feet (500 m)	1,640 feet (500 meters)
Aug 16-Oct 15	656 feet (200 m)	656 feet (200 m)	1,640 feet (500 meters)
Oct 16-Mar 31	164 feet (50 m)	328 feet (100 m)	1,640 feet (500 meters)

2. If occupied burrow avoidance is infeasible during the non-breeding season (between September 1 and January 31), a Qualified Biologist shall implement a passive relocation Project in accordance with the CDFW (2012) Staff Report on Burrowing Owl Mitigation, which may include installing one-way doors in burrow entrances for 48 hours to ensure the owl(s) have left the burrow, daily monitoring during the passive relocation period, and subsequently collapsing evicted burrows, once unoccupied, to prevent re-occupation. Prior to passive relocation or exclusion efforts, a burrowing owl management plan will be prepared and approved by CDFW. Destruction of burrows will occur only pursuant to a CDFW-approved burrowing owl management plan; burrow excavation will be conducted by hand whenever possible.

3. As an alternative to passive relocation, occupied burrows that are identified within 500 feet but outside the area of ground disturbance may be buffered with hay bales, fencing (e.g., sheltering in place), or as directed by the Qualified Biologist in coordination with CDFW, to avoid disturbance of burrows.

MM BIO-9: American Badger Avoidance. If the pre-disturbance biological survey identifies the presence of an occupied American Badger burrow, the following measures should be implemented:

1. Occupied American badger dens (non-maternity dens) will be avoided by establishing a minimum 50-foot non-disturbance buffer.

2. Occupied maternity dens will be avoided by establishing a minimum 200-foot non-disturbance buffer during the pup-rearing season (February 15 through July 1).

3. A Qualified Biologist will establish (e.g., flag) non-disturbance buffer areas, as identified above, and will periodically monitor ground-disturbing activities to ensure no work is encroaching on established buffer areas.

4. Destruction of a maternity den burrow shall only proceed after the maternity den is no longer active and no badgers are present within the burrow.

MM BIO-10: Other Sensitive Reptile Species Avoidance. If the pre-disturbance biological survey identifies the presence of California glossy snake, San Joaquin coachwhip, western spadefoot, or any other reptile species of special concern within the proposed work area, the following measures should be implemented:

1. If any California glossy snakes, San Joaquin coachwhips, or any other reptile species of special concern are observed during construction, the identified special-status reptiles will be allowed to move out of the work area on their own or will be removed from the work area and released in adjacent suitable habitat by the Qualified Biologist. The Qualified Biologist will have all appropriate permits in place prior to handling any special-status reptiles or any other wildlife.

2. No monofilament plastic will be used, such as for erosion control.

3. All construction equipment and construction personnel vehicles will be checked prior to moving them, to ensure that no special-status reptile is under equipment/vehicles. If any individuals are detected beneath equipment or vehicles, the equipment or vehicles

will be left in place until the individual(s) moves out of harm's way on its own accord, as determined by a Qualified Biologist.

MM BIO-11: Crotch's Bumblebee. As the species is a Candidate for listing on the California Endangered Species Act (CESA), further surveys and measures may be recommended by CDFW or CalGEM. If bumblebee species that could be Crotch's bumblebee are observed at the Project Site during the pre-construction survey, CDFW should be contacted.

MM BIO-12: Sensitive Plant Species Avoidance. Rare plant surveys were conducted for this Project in 2023. Since the surveys occurred in a year during which rainfall was higher than normal, survey results should be valid for 5 years. No special-status plants, including rare, Threatened or Endangered plants were observed with the Project site or survey buffer.

MM BIO-13: Best Management Practices for Biological Resources. The following best management practices (BMP) will be implemented during all projects, operations, and maintenance activities to avoid and minimize potential significant adverse impacts on biological resources:

1. All vehicles will observe a 20 mile-per-hour speed limit in all areas of disturbance and on unpaved roads unless otherwise posted. Off-road traffic outside designated access routes will be prohibited. Speed limit signs will be posted at visible locations at the point of site entry and at regular intervals on all unpaved access roads. A reduced speed limit of 10 miles-per-hour will be posted and observed within 0.25-mile of any reported blunt-nosed leopard lizard observation and from sunset until sunrise within 0.25-mile of occupied San Joaquin kit fox dens.

2. All disturbance activities, except emergency situations or drilling that may require continuous operations, will occur only during daylight hours. Continuous 24-hour drilling activities will use directed lighting, shielding methods, or reduced lumen intensity. All new lighting fixtures for safety and security at facilities would be shielded, oriented downward, and on-demand lighting and/or with timers, to avoid unnecessary visual disturbance to wildlife.

3. All food-related trash items and microtrash, such as wrappers, cans, bottles, bottle tops, and food scraps will be disposed of in closed containers and routinely removed from the project activity site, at intervals of no less than once per week.

4. Excavations, spoils piles, unpaved access roadways, and parking and staging areas will be subject to dust control.

5. Herbicides application will be in accordance with existing laws and manufacturers' instructions (i.e., pesticide/herbicide labels). All herbicide chemicals used must be registered for use in the U.S. and California and must have a label certifying that the Federal Environmental Protection Agency (EPA) and the California Department of Pesticide Regulation (DPR) have approved the herbicide for use. Herbicides will not be sprayed within 50 feet of known occurrences of any other special-status plant occurrence or federal land. No rodenticides will be used on any project.

6. All open trenches, excavations, and/or holes more than 2 feet deep will be backfilled or covered at the end of each workday to prevent wildlife entrapment. If an

excavation or hole is too large to cover, escape ramps will be installed at an incline ratio of no greater than 2:1 at least for every 500 feet. All trenches and excavations will be inspected for the presence of wildlife each day prior to the start of work. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals.

7. All straight construction pipes, culverts, or similar structures with a diameter of 3.5-inches or greater that are stored at a construction site overnight will be thoroughly inspected for wildlife before the pipe is subsequently buried, capped, or otherwise used or moved in any way. All bent pipe with a diameter of 3.5-inches or greater that cannot be visually inspected for wildlife with 100 percent certainty will be left in place and monitored by a Qualified Biologist using wildlife cameras and/or tracking material prior to being removed, capped, moved, or buried. If any wildlife is discovered inside a pipe, that section of pipe is not to be moved until the animal vacates the pipe on its own accord.

8. To enable San Joaquin kit foxes and other wildlife to pass through the project activity site, any new perimeter fencing installed around project work areas, with the exception of where fencing is required to exclude wildlife from known hazards, will include a 4 to 6-inch opening between the fence and the ground or the fence will be raised 4 to 6 inches above the ground. The bottom of the fence fabric will be knuckled (wrapped back to form a smooth edge), if necessary, to protect wildlife from injury when passing underneath.

9. All vertical tubes used in project construction and chain link fencing poles will be capped to avoid entrapment and death of special-status wildlife and birds.

10. Discovery of State or federally listed species that are injured or dead will be reported immediately via telephone and within 24 hours in writing to CDFW and USFWS Office as relevant. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information, such as the cause of injury or death (if known).

11. All activity will use previously disturbed areas to the maximum extent feasible to minimize the amount of new disturbance in areas with existing natural lands.

12. Vehicle, equipment, and material storage will be limited to previously disturbed areas or predefined storage/laydown areas that are incorporated into work site limits. All concrete and asphalt debris will be removed from the project locations to either a designated concrete or asphalt storage facility, or off site for recycling or proper disposal on completion of construction.

13. No vehicles or construction equipment will be parked within a water of the State, including any dry wash or drainage, nor shall vehicles or construction equipment cross, or travel within a water of the State, including any wash or drainage, where and when water is flowing. No materials will be stored within a Water of the State.

14. All construction equipment and construction personnel vehicles will be checked underneath prior to moving them, to ensure that no wildlife is under equipment/vehicles. If any individuals are detected beneath equipment or vehicles, the equipment or vehicles will be left in place until the wildlife moves out of harm's way on its own accord, as determined by a Qualified Biologist.

15. All tracked vehicles and other construction equipment entering the Project Area from outside of Kern County will be washed or maintained to be weed-free.

16. All washing of trucks, paint, equipment, or similar activities including concrete washout will occur in designated areas/facilities where runoff is fully contained for collection prior to off-site disposal. Wash water may not be discharged from the project activity site, must be stored in a manner that excludes sensitive wildlife species, and located at least 100 feet from any water of the State.

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APPENDIX A

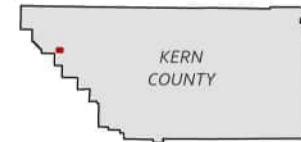
Project Figures



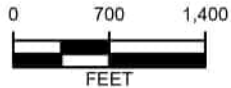
LEGEND:

- BNLL and Botanical Survey Area
- Exclusion Fence

MAP EXTENT:



Source: Esri Online Imagery Basemap, County of Kern
 Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
 Notes: This map was created for informational and display purposes only.



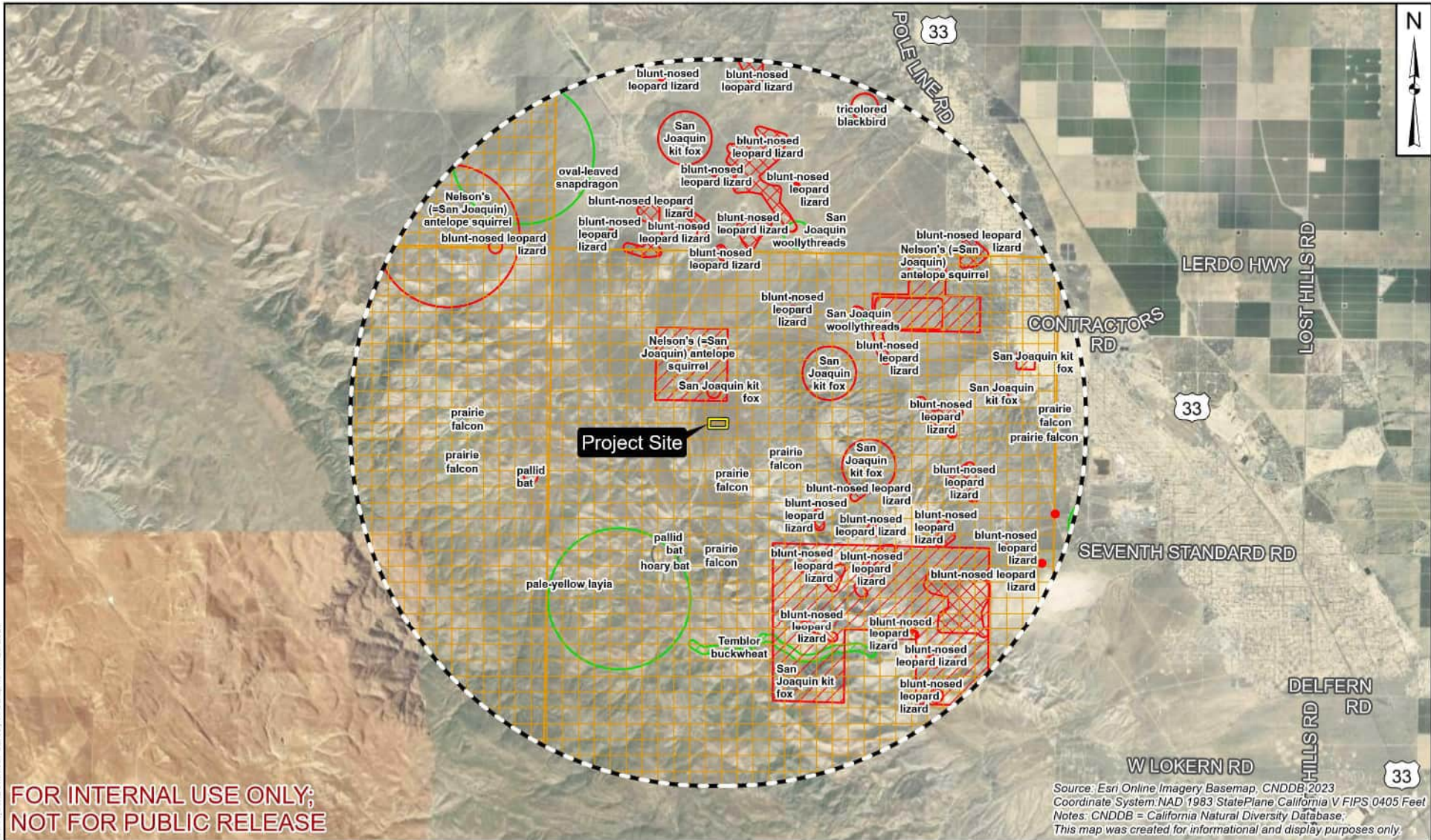
PROJECT NAME:
WESTSIDE TRENDS PROJECT
 KERN COUNTY, CA

PROJECT NUMBER:
 2302-0472

DATE:
 November 2023

GENERAL PROJECT AREA

FIGURE
1



FOR INTERNAL USE ONLY;
NOT FOR PUBLIC RELEASE

Source: Esri Online Imagery Basemap, CNDDDB/2023
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: CNDDDB = California Natural Diversity Database.
This map was created for informational and display purposes only.

LEGEND:

- | | | | |
|-----------------------|---------------------------|-------------------|-----------------------|
| Project Site | CNDDDB Occurrences | Plant (circular) | Animal (non-specific) |
| Buffer Zone (5 miles) | Plant (specific) | Animal (80m) | Animal (circular) |
| | Plant (non-specific) | Animal (specific) | Multiple (circular) |

MAP EXTENT:



padre
associates, inc.
ENGINEERS, GEOLOGISTS &
ENVIRONMENTAL SCIENTISTS

PROJECT NAME:
WESTSIDE TRENDS PROJECT
KERN COUNTY, CA

PROJECT NUMBER:
2302-0472

DATE:
November 2023

CNDDDB OCCURRENCES

FIGURE
2

APPENDIX B

Project Photos

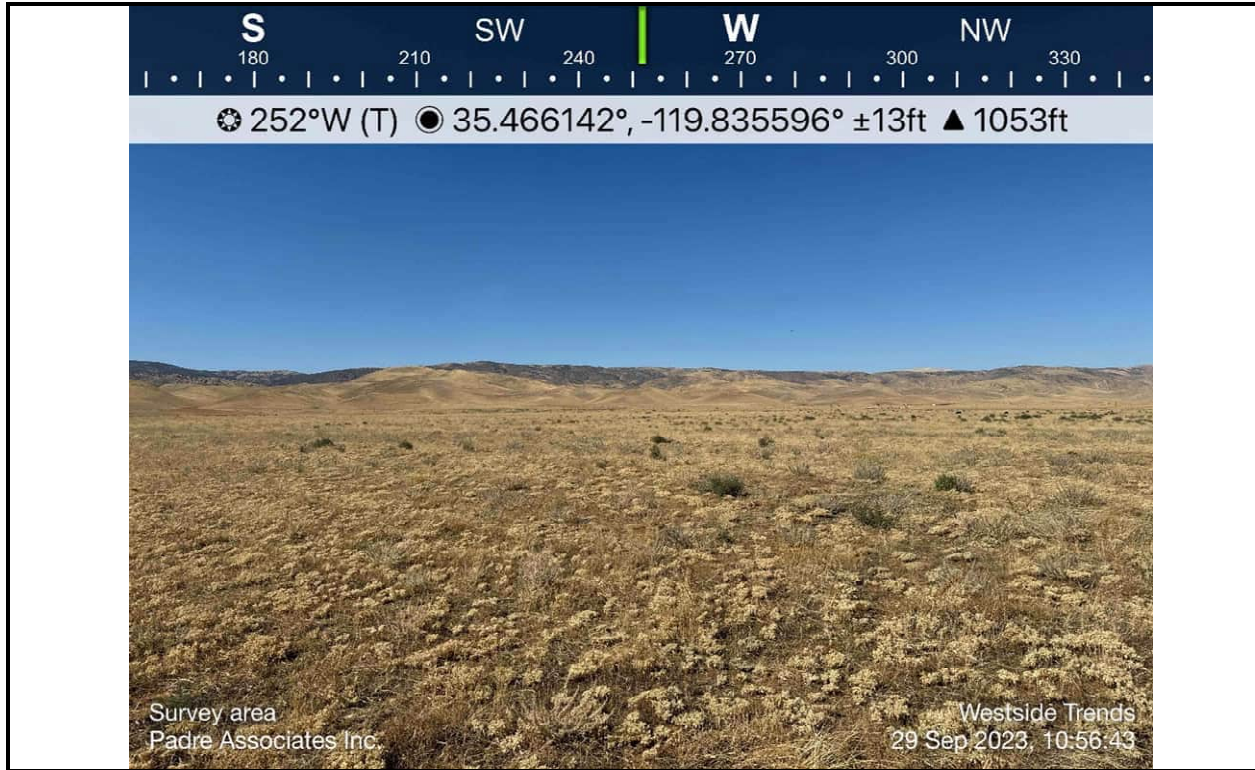


Photo 1. Grassland habitat in and surrounding the Project Area. Coordinates are in NAD83.



Photo 2. Grassland habitat in and surrounding the Project Area. Coordinates are in NAD83.

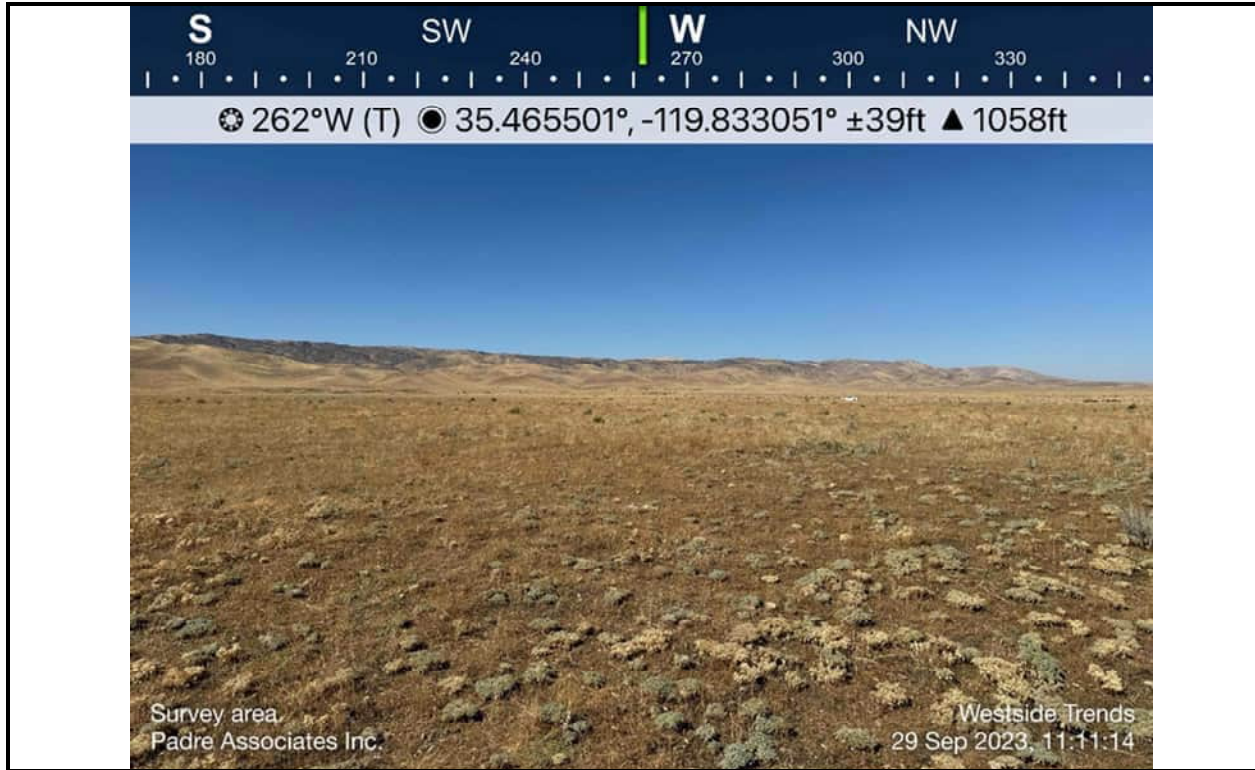


Photo 3. Grassland habitat in and surrounding the Project Area. Coordinates are in NAD83.



Photo 4. Exclusion fence installed around approximately 2.1 acres of grassland habitat within the Well Site.

APPENDIX C

Botanical Survey Report

October 10, 2023
Project No. 2302-0472

Bidr, LLC.
19100 7th Standard Road
McKittrick, CA. 93251

Attention: Mr. Andreas Kongsgården

Subject: Botanical Survey Report for the Westside Trend 20-acre Project in western Kern County, California.

Padre Associates, Inc. (Padre) has prepared this summary for Bidr, LLC. summarizing the results of the 2023 botanical surveys conducted for the purpose of drilling an exploration well within western Kern County. Botanical surveys were conducted within the leases to identify any threatened, endangered, or sensitive (TES) plant species that may be present within or surrounding the Project area. This report outlines the results of the botanical survey conducted by Padre.

PROJECT DESCRIPTION

The 20-acre Project site is located approximately 10 miles south of Blackwell's Corner and approximately 8 miles west of Highway 33 and 7th Standard Road. The Project occurs within the northern half of APN 085-170-09 and is located in Section 29 Township 28 South Range 20 East towards the northwest corner of Carneros Rock United States Geological Survey (USGS) quadrangle. The elevation profile of the Project site is approximately 320-326 meters. The surveys were conducted for the purpose of drilling an exploration well. The Project is located within the western portion of the San Joaquin Valley west of the Belridge Oilfield.

DESKTOP ANALYSIS

Padre conducted a desktop analysis using United States Geological Survey (USGS) 7.5-minute quadrangles (quads) to identify state and/or federally listed or otherwise sensitive plant species that may occur in or near the Project area. The analysis included the quad that the Project occurs in, Carneros Rocks, and the 8 surrounding quads: Blackwells Corner, Reward, Lost Hills, Belridge, McKittrick Summit, Simmler, Las Yeguas Ranch, and Shale Point. The desktop analysis included a query of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS) Rare Plant Inventory List, and U.S. Fish and Wildlife's Service (USFWS) Information for Planning and Conservation (iPaC) planning tool. Padre biologists professional experience within the general area conducting surveys was also used to determine species potential to occur. The sensitive plants that have potential to occur within the Project site and that might be impacted by Project activities have been listed in **Table 1**.

Table 1. Threatened, endangered, and/or sensitive plant species with potential to occur within or near the Project Site.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Rationale
<i>Allium howellii</i> var. <i>howellii</i> Howell's onion	-/4.3	Valley and foothill grassland, clay (sometimes), serpentinite (sometimes) soils; 50-2200 m.	Mar-Apr	Low potential. Potential habitat is present. No recorded occurrences within the Project quad. Nearest occurrence is about 11 miles north of the Project area.
<i>Amsinckia furcata</i> forked fiddleneck	-/4.2	Cismontane woodland, valley and foothill grassland; 50-1000 m.	Feb-May	Low potential. Potential habitat is present. No recorded occurrences within the Project quad. The nearest occurrence is in the Carrizo Plain National Monument.
<i>Androsace elongata</i> ssp. <i>acuta</i> California androsace	-/4.2	Chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, valley and foothill grassland; 150-1305 m.	Mar-Jun	Absent. Project site is outside of the known range (CalFlora, 2023). Only nearby observation is about 6 miles southwest of the Project area within the Temblor Mountain Range from 2010. (CCH 2023).
<i>Antirrhinum ovatum</i> oval-leaved snapdragon	-/4.2	Chaparral, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland; alkaline (often), clay (sometimes) soils; 200-1000 m.	May-Nov	Moderate potential. Habitat is present in the Project site. The nearest location is about 5 miles north in a similar habitat to the Project (CNDDDB 2023).
<i>Astragalus macrodon</i> Salinas milk-vetch	-/4.3	Chaparral, Cismontane woodland, valley and foothill grassland. sandstone (sometimes), serpentinite (sometimes), shale (sometimes) soils; 250-950 m.	Apr-Jul	Absent. The species is not found within the San Joaquin Valley geographic subdivision of the California Floristics Province (Jepson 2023).
<i>Atriplex coronata</i> var. <i>coronata</i> crownscale	-/4.2	Chenopod scrub, valley and foothill grassland, vernal pools. alkaline and clay (often) soils; 1-590 m.	Mar-Oct	Low potential. Marginal habitat is present. Species typically occurs in vernal pools which are absent from the Project site. No observations within the Project quad, nearest occurrence is approximately 16 miles southeast of the Project (CCH 2023).

Table 1. Threatened, endangered, and/or sensitive plant species with potential to occur within or near the Project Site.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Rationale
<i>Atriplex coronata</i> var. <i>vallicola</i> Lost Hills crownscale	-/1B.2	Chenopod scrub, valley and foothill grassland, vernal pool, wetland; in powdery, alkaline soils that are vernal moist with <i>Frankenia</i> , <i>Atriplex</i> spp. and <i>Distichlis</i> ; 50-635 m.	Apr-Sep	Absent. No vernal pools occur within the Project area to keep soil moist. Nearest occurrence is 13 miles south of the Project (CNDDDB 2023).
<i>Atriplex flavida</i> Carrizo Plain crownscale	-/1B.3	Chenopod scrub, valley and foothill grassland, vernal pools. Alkaline soil; 585-605 m.	Mar-Jul	Absent. The species is not found within the San Joaquin Valley geographic subdivision of the California Floristics Province (Jepson 2023). The Project site is not within the elevation range for the species.
<i>Canbya candida</i> white pygmy-poppy	-/4.2	Joshua tree "woodland", Mojavean desert scrub, pinyon and juniper woodland. Granitic, gravelly and sandy soil; 600- 1460 m.	Mar-Jun	Absent. The species is not found within the San Joaquin Valley geographic subdivision of the California Floristics Province (Jepson 2023). The Project site is not within the elevation range for the species.
<i>Caulanthus californicus</i> California jewelflower	FE, SE/1B.1	Chenopod scrub, pinyon and juniper woodland, valley and foothill grassland. Sandy soils; 61-1000 m.	Feb-May	Low potential. Habitat present. The nearest record of <i>C. californicus</i> is from 1937, approximately 10 miles east of the Project site (CNDDDB 2023).
<i>Caulanthus lemmonii</i> Lemmon's jewelflower	-/1B.2	Pinyon and juniper woodland, valley and foothill grassland; 80-1580 m.	Feb-May	Low potential. Habitat present. The nearest location of <i>C. lemmonii</i> is about 8 miles south in the Carrizo Plains (CNDDDB 2023).
<i>Clarkia xantiana</i> ssp. <i>Parviflora</i> Kern Canyon clarkia	-/4.2	Chaparral, cismontane woodland, Great Basin scrub, valley and foothill grassland, roadsides (sometimes), rocky (sometimes), sandy (often) soils, slopes; 700-3620 m.	May-Jun	Absent. The species is not found within the San Joaquin Valley geographic subdivision of the California Floristics Province (Jepson 2023). The Project is outside of the elevation range for the species.

Table 1. Threatened, endangered, and/or sensitive plant species with potential to occur within or near the Project Site.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Rationale
<i>Delphinium recurvatum</i> recurved larkspur	-/1B.2	Chenopod scrub, cismontane woodland, valley and foothill grassland. Alkaline soils; 3-790 m.	Mar-Jun	Moderate potential. Habitat present. The nearest location of <i>D. recurvatum</i> is about 11 miles south in the Carrizo Plains (CNDDDB 2023).
<i>Eremalche parryi ssp. kernensis</i> Kern mallow	FE/1B.2	Chenopod scrub, pinyon and juniper woodland, valley and foothill grassland. Dry areas, openings, sandy (sometimes) and clay (sometimes) soils; 70-1290 m.	Jan-May	Moderate potential. Preferred habitat present. The nearest location of <i>E. parryi ssp. kernensis</i> is about 8 miles east of the Project site (CNDDDB 2023).
<i>Eriastrum hooveri</i> Hoover's eriastrum	FD/4.2	Chenopod scrub, Pinyon and juniper woodland, valley and foothill grassland. Gravelly (sometimes) soils; 50-915 m.	Mar-Jul	Low potential. Habitat present. However, Project area lacks gravelly soils. The nearest location of <i>E. hooveri</i> is about 6 miles west of the Project site within the Temblor range (CNDDDB 2023).
<i>Eriogonum gossypinum</i> cottony buckwheat	-/4.2	Chenopod scrub, valley and foothill grassland. Clay soils; 100- 550 m.	Mar-Sep	Moderate potential. Preferred habitat present. There are no nearby records of <i>E. gossypinum</i> near the Project site (CNDDDB 2023).
<i>Eriogonum nudum var. indictum</i> protruding buckwheat	-/4.2	Chaparral, chenopod scrub, cismontane woodland. Clay and Serpentinite soils; 150-1463 m.	May-Oct	Absent. No habitat present. The Project area is a large grassland. No occurrences within the Project quad.
<i>Eriogonum temblorense</i> Temblor buckwheat	-/1B.2	Valley and foothill grassland; 300-1000 m.	May-Sep	Absent. The species is not found within the San Joaquin Valley geographic subdivision of the California Floristics Province (Jepson 2023).
<i>Eryngium spinosepalum</i> spiny-sepaed button-celery	-/1B.2	Valley and foothill grassland, vernal pools; 80-975 m.	Apr-Jun	Absent. Outside of the known range (CalFlora 2023).

Table 1. Threatened, endangered, and/or sensitive plant species with potential to occur within or near the Project Site.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Rationale
<i>Eschscholzia hyppecoides</i> San Benito poppy	-/4.3	Chaparral, cismontane woodland, valley and foothill grassland. Clay and serpentinite soils; 200-1500 m.	Mar-Jun	Absent. The species is not found within the San Joaquin Valley geographic subdivision of the California Floristics Province (Jepson 2023). The Project is outside of the species elevation profile.
<i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i> Tejon poppy	-/1B.1	Chenopod scrub, valley and foothill grassland; 160-1000 m.	Mar-May	Absent. The species is not found within the San Joaquin Valley geographic subdivision of the California Floristics Province (Jepson 2023).
<i>Eschscholzia rhombipetala</i> diamond-petaled California poppy	-/1B.1	Valley and foothill grassland; 0-975 m.	Mar-Apr	Absent. Outside of the known range (CalFlora 2023).
<i>Fritillaria agrestis</i> stinkbells	-/4.2	Chaparral, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland; Clay and serpentinite (sometimes) soils; 10–1555 m.	Mar-Jun	Absent. Outside of the known range (CalFlora 2023).
<i>Lasthenia chrysantha</i> alkali-sink goldfields	-/1B.1	Vernal pools. Alkaline soils; 0-200 m.	Feb-Apr	Absent. No habitat present. Occurs in vernal pools, wet saline flats which Project lacks.
<i>Lasthenia ferrisiae</i> Ferris' goldfields	-/4.2	Vernal pools; 20-700 m.	Feb-May	Absent. No habitat present. Occurs in vernal pools, wet saline flats which Project lacks.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfield	-/1B.1	Marshes and swamps, playas, vernal pools; 1-1220 m.	Feb-Jun	Absent. No habitat present. Occurs in saline places, vernal pools which Project lacks.
<i>Layia heterotricha</i> Pale-yellow layia	-/1B.1	Cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland. Alkaline (sometimes) and clay (sometimes) soils; 300–1705 m.	Mar-Jun	Absent. Outside of the known range (CalFlora 2023).

Table 1. Threatened, endangered, and/or sensitive plant species with potential to occur within or near the Project Site.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Rationale
<i>Layia munzii</i> Munz's tidy-tips	-/1B.1	Chenopod scrub, valley and foothill grassland. Alkaline clay soils; 150-700 m.	Mar-Apr	Absent. No records within Carneros Rocks (Project) quad. Alkaline soil is not present within the Project area.
<i>Lepidium jaredii</i> ssp. <i>jaredii</i> Jared's pepper-grass	-/1B.2	Valley and foothill grassland; 335-1005 m.	Mar-May	Absent. Project site is within the geographic range for the species, but outside of the elevation range. Soil preference and microhabitat are not present.).
<i>Madia radiata</i> showy golden madia	-/1B.1	Cismontane woodland, valley and foothill grassland; 25-1215 m.	Mar-May	Absent. The species is not found within the San Joaquin Valley geographic subdivision of the California Floristics Province (Jepson 2023).
<i>Monolopia congdonii</i> San Joaquin woollythreads	FE/1B.2	Chenopod scrub and valley and foothill grassland in sandy soils; 60-800 m.	Feb-May	Moderate potential. Habitat is present. Project area lacks sandy soils. Padre has observed this species approximately 2.4 miles north near an unrelated Project.
<i>Puccinellia simplex</i> California alkali grass	-/1B.2	Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools alkaline flats, lake margins, vernal mesic; 2- 930 m.	Mar-May	Absent. No habitat present. Occurs in saline flats, mineral springs (Jepson 2023) which Project lacks.
<i>Stylocline citroleum</i> oil neststraw	-/1B.1	Chenopod scrub, coastal scrub, valley and foothill grassland. Clay soils; 50-400 m.	Mar-Apr	Absent. Scrub habitat not present. No occurrences in the Project quad.
<i>Trichostema ovatum</i> San Joaquin bluecurls	-/4.2	Chenopod scrub, valley and foothill grassland; 65-320 m.	Apr-Oct	High potential. Habitat present. No occurrences in the Project quad. The closest occurrence is 21 miles east (CNDDDB 2023). A species in the same genus, <i>T. lanceolatum</i> was observed during Project survey. <i>T. ovatum</i> was not observed.

Table 1. Threatened, endangered, and/or sensitive plant species with potential to occur within or near the Project Site.

Species	Listing Status/Rare Plant Rank	Habitat	Blooming Period	Rationale
CCH1 = Consortium of California Herbaria Portal 1 CNDDDB= California Natural Diversity Database FE = Federally listed Endangered (USFWS) FD= Federally de-listed (USFWS) SE = State listed Endangered (CDFW)				
CNPS (California Native Plant Society) Codes, California Rare Plant Rank: 1B = Plants Rare, Threatened, or Endangered in California and Elsewhere 2B = Plants Rare, Threatened, or Endangered in California but more common Elsewhere 4 = Watch List: Limited Distribution 0.1 = Seriously Threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat) 0.2 = Fairly Threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat) 0.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats know)				

BOTANICAL REFERENCE SITE VISITS

Prior to surveys, Padre biologists visited special-status plant reference sites (if feasible) for early blooming plants to determine if federally and state listed plant species were in bloom for proper species identification. For those plants not observed, plants in the same genus were noted to ensure that blooming was present and/or other local botanist/biologists were contacted for reference site observations and information. Reference sites for federally listed species were visited to determine if the plants were in bloom (**Table 2**). Reference sites for California Native Plant Society Rare Ranked Plants were also visited; however, several of the plants listed in potential to occur start blooming in February and reference sites were visited in late March/early April. A reference site for California jewelflower (*Caulanthus californicus*) was not visited in 2023; however, reports in iNaturalist confirm that the species was in full bloom within areas of the Carrizo National Monument in April 2023 (iNaturalist 2023) suggesting the species would also be in bloom and identifiable within the Project site during botanical site visits.

Table 2. Reference Sites visited for State and/or Federally Listed Plants.

Common Name	Scientific Name	Date (2023)	Reference Site Location/GPS	Description of Reference Site	Observed?
San Joaquin woollythreads	<i>Monolopia congdonii</i>	4/6	West of Belridge 35.502460°N, 119.814464°W	Annual grassland adjacent to a disturbed access road	Yes
Kern mallow	<i>Eremalche parryi</i> ssp. <i>kernensis</i>	5/9	Lokern 35.394735°N, 119.643203°W	Chenopod scrub adjacent to a disturbed access road	Yes

SURVEY METHODOLOGIES

Padre biologists conducted botanical surveys on April 6, May 11, and June 7, 2023. Additionally, botanical species were also noted during other surveys (i.e., blunt-nosed leopard lizard surveys) within the Project site through September 2023. Pedestrian transects, spaced approximately ten feet apart, were completed in areas that are planned to be disturbed. The Project site is composed of annual grassland habitat (**Photolog**). Areas where the botanical surveys were conducted are depicted in **Figure 1**. Surveys were conducted during the beginning of the blooming periods when plants are both evident (i.e., flowering) and identifiable. All plant taxa occurring within the Project area were identified to taxonomic level necessary to determine whether they are a special status plant. The Jepson Manual, Second Edition (Baldwin *et al.* 2012) and Kern County Flora key (Moe 2016) were consulted and used for the identification of species observed in the field. Plant species that could not be readily identified in the field were collected for in-house identification using botanical keys and manuals.

State and Federal Agency Survey Guidelines

Several survey protocols were consulted with to obtain the best results for the survey area. These include the following:

- BLM. 2009. Survey Protocols Required for NEPA/ESA Compliance for BLM Special Status Plant Species.
- California Department of Fish and Wildlife. 2018. Protocols for surveying and evaluating impacts to special-status native plant populations and sensitive natural communities.
- California Native Plant Society. 2001. CNPS botanical survey guidelines.
- United States Fish and Wildlife Service. 2000. Guidelines for conducting and reporting botanical inventories for federally listed, proposed and candidate species.

RESULTS

The Project site is west of an active lease of oil and gas production in the Belridge Oilfield. The topography of the Project site is flat terrain with a slope of 2 to 5 percent and a range of elevation from approximately 320 to 326 meters (1050 to 1070 feet). The soils within the Project site include Milham sandy loam and Panoche clay loam. The Project location is within Annual grassland habitat. Padre biologists identified 38 plant species throughout the survey area within the Project Site. The species observed were common native or non-native species typically found in similar habitats in western Kern County and surrounding areas. Dominant herb/forb species include fiddleneck (*Amsinckia* sp.) and naturalized non-native grasses. Below is a table of the plant species observed at the Project site (**Table 3**). Although San Joaquin woollythreads (*Monolopia congdonii*) was observed at a reference site near the Project site 2.7 miles north, none were observed within the Project site during the botanical surveys.

Table 3. Plant species observed during botanical survey of the Westside Trend Project during the 2023 season.

Scientific Name	Common Name	Habit	Family
<i>Acmispon brachycarpus</i>	Foothill deervetch	AH	Fabaceae
<i>Acmispon wrangelianus</i>	Chilean trefoil	AH	Fabaceae
<i>Amsinckia menziesii</i>	Fiddleneck	AH	Boraginaceae
<i>Astragalus didymocarpus</i> var. <i>didymocarpus</i>	Dwarf white milkvetch	AH	Fabaceae
<i>Astragalus lentiginosus</i>	Freckled milk vetch	AH	Fabaceae
<i>Bromus madritensis</i> ssp. <i>rubens</i>	Red brome	AG	Poaceae
<i>Camissonia campestris</i>	Field sun cup	AH	Onagraceae
<i>Castilleja exserta</i> ssp. <i>exserta</i>	Purple owl's clover	AH	Orobanchaceae
<i>Caulanthus lasiophyllus</i>	California mustard	AH	Brassicaceae
<i>Croton setiger</i>	Turkey mullein	AH	Euphorbiaceae
<i>Deinandra pallida</i>	Kern tarweed	AH	Asteraceae
<i>Dichelostemma capitatum</i>	Blue dicks	PH	Themidaceae
<i>Erigeron canadensis</i>	Horseweed	AH	Asteraceae
<i>Erodium botrys</i>	Longbeak stork's bill	AH	Geraniaceae
<i>Festuca microstachys</i>	Small fescue	AG	Poaceae
<i>Festuca myuros</i>	Rat-tail fescue	AG	Poaceae
<i>Gilia tricolor</i>	Bird's eye gilia	AH	Polemoniaceae
<i>Gutierrezia californica</i>	Matchweed	PH	Asteraceae
<i>Herniaria hirsute</i>	Hairy rupturewort	AH	Caryophyllaceae
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Farmer's foxtail	AG	Poaceae
<i>Isocoma acradenia</i>	Alkali goldenbush	S	Asteraceae
<i>Koeleria gerardi</i>	Annual June grass	AG	Poaceae
<i>Lactuca serriola</i>	Prickly lettuce	AH	Asteraceae
<i>Lasthenia californica</i>	California goldfields	AH	Asteraceae
<i>Lepidium nitidum</i>	Shiny peppergress	AH	Brassicaceae
<i>Lupinus microcarpus</i>	Chick lupin	AH	Fabaceae
<i>Lupinus succulentus</i>	Arroyo lupine	AH	Fabaceae
<i>Malacothrix coulteri</i>	Snakes head	AH	Asteraceae
<i>Malacothrix glabrata</i>	Desert dandelion	AH	Asteraceae
<i>Malva parviflora</i>	Cheeseweed mallow	AH	Malvaceae
<i>Monolopia lanceolata</i>	Common monolopia	AH	Asteraceae
<i>Oxalis stricta</i>	Sour clover	AH	Oxalidaceae
<i>Phacelia fremontii</i>	Fremont's phacelia	AH	Boraginaceae
<i>Plagiobothrys canescens</i>	popcorn flower	AH	Boraginaceae
<i>Salsola tragus</i>	Russian thistle	AH	Chenopodiaceae
<i>Sisymbrium irio</i>	London rocket	AH	Brassicaceae
<i>Trichostema lanceolatum</i>	Vinegarweed	AH	Lamiaceae
<i>Tropidocarpum gracile</i>	Dobie pod	AH	Brassicaceae

Habit Definitions:
 AG = annual grass.
 AH = annual herb.
 PH = perennial herb.
 S = shrub.

DISCUSSION

No special-status plant species were observed during the botanical surveys. The timing of the survey occurred when the majority of the species were both evident and identifiable at reference locations. Surveys can confirm the presence of sensitive plant species, but negative results do not necessarily mean sensitive plants are absent from a survey area. Suitable habitat

for various sensitive species is present. The section below outlines measures recommended to avoid take and minimize disturbance of listed and sensitive species.

RECOMMENDATIONS

The following section outlines various recommendations to minimize the take of any listed or sensitive plant species that may occur where Project activities are planned. Implementation of these measures is designed to avoid and/or minimize effects to listed plant species and their habitats.

- All Project employees and contractors will receive Environmental Awareness Training prior to working on the Project including attending a sensitive species education program developed by trained biologists, focusing on the protected and sensitive plant species that may occur in the Project areas. At a minimum, the program will cover species distribution, identification characteristics, and sensitivity to human activities, legal protection, penalties for violation of state and federal laws, reporting requirements, and project mitigation measures. In addition, the training will emphasize the avoidance of contact with onsite wildlife and Biologically Sensitive Areas by Project personnel.
- Prior to any ground disturbance activities within special-status species habitat a pre-disturbance survey by a qualified biologist shall be conducted to record existing conditions of the site, determine if conditions have changed since the reconnaissance or protocol surveys were conducted, and to determine where sensitive species avoidance buffers will be established.
- No incidental take or relocation of any state-listed or federally-listed plant species may occur.
- If listed plant species are observed during pre-disturbance survey, then the Department approved buffers shall be established. If non-listed sensitive plants are observed during pre-disturbance survey, then a 50-foot buffer shall be established.
- Vehicles will use existing and/or designated roads. Off-road travel outside of designated access roads is prohibited.
- Dust control (use of water trucks) will be implemented during all project activities (i.e., excavations, spoil piles, access roads, and parking and staging areas, etc.) that create a substantial amount of dust. Fugitive dust can accumulate on the surfaces of plants and effect photosynthetic processes, which may result in the death of certain plants.
- All spills of hazardous materials shall be immediately contained and cleaned up to prevent exposure to plant species.
- Topsoil that can potentially or is known to support sensitive plant species should be stockpiled and redistributed over portions of work areas that will be temporarily disturbed.
- In any locations where work must be conducted near Biologically Sensitive Areas, on-site biological monitoring will be performed during initial ground disturbing activities to ensure that sensitive plant species are not impacted. The biological monitor shall flag-off or mark-off all areas clearly within the location where sensitive plant species are present. Project

personnel shall avoid all flagged areas and Project activities shall avoid disturbance activities in these areas.

CONCLUSION

If you have any questions regarding this information, please contact Ms. Haley Martin at (661) 706-7238 ext. 303 or Mr. Angel Correa at (661) 829-2686 ext. 301.

PADRE ASSOCIATES, INC.



William Collins
Staff Biologist



Haley Martin
Staff Biologist

Attachment: References
Figure 1. Botanical Survey Area
Photolog

REFERENCES

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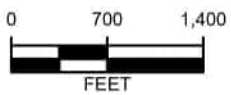
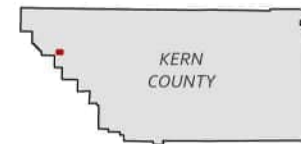


LEGEND:

 Botanical Survey Area

Source: Esri Online Imagery Basemap, County of Kern
 Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
 Notes: This map was created for informational and display purposes only.

MAP EXTENT:



PROJECT NAME:
WESTSIDE TRENDS PROJECT
 KERN COUNTY, CA

PROJECT NUMBER:
 2302-0472

DATE:
 October 2023

BOTANICAL SURVEY AREA

FIGURE
1

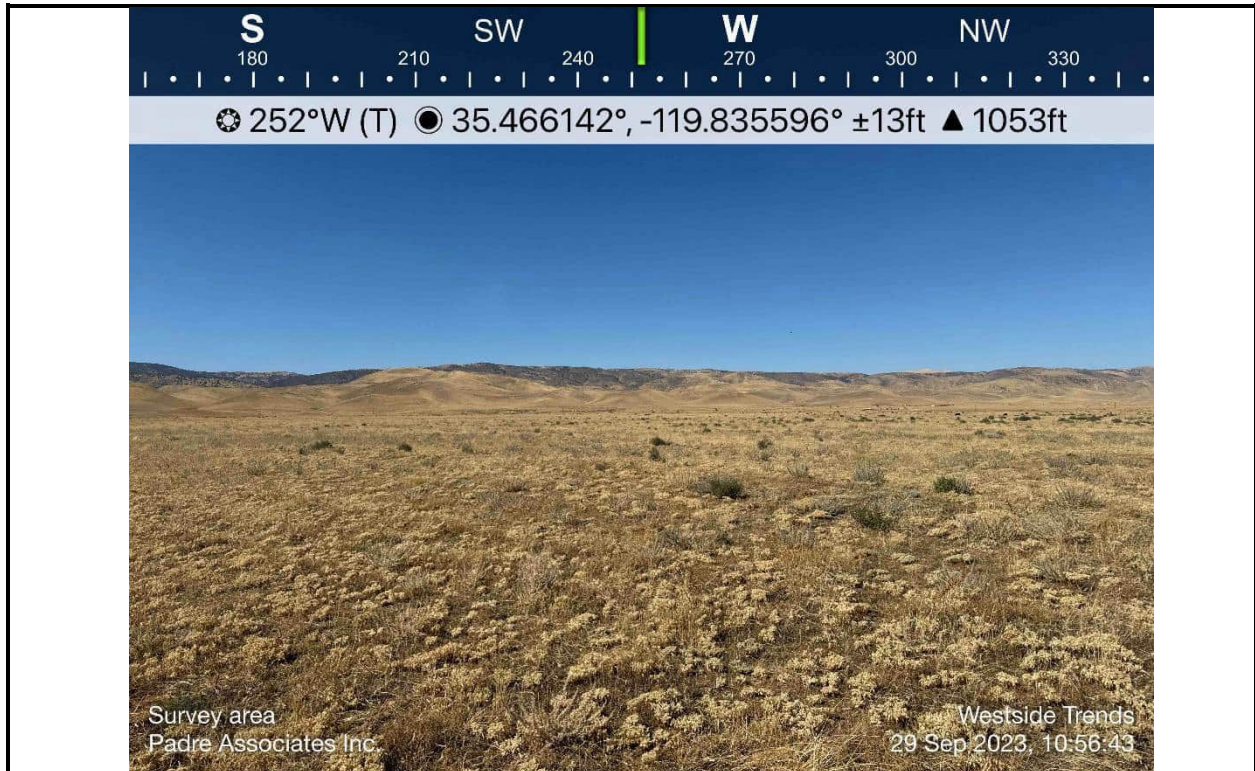


Photo 1. Grassland habitat in the botanical survey area for the Bidr Westside Trend Project. Coordinates are in NAD83.

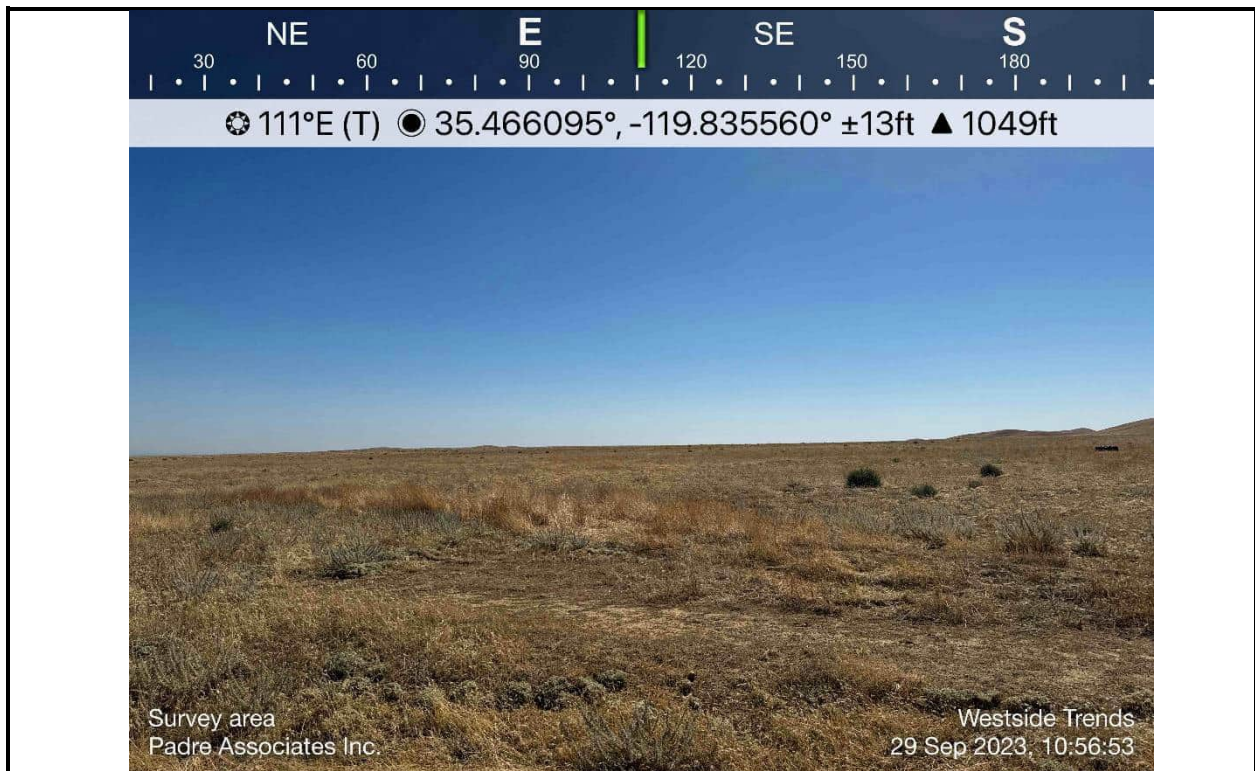


Photo 2. Grassland habitat in the botanical survey area for the Bidr Westside Trend Project. Coordinates are in NAD83.

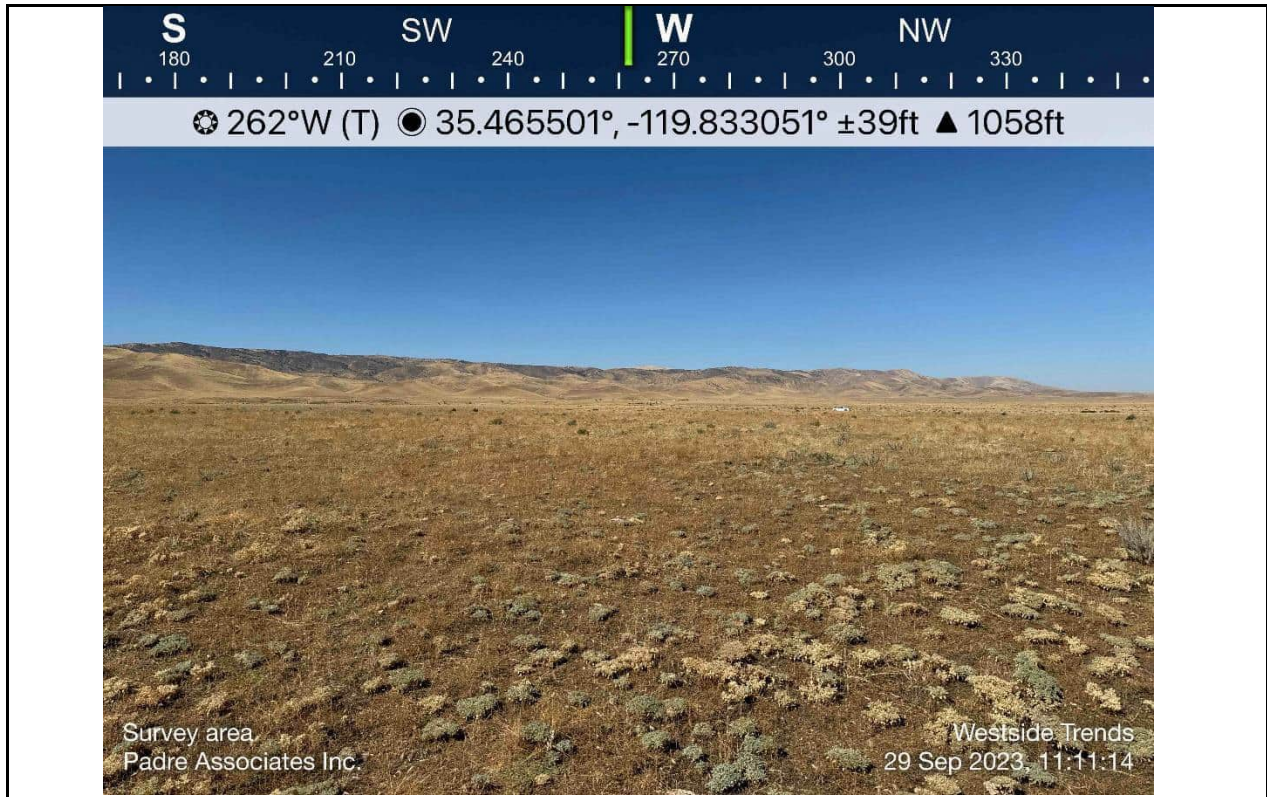


Photo 3. Grassland habitat in the botanical survey area for the Bidr Westside Trend Project. Coordinates are in NAD83.

APPENDIX D

Blunt-nosed leopard lizard Survey Report

November 2, 2023
Project No. 2302-0472

Bidr, LLC.
19100 7th Standard Road
McKittrick, CA. 93251

Attention: Mr. Andreas Kongsgården

Subject: Summary Report of 2023 Blunt-nosed Leopard Lizard Surveys for the drilling of an exploration well as part of the Westside Trend Project in western Kern County, California

Dear Mr. Kongsgården:

Padre Associates, Inc. (Padre) has prepared this report for Bidr, LLC. summarizing the results of the 2023 blunt-nosed leopard lizard (BNLL) protocol-level surveys conducted for the purpose of drilling an exploration well within western Kern County (**Figure 1**). Padre conducted protocol-level BNLL surveys during the 2023 calendar year to determine if BNLL are present within the area of the proposed Project. This report outlines the results of these surveys and includes a table of parameters collected (times, temperatures, lizard species observed, etc.) during the survey dates.

BACKGROUND

The Project site is located approximately 14 miles southwest of Lost Hills (**Figure 1**). The Project site is approximately 20 acres, in the northern half of APN 085-170-09, in Section 29 Township 28 south and Range 20 east. The surveys were conducted for the purpose of drilling an exploration well. The proposed Project area consists of dirt and gravel roads and grazed annual grassland habitat (**Photolog**).

The blunt-nosed leopard lizard (BNLL) is both federally and state listed as Endangered and is a California Fully Protected species under the California Department of Fish and Game Code (§5050). The code states that BNLL “may not be taken or possessed at any time. No provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected reptile...” (California Legislative Information 1974). This species of lizard was historically located on the floor of the San Joaquin Valley and Sierra foothills from Stanislaus County southward to the Tehachapi Mountains in Kern County, west of the San Joaquin Valley from Kettleman to western Kern County, Carrizo Plains, and in the southeastern Cuyama Valley in San Luis Obispo, Santa Barbara, and Ventura counties (USFWS 1998). Currently, the known range is fragmented populations across the floor of the San Joaquin Valley and in the Coast Range foothills. (USFWS 1998). The BNLL inhabits non-native grassland, native grassland, Valley Sink Scrub, and Valley Saltbush Scrub communities.

They are typically absent from areas with dense vegetation, seasonal flooding, or steep slopes (USFWS 1998).

The BNLL is a larger lizard ranging in size from snout to vent length (SVL) of 8.6 to 11.9 centimeters (USFWS 1998). The coloration of this lizard varies with rows of dark spots across their backs, alternating with white, cream-colored, or yellow bands. Other characteristics include a long tail, powerful hind limbs, and a short, blunt snout. (USFWS 1998). Breeding females have orange or reddish spots on the sides of their head, body and underside of their thighs and tail. Breeding males exhibit a salmon or rusty coloration on the undersides of their body and limbs. Juveniles may have yellow coloration on their undersides and red spots on their back that become brown when they are mature (USFWS 1998).

DESKTOP ANALYSIS

This is the first year that Padre has conducted BNLL surveys at the Project site. Prior to the start of the BNLL surveys at the Project site, a desktop analysis was conducted to identify any observation(s) of BNLL within or surrounding the Project site. The desktop analysis included a California Natural Diversity Database (CNDDDB) search within a 3-mile radius of the Project Site. There are 16 records, some observed by Padre on unrelated Projects, ranging from 2011-2023 within a 3-mile radius of the Project Site (CNDDDB, 2023). Padre conducted BNLL surveys for another nearby project in 2019 and observed multiple BNLL, approximately 2 to 2.6 miles from the Westside Trend Project site.

METHODOLOGIES

The BNLL surveys began on April 21, 2023, and concluded on September 29, 2023. At least one qualified Level II Padre biologist, along with the assistance of no more than three Level I surveyors, conducted surveys that met the requirements and recommendations in the *Approved Survey Methodology for the Blunt-nosed Leopard Lizard* (2019) from the California Department of Fish and Wildlife (CDFW). Level II Surveyors include Padre biologists Angel Correa, Andrew Krause, Haley Martin, William Collins, Eva Arrieta and Shannon Gonzalez, as well as Padre field technicians Lalo Gomez, and Jonathan Juarez. All Level II Surveyors have previously conducted at least 50 surveys and have at least one verified BNLL sighting, in accordance with the protocol.

Twelve survey days were conducted for this Project during the adult BNLL breeding period (April 15 to July 15) and five survey days were conducted during the hatchling/sub-adult period (August 15 to September 30). Of the five hatchling surveys, at least two were conducted between August 15 and August 30, and at least two were conducted between September 15 and September 30 (CDFW 2019).

The areas that were included in the survey contained potential habitat in the form of Annual Grassland communities with open, sandy patches and low vegetation (**Photolog**). The survey methodology consisted of slowly walking linear transects approximately 10-20 meters (32-65 feet) apart within the Project boundaries.

The surveys were conducted during optimal weather conditions, as stipulated in the CDFW revised 2019 protocol. Padre monitored beginning and ending air and soil temperatures (in degrees Fahrenheit), weather conditions, survey times and dates to ensure that survey conditions met protocol requirements (see **Table 1**).

RESULTS

No BNLL were observed during the surveys. Other lizard species observed during the surveys included: side-blotched lizard (*Uta stansburiana*). No other reptile species were observed during the surveys. The totals for individual lizards observed per surveys are presented in **Table 1**.

Although no BNLL were observed during the 2023 surveys, Bidr will fence the proposed well pad and work areas to deter any BNLL from entering the Project site before work occurs. The area proposed to be fenced is approximately 2.1 acres, within the BNLL survey area (**Figure 2**). The area to be fenced (using ERTEC Exclusion Fencing) is void of suitable BNLL burrows. Burrows were mapped for avoidance and can be found in **Figure 2**. No burrows will be impacted or disturbed from fencing activities. Bidr will plan for monthly inspections of the fence to ensure that the fence is still erect, sealed, and does not have any holes or other deficiencies that will allow BNLL to access the proposed work area. Fencing installation is planned to begin on November 6, 2023. A Padre biologist will be onsite for fencing activities.

CONCLUSION

No BNLL were observed during the protocol surveys. If the exclusion fence is not maintained, then additional BNLL surveys may be required within the fenced area if ground disturbance has not occurred by September 29, 2024. Currently, no Project activities are planned for outside of the exclusion fence. If Project activities are proposed to occur outside of the fenced area, and ground disturbance has not occurred by September 29, 2024, then BNLL surveys will need to be conducted again. If you have any questions regarding this information, please contact Ms. Haley Martin (661) 829-2686 ext. 303.

PADRE ASSOCIATES, INC.



Magaly Jurado
Staff Biologist

PADRE ASSOCIATES, INC.



Haley Martin
Staff Biologist

Attachment: References

Table 1: The parameters collected during the 2023 Bidr Westside Trend 20-acre blunt-nosed leopard lizard surveys.

Photolog

Figure 1. Westside Trend BNLL Survey Area

Figure 2. BNLL Exclusion Fence Area

REFERENCES

- California Department of Fish and Wildlife (CDFW) [Internet]. 2019. Approved Survey Methodology for the Blunt-nosed Leopard Lizard October 2019 (Revised). [Cited 2023 Jul 13] Available from:
<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=174900&inline>
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<https://esrp.csustan.edu/publications/recoveryplan.php>

Table 1: The parameters collected during the 2023 Bidr Westside Trend blunt-nosed leopard lizard surveys.

Date	Start Time	End Time	Start Air Temp (°F)	Start Ground Temp (°F)	Start Weather (CC% & Wind mph)	End Air Temp (°F)	End Ground Temp (°F)	End Weather (CC% & Wind mph)	# GAMSIL	# UTASTA	# ASPMUN	Other Reptiles
4/21/23	11:19	11:59	77.9	78.6	0, 1	80.6	81.3	0, 1	0	1	0	N/A
4/28/23	9:14	9:55	83.4	84.3	0, 1	84.3	82.7	0, 2	0	5	0	N/A
5/11/23	12:49	13:35	80.3	12.7	0, 5	41.0	87.0	0, 3	0	0	0	N/A
5/12/23	11:45	12:19	86.7	100.8	0, 4	84.3	106.5	2, 4	0	1	0	N/A
5/22/23	8:46	9:17	80.3	87.4	10, 2	87.7	88.2	10, 2	0	0	0	N/A
6/5/23	10:48	11:09	84.6	N/A	88, 3	84.2	N/A	88, 3	0	0	0	N/A
6/6/23	10:59	11:30	78.7	84.2	90, 5	79.1	84.6	85, 5	0	0	0	N/A
6/7/23	12:30	13:06	77.9	76.2	89, 2	78.8	86.9	50, 2	0	1	0	N/A
6/8/23	10:30	11:08	77.2	84.7	5, 4	80.6	80.1	15, 1	0	0	0	N/A
6/27/23	8:30	9:06	79.0	85.1	5, 2	77.9	4:48	5, 3	0	3	0	N/A
6/28/23	9:19	9:51	82.4	99.7	0, 3	83.0	89.8	0, 2	0	0	0	N/A
6/29/23	8:50	9:17	84.8	91.8	0, 4	85.7	88.0	0, 3	0	2	0	N/A
8/21/23	9:47	10:10	82.5	76.3	20, 6	82.4	77.0	20, 5	0	0	0	N/A
8/24/23	8:18	8:45	80.7	77.0	5, 0	79.4	77.3	5, 2	0	1	0	N/A
9/7/23	9:11	9:42	78.0	80.2	0, 4	77.7	82.7	0, 5	0	0	0	N/A
9/15/23	9:47	10:07	83.7	85.6	0, 1	83.3	84.6	0, 0	0	4	0	N/A
9/29/23	10:57	11:27	81.4	93.1	0, 2	82.9	90.5	0, 1	0	4	0	N/A

CC = Cloud Cover

GAMSIL = *Gambelia sila* (Blunt-nosed Leopard Lizard)

UTASTA = *Uta stansburiana elegans* (Western Side-Blotched Lizard)

ASPMUN = *Aspidoscelis tigris munda* (California Whiptail)

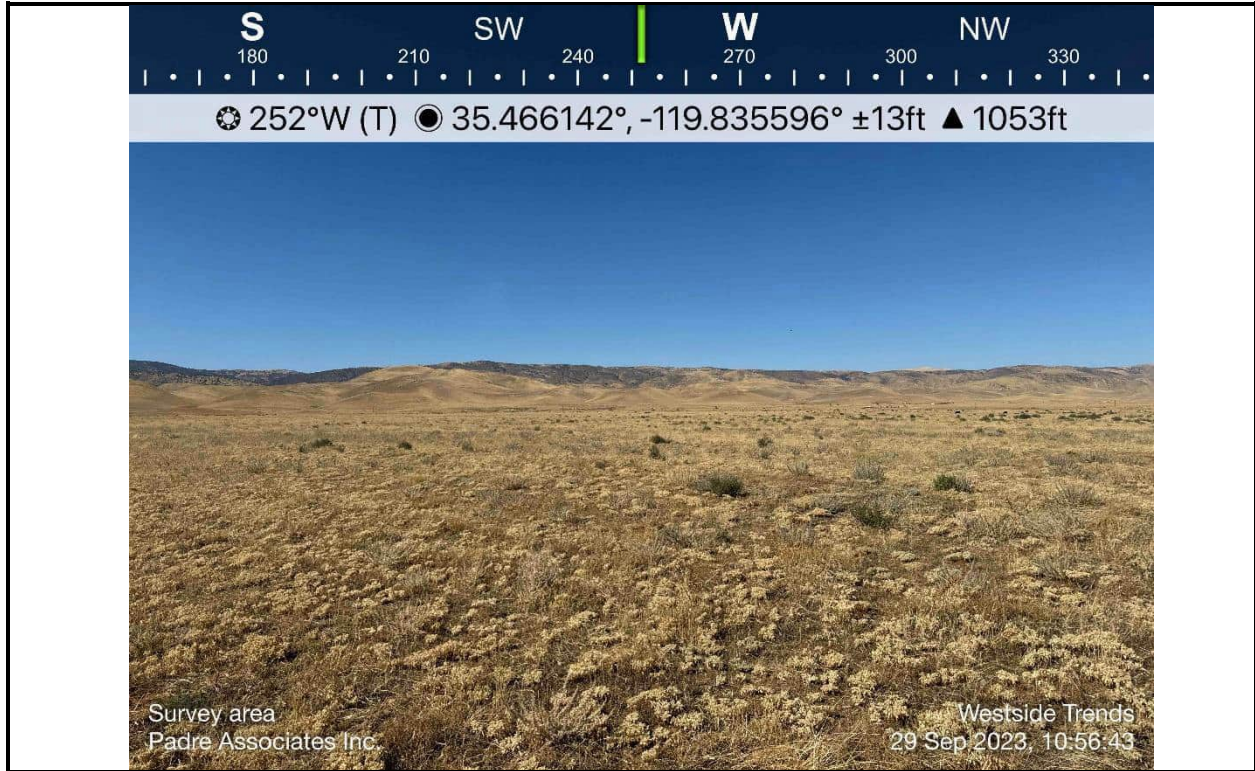


Photo 1. Grassland habitat in the BNLL survey area for the Bidr Westside Trend Project. Coordinates are in NAD83.

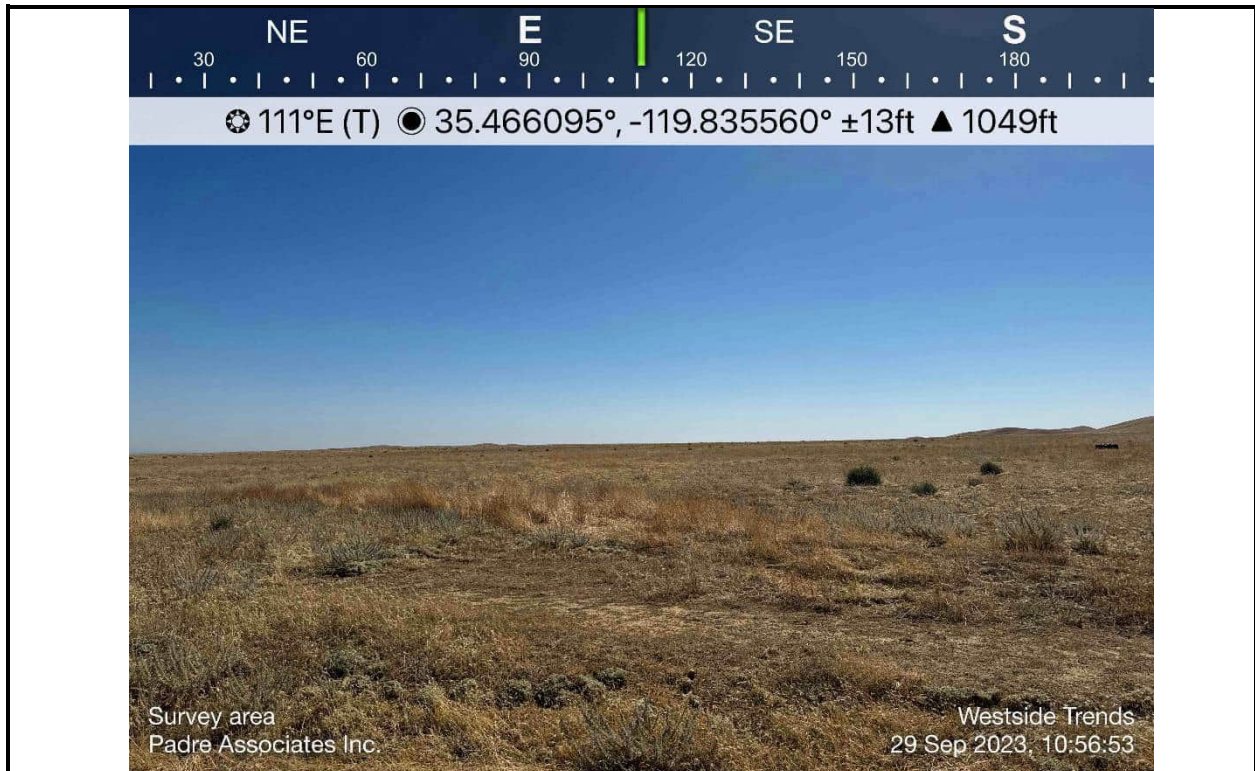


Photo 2. Grassland habitat in the BNLL survey area for the Bidr Westside Trend Project. Coordinates are in NAD83.

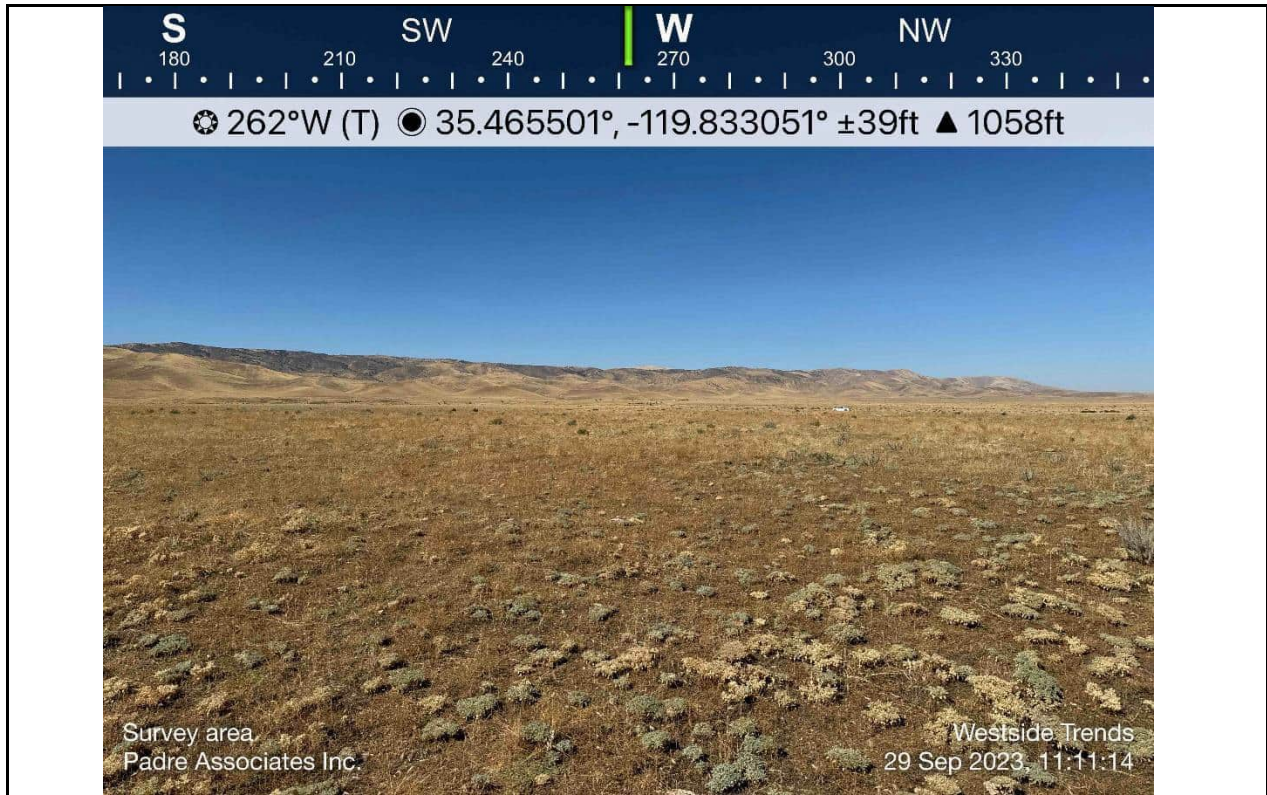


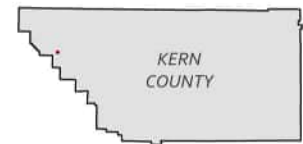
Photo 3. Grassland habitat in the BNLL survey area for the Bidr Westside Trend Project. Coordinates are in NAD83.



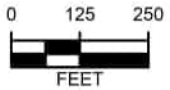
LEGEND:

 BNLL Survey Area

MAP EXTENT:



Source: Esri Online Imagery Basemap, County of Kern
 Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
 Notes: This map was created for informational and display purposes only.



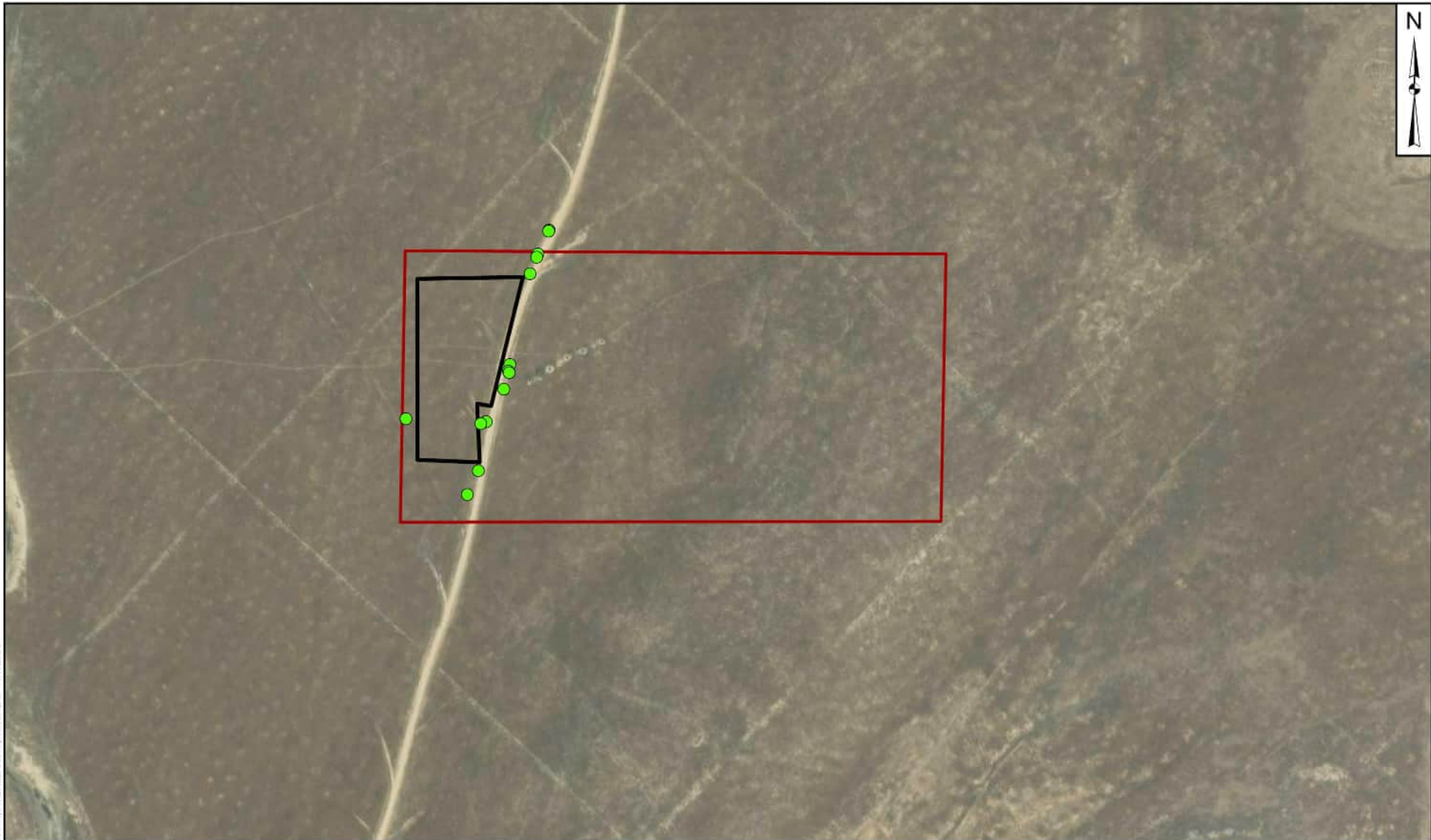
PROJECT NAME:
 WESTSIDE TRENDS PROJECT
 KERN COUNTY, CA

PROJECT NUMBER:
 2302-0472

DATE:
 October 2023

**2023 BIDR 20 ACRE
 BNLL SURVEY AREA**

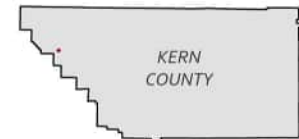
**FIGURE
 1**



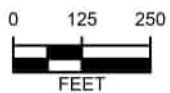
LEGEND:

- Small Mammalian Burrow
- BNLL Survey Area
- Exclusion Fence

MAP EXTENT:



Source: Esri Online Imagery Basemap, County of Kern
 Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
 Notes: This map was created for informational and display purposes only.



PROJECT NAME:
 WESTSIDE TRENDS PROJECT
 KERN COUNTY, CA

PROJECT NUMBER:
 2302-0472

DATE:
 November 2023

**2023 BIDR 20 ACRE
 BNLL EXCLUSION FENCE AREA**

**FIGURE
 2**