

**DOCKETED**

<b>Docket Number:</b>	21-AFC-02
<b>Project Title:</b>	Willow Rock Energy Storage Center
<b>TN #:</b>	248932
<b>Document Title:</b>	Karl Fairchild MGS Experience_11-27-2022_Redacted pdf
<b>Description:</b>	N/A
<b>Filer:</b>	Elizabeth Diaz
<b>Organization:</b>	Golder Associates
<b>Submitter Role:</b>	Applicant Consultant
<b>Submission Date:</b>	2/23/2023 3:37:42 PM
<b>Docketed Date:</b>	2/23/2023

Karl Fairchild



---

**MOHAVE GROUND SQUIRREL EXPERIENCE**

**Project:** Antelope Valley Commerce Center Project

**Position:** Independent Researcher

**Years Worked:**

2022: 18 days of field work

**Location:** Palmdale, CA

**Duties:**

- Established one trapping grid of 100 traps using a handheld GPS
- Prepared trapping bait
- Live-trapped and handled antelope ground squirrels (*Ammospermophilus leucurus*) and California ground squirrels (*Otospermophilus beecheyi*)
- Recorded age, sex and reproductive condition of all individuals trapped
- Set up Bushnell infrared cameras and bait tubes to identify presence of Mohave ground squirrel

**Project:** Palmdale Logistics Park Project

**Position:** Independent Researcher

**Years Worked:**

2022: 18 days of field work

**Location:** Palmdale, CA

**Duties:**

- Established one trapping grid of 100 traps using a handheld GPS
- Prepared trapping bait
- Live-trapped and handled antelope ground squirrels and California ground squirrels
- Recorded age, sex and reproductive condition of all individuals trapped
- Set up Bushnell infrared cameras and bait tubes to identify presence of Mohave ground squirrel

**Project:** Apple Valley 143 Project

**Position:** Independent Researcher

**Years Worked:**

2022: 18 days of fieldwork

**Location:** Apple Valley, CA

**Duties:**

- Established two trapping grids of 100 traps each using a handheld GPS

- Prepared trapping bait
- Live-trapped and handled antelope ground squirrels
- Recorded age, sex and reproductive condition of all individuals trapped
- Set up Reconyx and Bushnell infrared cameras and bait tubes to identify presence of Mohave ground squirrel

**Project: Apple Valley 160 Project**

**Position:** Independent Researcher

**Years Worked:**

2022: 18 days of fieldwork

**Location:** Apple Valley, CA

**Duties:**

- Established two trapping grids of 100 traps each using a handheld GPS
- Prepared trapping bait
- Live-trapped and handled antelope ground squirrels and California ground squirrels
- Recorded age, sex and reproductive condition of all individuals trapped
- Set up Bushnell infrared cameras and bait tubes to identify presence of Mohave ground squirrel

**Project: West of 395 Project**

**Position:** Independent Researcher

**Years Worked:**

2022: 18 days of fieldwork

**Location:** Hesperia, CA

**Duties:**

- Established 5 trapping grids of 100 traps each using a handheld GPS
- Prepared trapping bait
- Live-trapped and handled antelope ground squirrels and California ground squirrels
- Recorded age, sex and reproductive condition of all individuals trapped
- Set up Bushnell infrared cameras and bait tubes to identify presence of Mohave ground squirrel

**Project: Hesperia Gateway Project**

**Position:** Independent Researcher

**Years Worked:**

2022: 18 days of fieldwork

**Location:** Hesperia, CA

**Duties:**

- Established one trapping grid of 100 traps using a handheld GPS
- Prepared trapping bait
- Live-trapped and handled antelope ground squirrels and California ground squirrels
- Recorded age, sex and reproductive condition of all individuals trapped
- Set up Bushnell infrared cameras and bait tubes to identify presence of Mohave ground squirrel

**Project: Poplar 18 Project**

**Position:** Independent Researcher

**Years Worked:**

2022: 18 days of fieldwork

**Location:** Hesperia, CA

**Duties:**

- Established CDFW-approved modified trapping grid of 50 traps using a handheld GPS
- Prepared trapping bait
- Live-trapped and handled antelope ground squirrels and California ground squirrels
- Recorded age, sex and reproductive condition of all individuals trapped
- Set up Bushnell infrared cameras and bait tubes to identify presence of Mohave ground squirrel

**Project: Gold Discovery Group MGS Surveys**

**Position:** Independent Researcher

**Years Worked:**

2022: 4 days of fieldwork

**Location:** Atolia, CA

**Duties:**

- Established one trapping grid<sup>1</sup> of 100 traps each using a handheld GPS
- Prepared trapping bait
- Live-trapped and handled antelope ground squirrels and one Mohave ground squirrel
- Recorded age, sex and reproductive condition of all individuals trapped
- Set up Bushnell infrared cameras and bait tubes to identify presence of Mohave ground squirrel

**Project: Hesperia Commerce Center/I-15 Industrial Park**

**Position:** Independent Researcher

**Years Worked:**

2022: 18 days of field work

2021: 18 days of field work

2020: 19 days of field work

**Location:** Hesperia, CA

**Duties:**

- Established standard or CDFW-approved modified trapping grids (2020, 2021: two grids; 2022: one standard grid, one modified 50-trap grid)
- Prepared trapping bait
- Live-trapped and handled antelope ground squirrels and California ground squirrels, Panamint kangaroo rat
- Recorded age, sex and reproductive condition of all individuals trapped
- Set up Bushnell infrared cameras and bait tubes to identify presence of Mohave ground squirrel

**Project: Kern County Sanitary Landfill Expansion Project**

**Position:** Independent Researcher

**Years Worked:**

2021: 80 days of field work

**Location:** Mojave, CA

**Duties:**

- Established 10 trapping grids of 100 traps each using a handheld GPS
- Prepared trapping bait
- Live-trapped and handled antelope ground squirrels (*Ammospermophilus leucurus*) and California ground squirrels (*Otospermophilus beecheyi*), Panamint kangaroo rat (*Dipodomys panamintinus*)
- Recorded age, sex and reproductive condition of all individuals trapped
- Set up Reconyx and Bushnell infrared cameras and bait tubes to identify presence of Mohave ground squirrel

**Project: BESS Switching Station Expansion Project**

**Position:** Independent Researcher

**Years Worked:**

2021: 4 days of field work

**Location:** California City, CA

**Duties:**

- Established a CDFW-approved modified trapping grid of 25 traps using a handheld GPS
- Prepared trapping bait
- Live-trapped and handled antelope ground squirrels
- Recorded age, sex and reproductive condition of all individuals trapped
- Set up Bushnell infrared cameras and bait tubes to identify presence of Mohave ground squirrel

**Project: Wasteland Weekend Project**

**Position:** Biological technician

**Years Worked:**

2019: 6 days of field work (camera trapping only)

2018: 21 days of field work (live trapping only)

**Location:** California City, CA

**Duties:**

- Helped establish one trapping grid of 100 traps using a handheld GPS
- Prepared trapping bait
- Live-trapped and handled antelope ground squirrels
- Recorded age, sex and reproductive condition of all individuals trapped
- Set up Reconyx infrared cameras and bait stations to identify presence of Mohave ground squirrel

**Project:** CSU Stanislaus Endangered Species Recovery Program-Coso Grazing Exclosure Monitoring Study

**Position:** Biological technician

**Years Worked:**

2016: 9 days of field work

2015: 9 days of field work

**Location:** Olancho, CA

**Duties:**

- Helped to establish two trapping grids of 441 traps each for live trapping
- Prepared trapping bait
- Live-trapped and handled 3 Mohave ground squirrels (including PIT tagging one), in addition to antelope ground squirrels
- Recorded age, sex and reproductive condition of all individuals trapped

## **OTHER SMALL MAMMAL EXPERIENCE**

**Biologist, Environmental Science Associates, Irvine, CA**

**2013-2021**

- Conducted nocturnal small mammal trapping in a variety of habitats, as dictated by project needs, in Orange and San Diego Counties
- Opportunistically placed Sherman traps along transects lines that encompassed suitable habitat for target species.
- Identified presence of special status small mammal species including San Diego desert woodrat (*Neotoma lepida intermedia*), Southern grasshopper mouse (*Onychomys torridus ramona*), and northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*).
- Identified presence of non-target small mammal species including big eared woodrat (*Neotoma macrotis*) western harvest mouse (*Reithrodontomys megalotis*), deer mouse (*Peromyscus maniculatus*), northern Baja mouse (*Peromyscus fraterculus*), California mouse (*Peromyscus californicus*), California vole (*Microtus californicus*), and Dulzura kangaroo rat (*Dipodomys simulans*; DKR)
- Relocated special-status individuals following indications in listed in the project relocation plan

- Reported all occurrences of special status individuals to California Natural Diversity Database CNDDDB
- Assisted with protocol-level trapping of San Bernardino kangaroo rat (*Dipodomys merriami parvus*; SBKR) under supervision of permitted biologist Tracy Bailey (TE-122026-2) in Fontana, CA; biologist handled 23 SBKR and demonstrated ability to separate SBKR from Dulzura kangaroo rat, and performed powder tracking of SBKR and GPS mapped distance traveled to burrows
- Assisted with protocol-level trapping of Stephen's kangaroo rat (*Dipodomys stephensi*; SKR) in Valley Center, CA under supervision of permitted biologist Steven Chen (TE-95006A-3); biologist handled one SKR and demonstrated ability to separate SKR from DKR

**Mammalian Field Technician, USDA Forest Service/Washington State University, Mt. St. Helens, WA**  
**June - Sept 2007, June-Aug 2008, July 2009**

- Implemented surveys and sampling procedures for small mammals at the Mt. St. Helens National Volcanic Monument
- Used Sherman live traps for capturing small mammals
- Species captured: Northern water shrew (*Sorex palustris*), Keen's mouse (*Peromyscus keeni*), deer mouse (*Peromyscus maniculatus*), Cascade golden mantled ground squirrel (*Callospermophilus saturatus*), yellow-pine chipmunk (*Neotamias amoenus*), Pacific jumping mouse (*Zapus trinotatus*), long-tailed weasel (*Mustela frenata*)

**Biological Field Technician, Oregon State University, CA**  
**June-August 2004**

- Helped establish transects of Sherman live traps
- Obtained biometric measurements of all rodents trapped.
- Species captured: Deer mouse, dusky-footed woodrat (*Neotoma fuscipes*), Allen's chipmunk (*Neotamias senex*), Townsend's chipmunk (*Neotamias townsendii*), Siskiyou chipmunk (*Neotamias siskiyou*)