

**Focused Burrowing Owl, Mohave Ground Squirrel and Desert Tortoise Surveys**

For

**Apple Bear Retail Site**

(APN #0434-021-10, -35, -37)

Apple Valley South 7.5 Minute Quadrangle,  
Section 6, Township 4N, Range 3W  
Apple Valley, San Bernardino County, California

*Prepared for*

Wood Investment  
2920 Airway Avenue, Suite A-9  
Costa Mesa, CA 92627

*Prepared by*

Field Work & Report by  
Ryan Young  
Phoenix Biological Consulting  
313 Nicole Dr  
Vista CA 92084

[www.phoenixbiologicalconsulting.com](http://www.phoenixbiologicalconsulting.com)

(949) 887 0859 cell

January 4, 2023

## Table of Contents

<b>SECTION I – BACKGROUND INFORMATION.....</b>	<b>4</b>
1 INTRODUCTION AND PURPOSE .....	4
2 PROPERTY AND PROJECT DESCRIPTION.....	4
2.1 Project Location .....	4
2.2 Project Description & Existing Conditions .....	4
<b>SECTION II – BURROWING OWL FOCUSED SURVEY RESULTS.....</b>	<b>5</b>
3 JUSTIFICATION .....	5
4 METHODOLOGY .....	5
5 WEATHER.....	5
6 BURROWING OWL RESULTS .....	6
6.1 Field Results .....	6
<b>SECTION III – DESERT TORTOISE SURVEY RESULTS.....</b>	<b>7</b>
7 JUSTIFICATION .....	7
8 METHODOLOGY .....	7
8.1 Desert Tortoise Survey Results .....	7
<b>SECTION IV – MOHAVE GROUND SQUIRREL SURVEY.....</b>	<b>9</b>
9 JUSTIFICATION .....	9
10 METHODOLOGY .....	9
11 WEATHER.....	9
12 MOHAVE GROUND SQUIRREL RESULTS.....	9
12.1 MGS Survey Field Results.....	10
<b>SECTION V – RECOMMENDATIONS FOR GENERAL MITIGATION MEASURES .....</b>	<b>11</b>
13 Literature Cited.....	11
14 Certification .....	13
Table 1: Weather Summary for Surveys.....	6
Table 2: Weather Summary for the Desert Tortoise Survey.....	7
Exhibit 1: Regional View.....	15
Exhibit 2: Topographic View.....	16
Exhibit 3: Aerial View .....	17
Exhibit 4: Site Plan for Apple Bear Retail Site .....	18
Appendix A: Mohave ground squirrel survey form .....	19

Appendix B: Weather Data Example, Grid 1, Session 1 ..... 21  
Appendix B: Weather Data Example, Grid 1, Session 2 ..... 22  
Appendix B: Weather Data Example, Grid 1, Session 3 ..... 23  
Appendix C: MGS Camera Study Results ..... 23

---

## SECTION I – BACKGROUND INFORMATION

---

### 1 INTRODUCTION AND PURPOSE

At the request of Wood Investments (Wood), Phoenix Biological Consulting (Phoenix) initiated several biological focused surveys on the approximately 21.4 acre property (APN: #0434-021-10, -35, -37). Wood is developing the upper portion, approximately 7 acres, of the site into a commercial development project known as Apple Bear Retail Site (Exhibit 4).

Based on the location of the project site, several focused biological surveys were conducted to determine the presence or absence of sensitive biological species. The site was surveyed for burrowing owl, desert tortoise and Mohave ground squirrels. The results were negative for any sign/presence of burrowing owl, desert tortoise and Mohave ground squirrel. The survey activities include: (1) Burrowing owl surveys – Section II, (2) Desert tortoise surveys – Section III. (3) Mohave ground squirrel surveys – Section IV.

### 2 PROPERTY AND PROJECT DESCRIPTION

#### 2.1 *Project Location*

The site is located south of Bear Valley Road in the Apple Valley South 7.5-minute quadrangle topographic map (Exhibit 2). The legal description of the parcel is a portion of Section 31, Township 5 N, Range 3 W, City of Apple Valley, and San Bernardino County.

#### 2.2 *Project Description & Existing Conditions*

The site is currently considered disturbed desert scrub habitat with rubber rabbit brush vegetation present in sparse patches. Wood Investments is proposing to develop the site into a commercial development known as Apple Bear Retail Site on approximately 7.78 acres, assessor property (APN: #0434-021-10, -35, -37) located in Apple Valley, San Bernardino County.

The parcel is situated at approximately 2,840 feet elevation. It is east of Mojave River and situated in the southeastern portion of Apple Valley. Commercial areas exist to the northwest of the study area and disturbed desert scrub to the west. Semi-open desert scrub habitat exists to the south and east.

The study area consists of semi-disturbed undeveloped lands. There is no evidence of recent disking within or adjacent to the site, per the site visit or aerial photo review. There are no true trees in or bordering the site. There is one mature, adult Joshua tree in the southern portion of

the study area, outside the disturbance limits of the existing site plan. Existing vegetation consists of sparse patches of rubber rabbit brush.

## SECTION II – BURROWING OWL FOCUSED SURVEY RESULTS

---

### 3 JUSTIFICATION

Based on the location and habitat present on site focused surveys were conducted for the burrowing owl (BUOW; *Athene cunicularia*) during the spring/summer of 2022.

### 4 METHODOLOGY

BUOW surveys were conducted during the spring/summer of 2022. The burrowing owl surveys were conducted by Ryan Young. Mr. Young has conducted dozens of protocol level burrowing owl surveys throughout the species range. Survey methodology for the BUOW included the Staff Report on Burrowing Owl Mitigation (CDFW, 2012).

The burrowing owl surveys were conducted by walking straight-line transects spaced 7 m to 20 m apart, adjusting for vegetation height and density. At the start of each transect and, at least, every 100 m, scan the entire visible project area for burrowing owls using binoculars. Four site visits were included for the BUOW surveys. During the pedestrian surveys, the biologists recorded all potential burrows used by burrowing owls as determined by the presence of one or more burrowing owls, pellets, prey remains, whitewash, or decoration. The field biologists also paused at regular intervals to listen for owl vocalizations. Survey teams used hand-held mirrors to view into any potential burrows. Buffer zone surveys were conducted out to 150 meters from the project edge. The owl surveys started between morning civil twilight and 10:00 am and/or two hours before sunlight until evening civil twilight. During the survey, the surveyor(s) search images included: burrows, burrowing owls, owl feathers, pellets, owl whitewash (scat) and owl vocalizations. Surveys were conducted in all portions of the project site and buffer areas that were identified in the habitat assessment.

### 5 WEATHER

Weather conditions during the spring survey effort consisted of relatively dry conditions. Winter rainfall of 2021-22 is below average. The Apple Valley Automated Weather Station (RAWS) which is located 8.7 miles northeast of the site received 2.19 inches from November 2021 through March 2022 (RAWS, 2022). Annual plant abundance was lacking. The morning and afternoon temperatures were taken to ensure surveys were within acceptable parameters for the BUOW surveys.

Table 1: Weather Summary for Surveys

Date	Begin Temp (°F)	End Temp (°F)	Begin Cloud %	End Cloud %	Begin Wind (MPH)	End Wind (MPH)
04/07/22	58	81	5	5	8	10
05/05/22	59	85	5	5	4	12
05/26/22	65	90	5	5	3	15
06/24/22	68	95	5	5	3	10

## 6 BURROWING OWL RESULTS

### 6.1 Field Results

The field results were negative for the presence of burrowing owls and/or their sign. There are several California ground squirrel burrows present and numerous California ground squirrels observed but no sign of burrowing owls was present.

## SECTION III – DESERT TORTOISE SURVEY RESULTS

### 7 JUSTIFICATION

Based on the location and suitable surrounding habitat present on site focused surveys were conducted for the desert tortoise (DETO; *Gopherus agassizii*) during the spring/summer of 2022.

### 8 METHODOLOGY

Desert Tortoise (*Gopherus agassizii*) presence/absence survey methodology conformed to the *Desert Tortoise Pre-project Survey Protocol* (USFWS, 2017). The survey was conducted by Ryan Young who has conducted numerous desert tortoise surveys in Southern California and successfully completed the Desert Tortoise Workshop in 2009.

The desert tortoise survey was conducted by walking straight-line transects spaced 10 m apart. At the start of each transect and, at least, every 100 m, scan the entire visible project area for desert tortoise using binoculars. The desert tortoise survey focused on finding desert tortoise along with both scat and carcasses. The desert tortoise survey was conducted in May when air temperatures are below 40°C (104 °F). During the pedestrian survey, Mr. Young recorded all potential burrows used by desert tortoise as determined by the presence of one or more desert tortoises, scat, and carcasses. Hand-held mirror to view into any potential burrows. Buffer zone survey was conducted out to 150 meters from the project edge. During the survey, Mr. Young's search images included: burrows, desert tortoise, scat, tracks, and carcasses. Surveys were conducted in all portions of the project site and buffer areas.

Weather conditions during the spring survey effort consisted of warm weather in the Apple Valley Region. Winter rainfall of 2020-21 continued to be below average and drought conditions persist throughout the state of California. The morning and afternoon temperatures were taken to ensure that the survey was within acceptable parameters for desert tortoise.

Table 2: Weather Summary for the Desert Tortoise Survey

Date	Begin Temp (°F)	End Temp (°F)	Begin Cloud %	End Cloud %	Begin Wind (MPH)	End Wind (MPH)
05/6/22	61	88	0	5	4	15

#### 8.1 Desert Tortoise Survey Results

The field results were negative for desert tortoise. Numerous small burrows were observed during the field effort. The burrows were absent of desert tortoise sign. The burrows all appeared to be active California ground squirrel burrows and are not sensitive nor have any protection. Desert tortoises were not observed during the survey effort and no desert tortoise sign such as scat, tracks, carcasses were observed.



---

## SECTION IV – MOHAVE GROUND SQUIRREL SURVEY

---

### 9 JUSTIFICATION

Based on a preliminary desktop review of the CNDDDB Search results it was determined that focused surveys were recommended for the Mohave ground squirrel during the spring/summer of 2022 trapping period. Field surveys were conducted by Ryan Young.

### 10 METHODOLOGY

The visual survey was conducted on March 31<sup>st</sup>. All potential MGS habitat within the grid location was surveyed during this visit. Phoenix's role was to locate the grid location and implement the live-trapping for one grid within the project site. Within the one grid, one hundred (100) traps were deployed at thirty-five meter spacing over the suitable habitat (Table 2). The grid consisted of ten by ten grid arrays. Typically, a grid is required for every eighty acres of habitat. Grid placement was determined by suitable vegetation cover, proximity to surrounding habitat and availability of access roads.

Standard, small-mammal, aluminum, foldable, ventilated 12" Sherman Traps were used. Cardboard boxes were used as shade covers for each trap. Traps and shade covers were placed on the north side of the nearest bush on a north-south axis to provide the greatest shade cover possible. The shade covers were covered with dirt on both sides and on the roof to provide better temperature insulation and to prevent the boxes from blowing away in the wind. Temperature readings were taken and recorded every hour at one foot and at ground level in the shade of a bush. Traps were checked every two to four hours depending on temperature and other influential factors such as potential pregnant or lactating females in traps, dogs on grids, ravens, cold weather, expected juveniles etc. Traps were open within one hour after sunrise and closed within one hour before sunset. Traps were closed when air temperature reached 90 °F, when temperature fell below 50 °F or during periods of rainy weather. The bait used consisted of crushed four-way grains with molasses and mixed with peanut butter and water.

### 11 WEATHER

Weather conditions during the spring survey effort consisted of relatively dry conditions. Winter rainfall of 2022 is below average. The Apple Valley Automated Weather Station (RAWS) which is located 8.7 miles northeast of the site received 2.19 inches from November 2021 through March 2022 (RAWS, 2022).

### 12 MOHAVE GROUND SQUIRREL RESULTS

### **12.1 MGS Survey Field Results**

MGS were not seen nor heard during the visual survey. Furthermore, MGS were not trapped on the grid. A total of two species were trapped on the grid: Antelope ground squirrels (AGS; *Ammospermophilus leucurus*) and California ground squirrels (CGS; *Spermophilus beecheyi*). The results of the five camera stations were also negative for MGS. Species recorded via camera bait stations included Antelope ground squirrels and California ground squirrels. All the above-named species are commonly occurring, non-listed species.

Total trap hours were 155 for the total project site. Total captures were 105. 15 captures were AGS and 90 captures were CGS. The results of the MGS survey are good for up to one year from the final trap date.

## SECTION V – RECOMMENDATIONS FOR GENERAL MITIGATION MEASURES

Below are proposed, general mitigation measures (MM) resulting from the focused survey results:

- **MM-01: Nesting Bird Survey:** To comply with the Migratory Bird Treaty Act (MBTA), if any ground disturbance is anticipated during the nesting bird season (February-August) the project proponent will initiate a breeding/nesting bird survey, within 14 days before construction starts, to ensure no nesting birds are impacted. If a nesting bird is detected, the area will be avoided and a 50-meter buffer will be installed until the nesting birds have fledged and have been observed to be foraging independently. In the event a hawk nest is observed, the active buffer may be extended to 150 feet and shall be installed around the hawk nest until the birds are observed to be foraging independently.
- **MM-02: 14 Day Take Avoidance Burrowing Owl Preconstruction Survey:** A preconstruction burrowing owl take avoidance survey, within 14 days of start of construction, is recommended to ensure no burrowing owls have moved onto the project site. The project proponent should retain a qualified biologist to conduct a burrowing owl preconstruction survey within the project site and the 150-meter buffer zone to ensure no owls have emigrated onto the site.

### 13 Literature Cited

- Audubon Guide to North American Birds; Kaufman, Kenn. Lives of North American Birds. 1996. <http://www.audubon.org/field-guide>
- California Burrowing Owl Consortium (BOC). Burrowing Owl Survey Protocol and Mitigation Guidelines. 1993.
- California Department of Fish and Wildlife. Natural Diversity Database. Special Vascular Plants, Bryophytes, and Lichens List. January 2018.
- CDFW. Natural Diversity Database. Special Animals List. March 2018.
- CDFW. Staff Report on Burrowing Owl Mitigation. March 7, 2012.
- CDFW. Habitat Conservation Planning Branch. California Desert Native Plants Act. Sacramento, CA. 2015
- California Native Plant Society, Rare Plant Program. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA, 2018.
- IUCN Red List of Threatened Species. Version 2018. [www.iucnredlist.org](http://www.iucnredlist.org).
- Jepson Flora Project (eds.). *Jepson eFlora*. 2013. <http://ucjeps.berkeley.edu/IJM.html>

- Nafis, Gary. A Guide to the Amphibians and Reptiles of California. February, 2013. <http://www.californiaherps.com/>
- NatureServe. NatureServe Explorer: An online encyclopedia of life. Version 7.1. NatureServe, Arlington, Virginia. 2018. <http://explorer.natureserve.org>
- Remote Automated Weather Station (RAWS), 2018. Hart Flat. <https://raws.dri.edu/index.html>
- Tower Engineering Professionals. Biological Review for the Decommissioning of an Existing Radionavigation Tower, Kern County, CA. 2017.
- United States Department of Agriculture, Natural Resource Conservation Service. 2018. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>
- United States Fish and Wildlife Service. Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox prior to or during ground disturbance. 2011.
- Williams, Daniel F. Mammalian Species of Special Concern in California. California State University, Stanislaus. Department of Biological Sciences. Turlock, CA. February 1986.
- Zeiner, D.C., W.F. Laudenslayer, Jr., K.E.Mayer, and M.White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Department of Fish and Game, Sacramento, California.

## 14 Certification

*I hereby certify that the statements furnished above and in the attached exhibits present the data and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this report was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project. Any federally and/or state threatened/endangered species cannot be taken under State and Federal law. The report and recommended mitigation measures included in this report do not constitute authorization for incidental take of any sensitive species.*

Biological Technical Report and Field Surveys

Prepared BY:

Date: 1/4/2023

Signature: \_\_\_\_\_



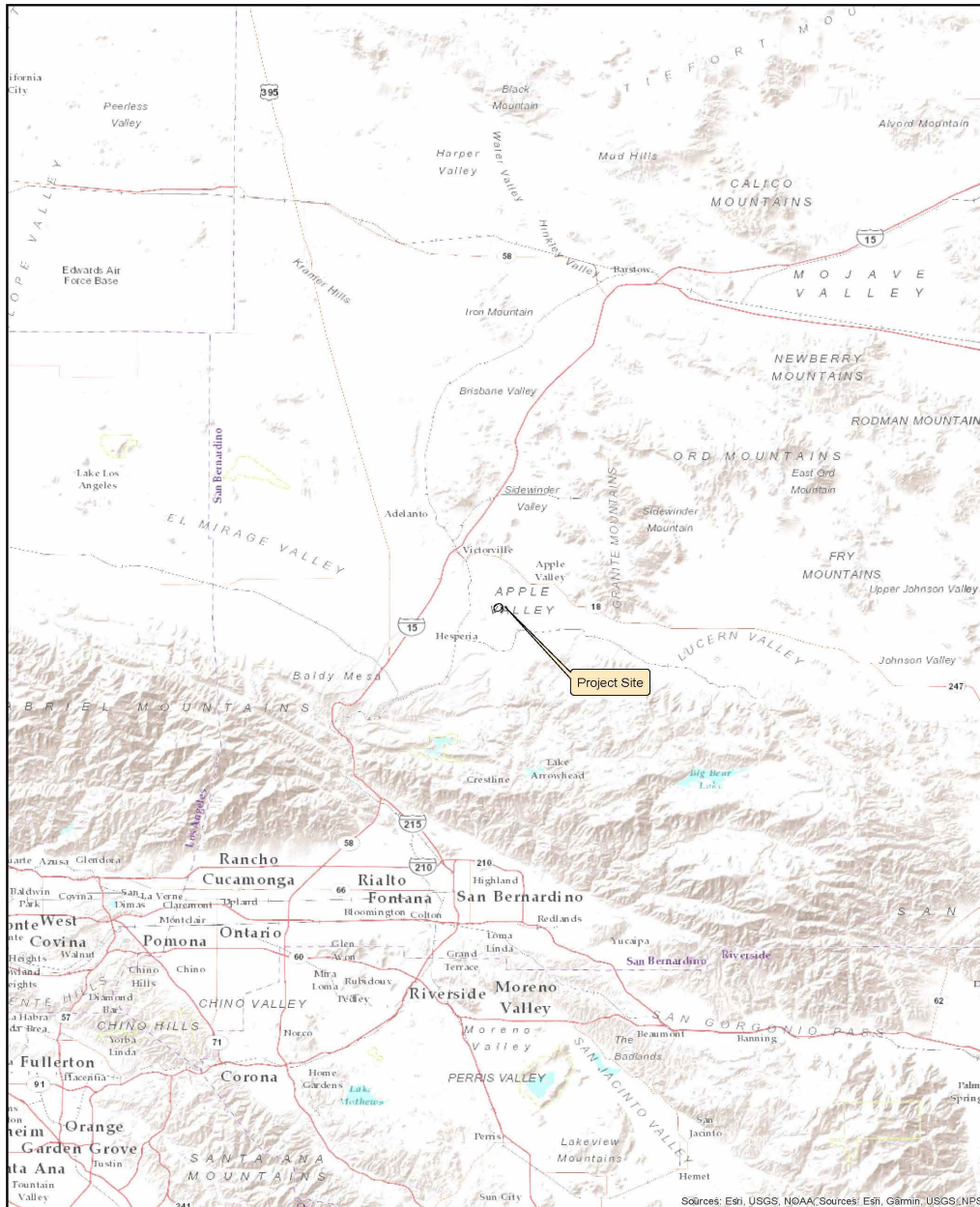
Ryan Young, Senior Biologist & Principal

## Project Exhibits

---

---

Exhibit 1: Regional View



**Regional View**  
Parcel Boundaries (0434-021-10, -35, -37)

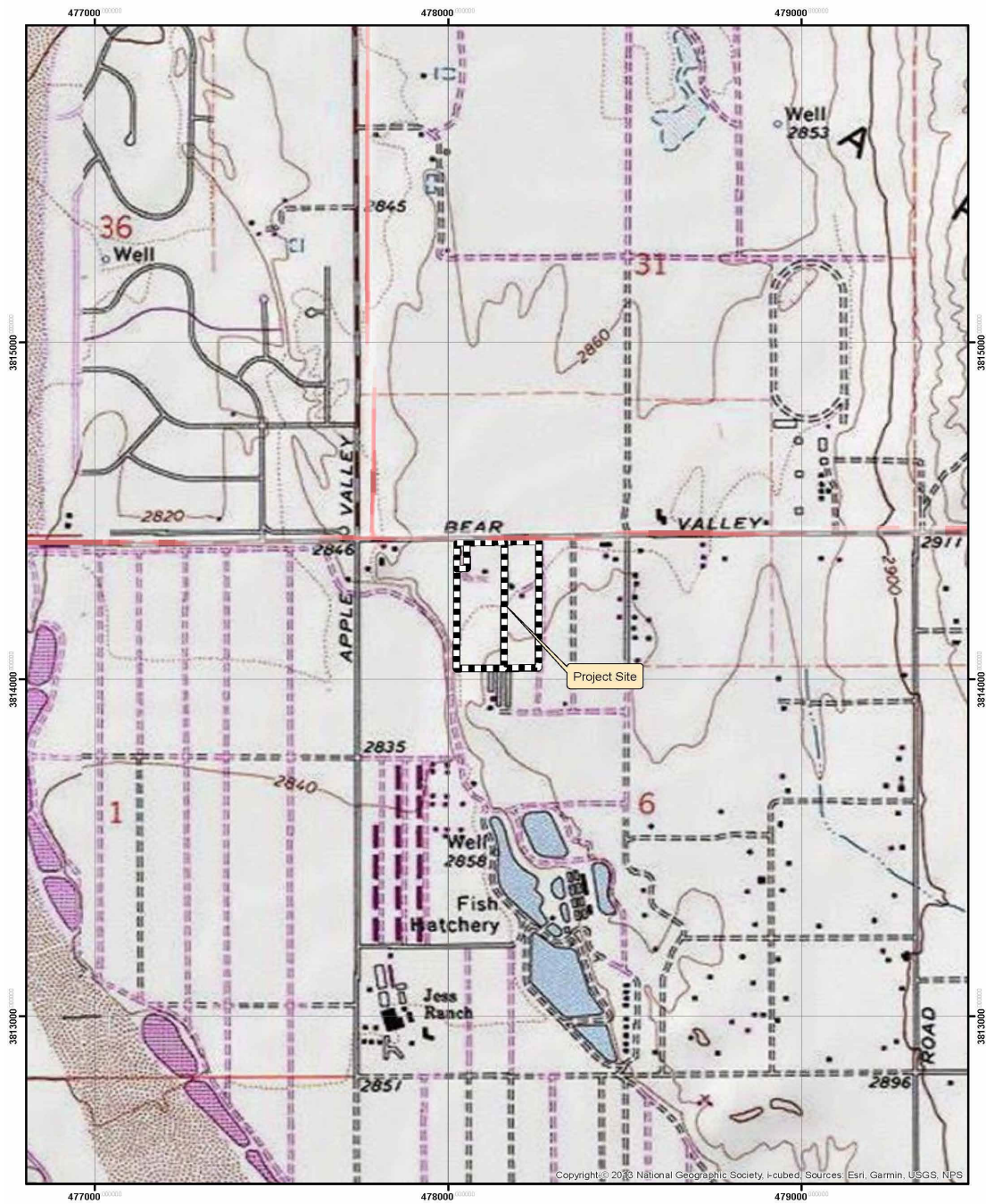
**Legend**

Parcels 0434-021-10, -35, -37

0 41,000 82,000 164,000 248,000 Feet

Source: ESRI ArcGIS, Wood Investment Companies, Inc. March, 2022

Exhibit 2: Topographic View



**Topographic View**  
Parcel Boundaries (0434-021-10, -35, -37)

**Legend**

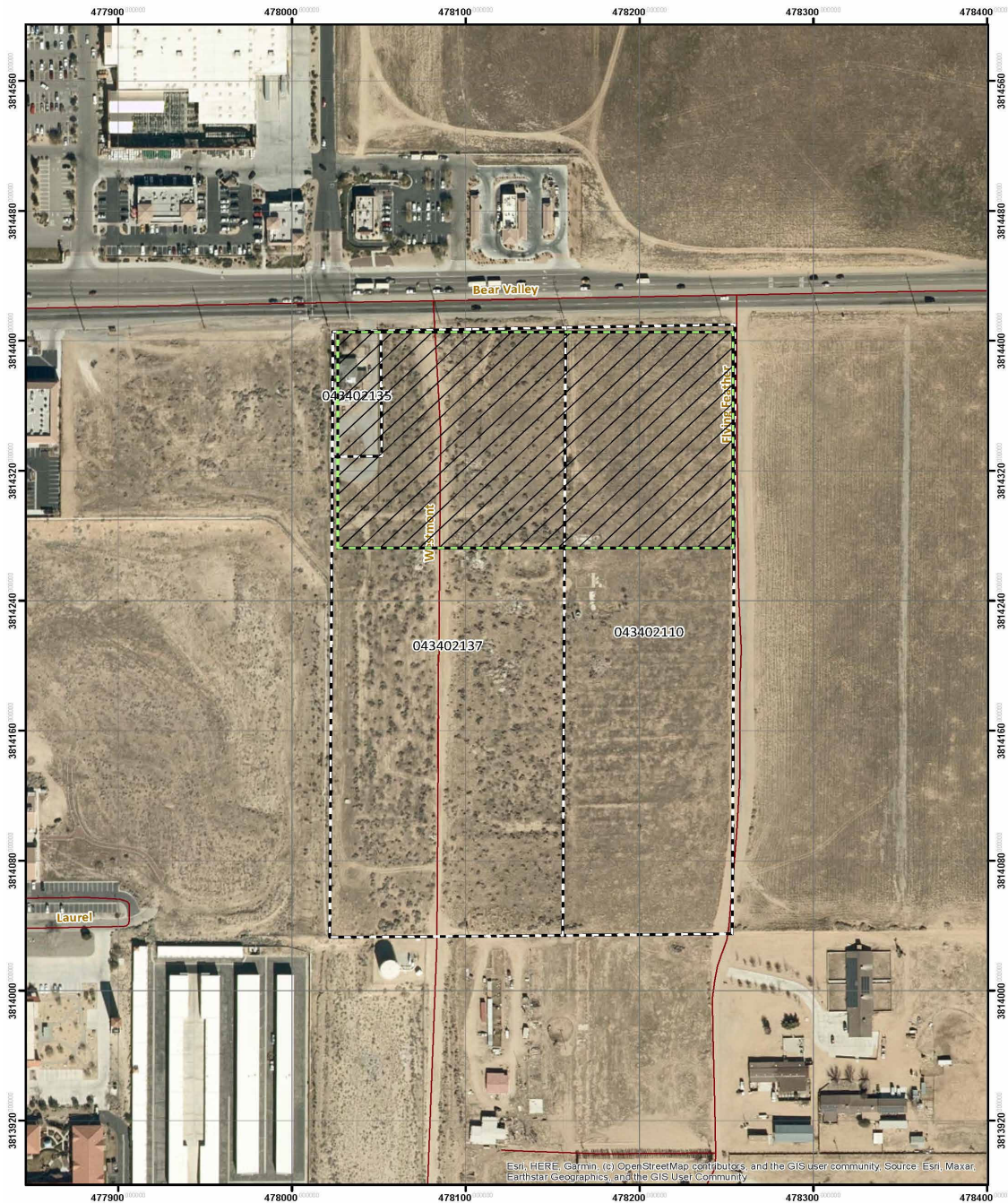
Parcels 0434-021-10, -35, -37

0 800 1,600 3,200 4,800 Feet

Source: ESRI ArcGIS, Wood Investment Companies, Inc, March, 2022

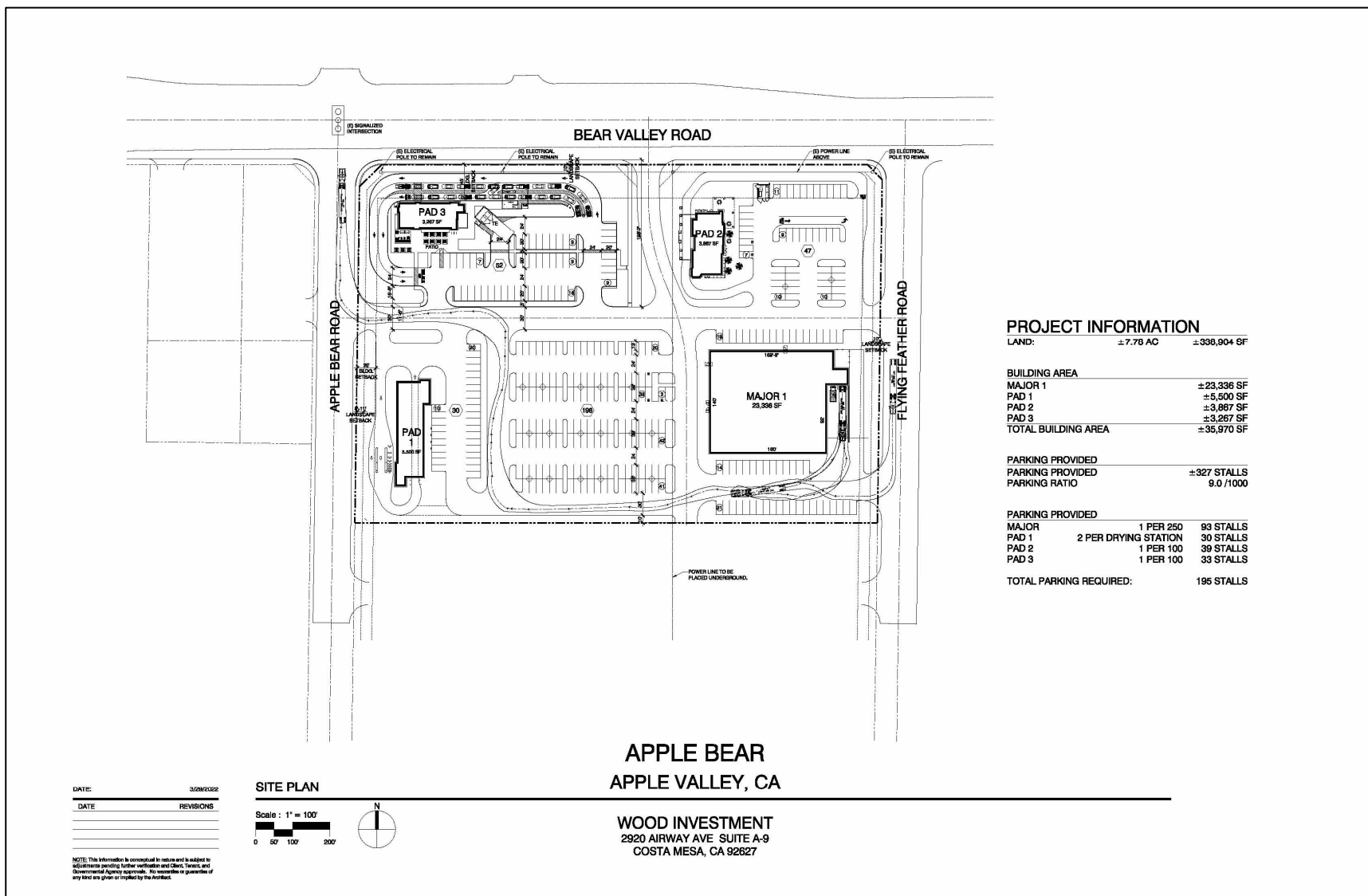


Exhibit 3: Aerial View



<b>Legend</b>		<b>Parcel Boundaries (0434-021-10, -35, -37)</b>		
	Proposed Development Area		Parcels 0434-021-10, -35, -37	
Source: ESRI ArcGIS, Wood Investment Companies, Inc, March, 2022				

Exhibit 4: Site Plan for Apple Bear Retail Site



## Appendix A: Mohave ground squirrel survey form



### Mohave Ground Squirrel (MGS) Survey and Trapping Form

**PART I - PROJECT INFORMATION (use a separate form for each sampling grid, photocopy form as needed)**

Project name:	Apple Bear Retail Site
Project owner:	Wood Investment
USGS quadrangle/series (7.5/15 min):	Apple Valley South
Latitude (decimal degree):	34.46924
Longitude (decimal degree):	117.23814
Datum:	WGS84
Location (township, range, section, 1/4 section):	5N, 3W, Section 31
UTM coordinates:	478097 E, 3814605 N
Acreage of project site:	21.4 acres
Acreage of potential MGS habitat on site:	21.4
Total acreage visually surveyed on project site	21.4 acres
Visual survey date(s):	March 30, 2021
Visual surveys conducted by:	Ryan Young
Total acres trapped:	21.4 acres
Number of sampling grids:	One
Trapping conducted by:	Ryan Young
Dates of sampling term(s): First, Second, Third	April 7-11, 2022, May 16-20, 2022, June 27-July 1, 2022

**PART II - GENERAL HABITAT DESCRIPTION (use back of form, if needed)**

Dominant perennials:

Other dominant perennials:

Annuals:

Other annuals:

Landforms:

Soil description:

Elevation (meters):

% Slope:

**PART III - WEATHER**

Temperature (celsius):

% Cloud cover:

Wind speed (km/hr):

**ADDITIONAL INFORMATION**

UTM coordinates: GPS coordinates of trapping-grid corners

Visual surveys conducted by: Names of all persons by date

Trapping conducted by: Names of all persons by sampling term and sampling grid

Dates of sampling term(s): First, Second, Third: Second and Third if required

Landforms: Mesa, bajada, wash

Temperature: AIR (Minimum and maximum) SOIL (Minimum and maximum)

Report measurements in the following categories for each day of visual survey and each day of trapping; using 24-hour clock, indicate time of day that each measurement was made.

Cloud cover: Percent in AM and Percent in PM. Report measurements in the following categories for each day of visual survey and each day of trapping; using 24-hour clock, indicate time of day that each measurement was made.

Wind speed: AM and PM. Report measurements in the following categories for each day of visual survey and each day of trapping; using 24-hour clock, indicate time of day that each measurement was made.

**ADDITIONAL SPACE (use the space below for continuation of responses)**

## Appendix B: Weather Data Example, Grid 1, Session 1

**PART III – WEATHER**

Project Name: Apple Bear Retail Site

Property Owner: Wood Investments

Year: 2022 (Trapping Period \_1\_)

Grid Number: 1

WEATHER (temperature = °F; cloud cover = %; wind speed = kph)

**DATE: 04/7/22**      **ACTIVITY: trapping Day 1**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	58	0600
AIR TEMPERATURE, MAX.	83	1500
SOIL TEMPERATURE, MIN.	55	0600
SOIL TEMPERATURE, MAX.	85	1500
CLOUD COVER, AM	5	0800
CLOUD COVER, PM	10	1500
WIND SPEED, AM	8	0600
WIND SPEED, PM	15	1500

**DATE: 04/8/22**      **ACTIVITY: trapping Day 2**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	56	0600
AIR TEMPERATURE, MAX.	88	1500
SOIL TEMPERATURE, MIN.	56	0600
SOIL TEMPERATURE, MAX.	90	1500
CLOUD COVER, AM	5	0800
CLOUD COVER, PM	10	1500
WIND SPEED, AM	4	0600
WIND SPEED, PM	4	1500

**DATE: 04/9/22**      **ACTIVITY: trapping Day 3**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	63	0600
AIR TEMPERATURE, MAX.	84	1500
SOIL TEMPERATURE, MIN.	65	0600
SOIL TEMPERATURE, MAX.	84	1500
CLOUD COVER, AM	10	0600
CLOUD COVER, PM	15	1500
WIND SPEED, AM	2	0600
WIND SPEED, PM	10	1500

**DATE: 04/10/22**      **ACTIVITY: trapping Day 4**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	54	0600
AIR TEMPERATURE, MAX.	75	1500
SOIL TEMPERATURE, MIN.	55	0600
SOIL TEMPERATURE, MAX.	77	1500
CLOUD COVER, AM	10	0600
CLOUD COVER, PM	10	1500
WIND SPEED, AM	5	0600
WIND SPEED, PM	10	1500

**DATE: 04/11/22**      **ACTIVITY: trapping Day 5**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	49	0600
AIR TEMPERATURE, MAX.	48	1500
SOIL TEMPERATURE, MIN.	45	0600
SOIL TEMPERATURE, MAX.	67	1500
CLOUD COVER, AM	10	0600
CLOUD COVER, PM	15	1500
WIND SPEED, AM	10	0600
WIND SPEED, PM	19	1500

## Appendix B: Weather Data Example, Grid 1, Session 2

**PART III – WEATHER**

Project Name: Apple Bear Retail Site

Property Owner: Wood Investments

Year: 2022 (Trapping Period \_2\_)

Grid Number: 1

WEATHER (temperature = °F; cloud cover = %; wind speed = kph)

**DATE: 05/16/22**      **ACTIVITY: trapping Day 1**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	64	0600
AIR TEMPERATURE, MAX.	88	1500
SOIL TEMPERATURE, MIN.	65	0600
SOIL TEMPERATURE, MAX.	89	1500
CLOUD COVER, AM	10	0800
CLOUD COVER, PM	10	1500
WIND SPEED, AM	8	0600
WIND SPEED, PM	15	1500

**DATE: 05/17/22**      **ACTIVITY: trapping Day 2**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	58	0600
AIR TEMPERATURE, MAX.	88	1500
SOIL TEMPERATURE, MIN.	56	0600
SOIL TEMPERATURE, MAX.	90	1500
CLOUD COVER, AM	10	0800
CLOUD COVER, PM	15	1500
WIND SPEED, AM	4	0600
WIND SPEED, PM	9	1500

**DATE: 05/18/22**      **ACTIVITY: trapping Day 3**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	60	0600
AIR TEMPERATURE, MAX.	93	1500
SOIL TEMPERATURE, MIN.	61	0600
SOIL TEMPERATURE, MAX.	95	1500
CLOUD COVER, AM	15	0600
CLOUD COVER, PM	15	1500
WIND SPEED, AM	2	0600
WIND SPEED, PM	10	1500

**DATE: 05/19/22**      **ACTIVITY: trapping Day 4**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	61	0600
AIR TEMPERATURE, MAX.	94	1500
SOIL TEMPERATURE, MIN.	60	0600
SOIL TEMPERATURE, MAX.	96	1500
CLOUD COVER, AM	5	0600
CLOUD COVER, PM	10	1500
WIND SPEED, AM	2	0600
WIND SPEED, PM	14	1500

**DATE: 05/20/22**      **ACTIVITY: trapping Day 5**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	59	0600
AIR TEMPERATURE, MAX.	82	1500
SOIL TEMPERATURE, MIN.	60	0600
SOIL TEMPERATURE, MAX.	80	1500
CLOUD COVER, AM	10	0600
CLOUD COVER, PM	10	1500
WIND SPEED, AM	10	0600
WIND SPEED, PM	10	1500

## Appendix B: Weather Data Example, Grid 1, Session 3

**PART III – WEATHER**

Project Name: Apple Bear Retail Site

Property Owner: Wood Investments

Year: 2022 (Trapping Period \_3\_)

Grid Number: 1

WEATHER (temperature = °F; cloud cover = %; wind speed = kph)

**DATE: 06/27/22**      **ACTIVITY: trapping Day 1**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	74	0600
AIR TEMPERATURE, MAX.	101	1500
SOIL TEMPERATURE, MIN.	74	0600
SOIL TEMPERATURE, MAX.	103	1500
CLOUD COVER, AM	10	0800
CLOUD COVER, PM	10	1500
WIND SPEED, AM	3	0600
WIND SPEED, PM	5	1500

**DATE: 06/28/22**      **ACTIVITY: trapping Day 2**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	73	0600
AIR TEMPERATURE, MAX.	102	1500
SOIL TEMPERATURE, MIN.	72	0600
SOIL TEMPERATURE, MAX.	105	1500
CLOUD COVER, AM	10	0800
CLOUD COVER, PM	15	1500
WIND SPEED, AM	5	0600
WIND SPEED, PM	18	1500

**DATE: 06/29/22**      **ACTIVITY: trapping Day 3**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	72	0600
AIR TEMPERATURE, MAX.	97	1500
SOIL TEMPERATURE, MIN.	71	0600
SOIL TEMPERATURE, MAX.	100	1500
CLOUD COVER, AM	15	0600
CLOUD COVER, PM	15	1500
WIND SPEED, AM	4	0600
WIND SPEED, PM	15	1500

**DATE: 06/30/22**      **ACTIVITY: trapping Day 4**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	77	0600
AIR TEMPERATURE, MAX.	94	1500
SOIL TEMPERATURE, MIN.	74	0600
SOIL TEMPERATURE, MAX.	96	1500
CLOUD COVER, AM	5	0600
CLOUD COVER, PM	10	1500
WIND SPEED, AM	4	0600
WIND SPEED, PM	14	1500

**DATE: 07/1/22**      **ACTIVITY: trapping Day 5**

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	69	0600
AIR TEMPERATURE, MAX.	95	1500
SOIL TEMPERATURE, MIN.	69	0600
SOIL TEMPERATURE, MAX.	97	1500
CLOUD COVER, AM	5	0600
CLOUD COVER, PM	10	1500
WIND SPEED, AM	5	0600
WIND SPEED, PM	18	1500

## Appendix C: MGS Camera Study Results

<b>Camera Station</b>	<b>Session 1 (04/7/22 to 04/11/22)</b>	<b>Session 2 (05/16/22 to 05/20/22)</b>	<b>Session 3 (6/27/22 to 7/1/22)</b>
1	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>
2	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>
3	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>
4	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>
5	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>	<i>Ammospermophilus leucurus. Spermophilus beecheyi</i>



## Site Photographs

<p>UTC: 2022.07.06T18:13:17Z          Lat, Lon: 34.471043, -117.236859          Alt: 850.6m MSL WGS84          CEP: 4m</p> <p>Azimuth and Bearing          206° S25W</p> <p>-8°</p> <p>-8.1°</p> <p>S SW</p>	<p>NE Corner. Facing SW.</p>
<p>UTC: 2022.07.06T18:11:28Z          Lat, Lon: 34.470918, -117.237759          Alt: 865.6m MSL WGS84          CEP: 5m</p> <p>Azimuth and Bearing          131° S41E</p> <p>-4°</p> <p>-9.1°</p> <p>E SE S</p>	<p>NW Corner. Facing SE.</p>

 <p>UTC: 2022.07.06T17:45:03Z Lat, Lon: 34.467664, -117.236952 Alt: 848.9m MSL WGS84 CEP: 4m</p> <p>Azimuth and Bearing 311° N40W</p>	<p>SE Corner. Facing NW.</p>
 <p>UTC: 2022.07.06T17:47:07Z Lat, Lon: 34.467688, -117.237815 Alt: 862.4m MSL WGS84 CEP: 4m</p> <p>Azimuth and Bearing 26° N25E</p>	<p>SW Corner. Facing NE.</p>