Lenwood Spreading Grounds

Biological Resources Technical Report
San Bernardino County Department of Public Works



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For:

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March 2019

Table of Contents

| SUMM | ARY | 1 |
|--------|--|----|
| 1.0 | INTRODUCTION | 2 |
| 1.1 | Project Area and Project Study Area | 2 |
| 1.3 | 1.1 Project Area | 2 |
| 1.3 | 1.2 Project Study Area | 2 |
| 1.2 | Surrounding Land Use | 2 |
| 1.3 | Project Description | 5 |
| 1.3 | 3.1 Maintenance of Access Roads | 5 |
| 1.3 | 3.2 Lenwood Channel Routine Maintenance | 5 |
| 1.3 | 3.3 Lenwood Spreading Grounds Routine Maintenance | 5 |
| 1.3 | 3.4 Lenwood Spreading Grounds Spillway Restoration | 6 |
| 2.0 | METHODOLOGY | 7 |
| 2.1 | Literature Review and General Biological Setting | 7 |
| 2.2 | Desert Tortoise | 7 |
| 2.3 | Burrowing Owl | 7 |
| 2.4 | Mohave Ground Squirrel | 11 |
| 2.4 | 4.1 Live Trapping | 11 |
| 2.4 | 4.2 Camera Trapping | 13 |
| 3.0 | RESULTS | 14 |
| 3.1 | General Biological Setting | 14 |
| 3.3 | 1.1 Plants | 14 |
| 3.3 | 1.2 Wildlife | 16 |
| 3.2 | Desert Tortoise | 17 |
| 3.3 | Burrowing Owl | 17 |
| 3.4 | Mohave Ground Squirrel | 21 |
| 3.4 | 4.1 Live Trapping | 21 |
| 3.4 | 4.2 Camera Trapping | 21 |
| 4.0 | RECOMMENDATIONS | 26 |
| 4.1 | Desert Tortoise | 26 |
| 5.0 | REFERENCES | 29 |
| Append | dix A - General Site Photos | 30 |
| Append | dix B – Datasheets | 32 |

| Figure 1. Regional Location | 3 |
|---|----|
| Figure 2. Project Study Area | 4 |
| Figure 3. CNDDB INfo | 9 |
| Figure 4. Desert Tortoise Transects | 10 |
| Figure 5. MGS Camera and Trapping Grid Locations | 12 |
| Figure 6. Vegetation Communities | 15 |
| Figure 7. Desert Tortoise Results - 2017 | 18 |
| Figure 8. Desert Tortoise Results - All | 19 |
| Figure 9. Burrowing Owl Results | 20 |
| Table 1. Burrowing Owl Survey Dates | |
| Table 2. MGS Trapping and Camera Dates | |
| Table 3. Plants Detected | |
| Table 4. Incidental Species Detected | |
| Table 5. MGS Live Trapping Results | |
| Table 6. Camera Trapping Results | 24 |
| Photo 1. LeConte's thrasher, camera station LO2, session 1 | 16 |
| Photo 2. Adult Male tortoise found in | 17 |
| Photo 3. Burrows with feather and white wash | 17 |
| Photo 4. Burrowing owl | 17 |
| Photo 5. RTGS lactating female, grid 2 session 1 | 21 |
| Photo 6. RTGS lactating female, grid 1 session 2 | 21 |
| Photo 7. RTGS, camera station L10, session 3 and Photo 8. RTGS, camera station L14, session 2 | 22 |
| Photo 9. Assumed RTGS, camera station L16, and Photo 10. Antelope ground squirrel, | 22 |
| Photo 11. Black-tailed jackrabbit and Photo 12. Desert kit fox, camera station LO2, session 2 | 23 |
| Photo 13, kangaroo rat and Photo 14. Deer mouse, camera station 118, session 2 | 23 |

SUMMARY

The San Bernardino County Department of Public Works (DPW) Flood Control District (District) is proposing to conduct routine maintenance work along approximately 1.7 miles of the existing Lenwood Channel and within the approximately 220-acre Lenwood Spreading Grounds facilities within the City of Barstow. Additionally, between the channel and spreading grounds, a spillway will be constructed to replace the existing spillway significantly damaged during the 2014 storm season. Focused biological surveys for sensitive species including desert tortoise (*Gopherus agassizzii*), burrowing owl (*Athene cunicularia*), and Mohave ground squirrel (*Xerospermophilus mohavensis* -MGS) were conducted during Spring 2017 by Ironwood Consulting, Inc. (Ironwood) to determine the presence/absence of these species within the Project Study Area. The summary results of these surveys include:

- Two live desert tortoises were observed one within the northern part of the Lenwood spreading grounds, and another in the Project Study Area outside the fence were observed during the surveys. Additional sign of the southern portion of the Lenwood spread grounds being actively used by desert tortoises included active burrows and recent scat. Additional attempts to relocate the tortoise seen in the northern part of the spreading grounds have been made on three occasions since spring 2017 and have not relocated this individual, nor any sign that it remains on the project site.
- One burrowing owl was observed during the second set of burrowing owl surveys but was not observed again during the third and fourth surveys. Three burrows with active burrowing owl sign were also detected in the central part of the Lenwood spreading grounds.
- No MGS were trapped or observed in camera images in any of the project areas.

Data were also taken on all plant and wildlife species observed incidental to these surveys. No rare pants were recorded. LeConte's thrasher (*Toxostoma lecontei*), a California species of concern, was observed once on camera, in the central part of the Lenwood spreading grounds, related to the MGS camera surveys.

Because adverse impacts may occur to the desert tortoise that uses the southern portion of the Lenwood spreading grounds during project implementation, Ironwood recommends using desert tortoise exclusion fencing to exclude those areas of good habitat (intact native creosote bush-white bursage communities with adjacent accessible similar habitats). The area inside the desert tortoise fence would be cleared to determine presence or absence of any desert tortoise or recent sign inside the fence. If no such animals or sign are found project activities will continue with no monitor required for activities conducted inside the fence, assuming the fence remains intact. If any desert tortoise or recent sign are found during the clearance survey, activities will not commence and San Bernardino Flood Control District personnel will contact California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) personnel to initiate formal consultation under the state and federal endangered species acts.

In addition, pre-construction surveys for sensitive species such as nesting birds and burrowing owl may be conducted within 30 days prior to proposed ground-disturbing activities to determine the current status of these resources in order to plan for avoidance and minimization measures during project activities.

1.0 INTRODUCTION

The San Bernardino County Flood Control District (District) proposes to conduct routine maintenance work along approximately 2.0 miles of the existing Lenwood Channel and within the approximately 220 - acre Lenwood Spreading Grounds facilities. The Lenwood Channel and Spreading Grounds Maintenance and Spillway Improvement Project would primarily consist of access road repair and related herbicide treatment, vegetation removal, soil excavation to reestablish flowline and design capacity, bank repair, concrete and appurtenant structure repair, and spillway reconstruction and improvements.

This report represents findings from Spring 2017 biological resource surveys conducted by Ironwood Consulting, Inc. (Ironwood) at the facilities. Focused surveys were conducted for the federally endangered desert tortoise (*Gopherus agassizii*), state species of concern burrowing owl (*Athene cunicularia*), and state threatened Mohave ground squirrel (*Xerospermosphilus mohavensis*-MGS). In addition, all plant and wildlife species observed incidental to these surveys were recorded.

1.1 Project Area and Project Study Area

1.1.1 Project Area

The facilities are located in the southwest portion of the City of Barstow near the community of Lenwood. The proposed Project is west of Interstate 15, south of National Trails Highway (State Route 66), and south of Lenwood Avenue, at the northwest corner of dirt roads Green Desert Drive and Salt Springs Avenue (Figure 1).

1.1.2 Project Study Area

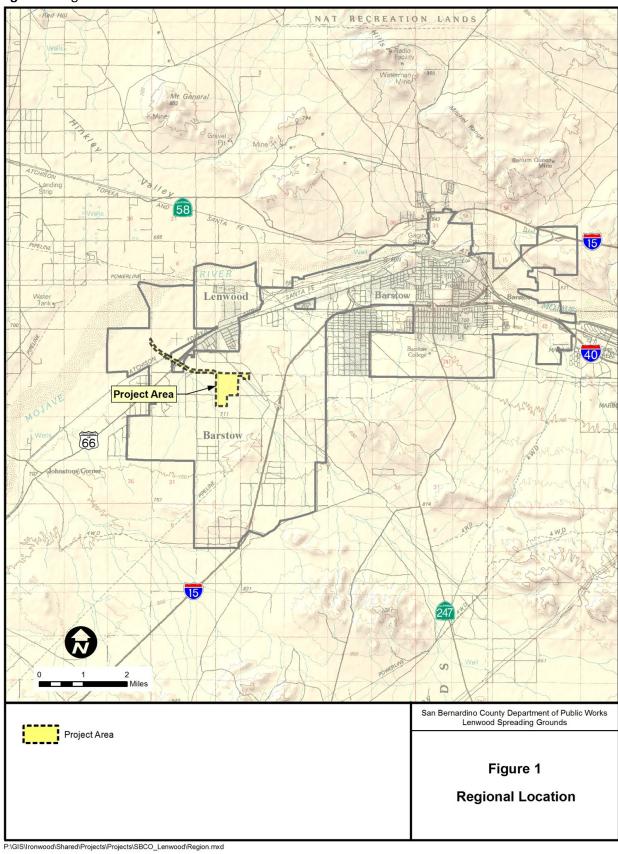
The Project Study Area is an area that encompasses all areas where biological surveys were completed for the proposed Project and encompasses the area of the Project facilities as defined above, and also a buffer area where any potential impacts to these species may occur (area of effect). The Project Study Area are shown on Figure 2.

The Project Study Area is located on the U.S. Geological Survey Hodge and SE Barstow quadrangle maps within township 9N, range 2W and sections 18, 20, and 21 of the San Bernardino Base & Meridian, San Bernardino County, California. Elevations range from approximately 2,200 feet (670 meters) to 2,400 feet (730 meters) above mean sea level. Soils on the project site are a combination of sand and gravel with site slopes approximately 5-15 percent and a western aspect towards the Mojave River located adjacent to the western edge of the Project Study Area. The Project Study Area supports low to moderately disturbed areas of creosote bush-white birsage scrub (Sawyer et al, 2009), highly disturbed areas within existing basins and channels, and unvegetated areas for numerous existing roads.

1.2 Surrounding Land Use

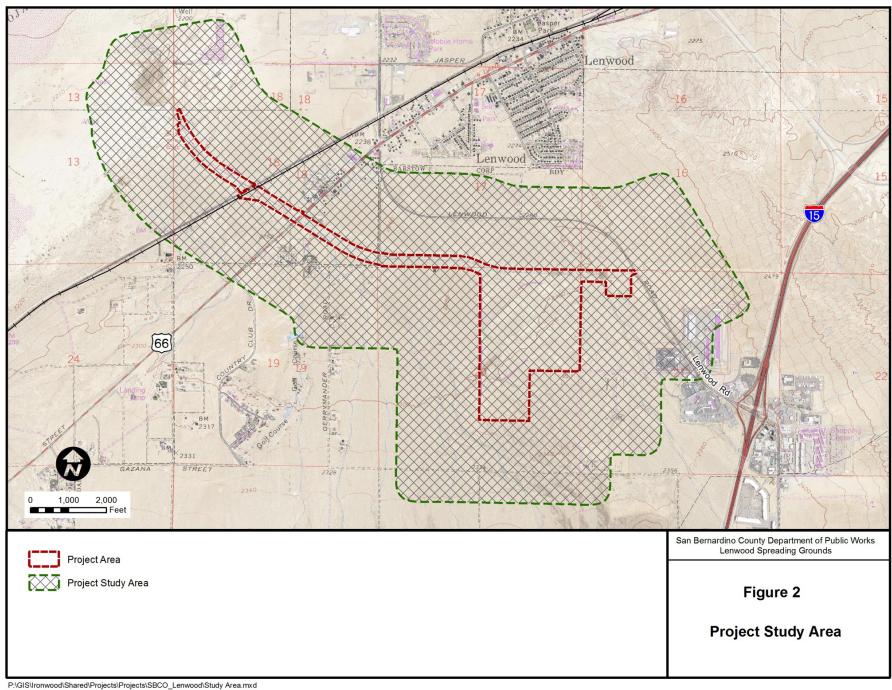
The easternmost extent of the Project is located approximately 1 mile west of Interstate 15 (I-15), which runs in a north-south alignment west of the Lenwood Spreading Grounds. Highway 66 (National Trails Highway) crosses Lenwood Channel approximately 1 mile west (downstream) of the spreading grounds and approximately 0.5 mile southwest of the Highway 66/Lenwood Road intersection. The BNSF rail also crosses the Lenwood Channel approximately 0.3 mile west (downstream) of Highway 66. The surrounding land use designations consist of low-density residential, commercial uses, industrial uses, utilities, transportation corridors and undeveloped open space.

Figure 1. Regional Location



Page 3

Figure 2. Project Study Area



1.3 Project Description

The District is charged with operating and maintaining its existing flood control facilities throughout the County of San Bernardino. The Barstow area climate, within the Mojave Desert, is extremely arid and the precipitation in the general area of the Project site is largely a result of thunderstorm activity. These desert thunderstorms generally occur during the warm summer months from July through September. The characteristics of desert thunderstorm precipitation consist of high intensities, limited areal coverage, relatively short duration, and erratic frequency.

Because the District does not have regulatory permits to conduct routine maintenance, there has been a lack of maintenance in the channel and spreading grounds. Within the spreading grounds, sediment and debris has built up over time, resulting in a decreased capacity for storm flow containment and groundwater recharge. In some areas, the sediment build-up is 7-9 feet deep. Further, in August 2014, the spillway of the Lenwood Spreading Grounds was destroyed by flooding. Large volumes of debris laden sediment washed down through the spillway, resulting in extensive irreparable damage to the spillway, and wing walls. The facilities convey flows of a drainage area of approximately 43,560 acres. The spillway is an integral part of the flood control facility because it regulates the water flow into Lenwood Channel and allows water to percolate within the spreading grounds. The Project consists of the routine maintenance of the District-owned flood control facilities; maintenance also includes upgrading the channel spillway that was irreparably damaged in 2014.

1.3.1 Maintenance of Access Roads

The District maintains numerous access or service maintenance roads throughout the Project Study Area. Most are 12-15 feet wide and surfaced with native material such as gravel or compacted soil. Maintenance activities include clearing encroaching vegetation, filling ruts and potholes, grading, resurfacing (with similar materials), spraying herbicide on and adjacent to the roads as needed by a licensed applicator, and repairing washouts. This maintenance would occur 2-3 times a year as needed and last about 2-3 weeks. There may be years where access road maintenance may occur more than 3 times, depending on the severity and frequency of erosion caused by storm events. There are approximately 10.5 miles of access roads within the Lenwood spreading grounds.

1.3.2 Lenwood Channel Routine Maintenance

Routine maintenance activities along Lenwood Channel would include

- Grading and sediment and debris removal within the channel bottom to re-establish a consistent flow path,
- Re-establishing the channel sideslopes,
- Removing vegetation as needed to maintain structural integrity,
- Repairing washouts and eroded areas (typically accomplished by filling in the eroded area with native material, and sometimes rip-rap if excessive erosion requires rock to reduce future maintenance in that specific location),
- Maintaining concrete and appurtenant structures, and
- Removing graffiti.

Primarily these activities would encompass approximately 17.0 acres within the 61-acre channel facility and would occur along the channel bottom, and side slopes, for a linear distance of approximately10,560 feet. It is estimated that maintenance will occur 2-3 times a year as needed and take about 1-2 weeks to complete at each visit.

1.3.3 Lenwood Spreading Grounds Routine Maintenance

The Lenwood Spreading Grounds is a series of basins that vary in size and primarily serve to collect water to recharge the groundwater basin. The basins are excavated areas on the upstream side of dikes, and are

where the actual velocity dissipation, short term storage, and water percolation takes place. Flow of water into these basins brings suspended sediment, which is dropped to the basin floors with percolation of the water. This sediment requires periodic removal, which also tills the basin floor, in order for percolation rates to remain efficient.

The Lenwood Spreading Grounds cover approximately 220 acres. A series of weirs and culverts divert local runoff into approximately 16 basins where water is slowed down before entering Lenwood Channel and/or where it can percolate into the regional groundwater basin. The three southeastern most basins (basins 1-3) will remain inactive and inside the fenced Lenwood Spreading Grounds to minimize impacts to desert tortoise known to occur in this part of the Project area.

Routine maintenance activities include:

- Grading and sediment removal within the basin to re-establish percolation function,
- Re-establishing the basin sideslopes,
- Removing vegetation as needed,
- Repairing washouts and eroded areas (typically accomplished by filling in the eroded area with native material, and sometimes rip-rap if excessive erosion requires rock to reduce future maintenance in that specific location),
- Maintaining concrete and appurtenant structures, and
- Removing graffiti.

Maintenance of the Lenwood Spreading Grounds facilities would occur typically in the summer, fall, or winter. Vegetation management and, if required, herbicide spraying, would occur 1-2 times a year, with slope repair occurring at least 1-3 times a year, depending on the frequency and intensity of storm events. Maintenance work, such as slope stabilization activities to repair gullies, may occur on a more frequent basis as needed along the access roads, channel slopes and basin slopes which encompass approximately 20 acres.

Sediment and debris removal activities would occur over the entire 181 acres, but in alternating sections of approximately 90 acres each year over two years. Maintenance work necessary to ensure structural integrity of the facility following a storm, such as slope stabilization activities to repair gullies, may have to occur on a more frequent basis as needed. Sediment and debris removal activities may increase beyond the 90 acres following a severe storm or storm season if required to ensure flood protection, but in an average storm year, the work will be tiered as identified above. Removed sediment will be used for dike, channel, and access road maintenance. It is estimated that the District will remove approximately 1.9 million cubic yards of sediment in the first two years due to accumulation over time (assuming initial excavation of 8.5-foot depth of accumulated sediment), with reduction to approximately 200,000 cubic yards a year thereafter. Removed sediment will be sold, with the remainder used for dike, channel, and access road maintenance. Sediment is only sold when there is a market, so sediment piles may sit for a year or two in designated stockpile locations. Materials sifting and rock processing is not part of the District's operations and maintenance of their facilities. The initial excavation work will take approximately 2.5 years to complete, and 4-6 weeks each year thereafter.

1.3.4 Lenwood Spreading Grounds Spillway Restoration

Severe damage was incurred during heavy storms between August 3 and 12, 2014 when large volumes of debris laden sediment washed down through the concrete spillway destroying the concrete spillway invert and wing walls. The original spillway, constructed in the 1960s, was approximately 36 feet wide by 23.5 feet long consisting of 846 square feet (0.02 acre) of concrete.

2.0 METHODOLOGY

2.1 Literature Review and General Biological Setting

Prior to the surveys, relevant biological information for the site and surrounding area was reviewed, which included reviewing the California Natural Diversity Database [CNDDB, 20177 (Figure 3)], California Native Plant Society's Electronic Inventory (CNPSEI), and historical records of special status species found throughout the area for the past ten years. In addition to this information, the San Bernardino County Ecological Resource Specialist, Milo Rivera, provided known locations of sensitive species (live individuals, burrows and scat) from past surveys at the project site.

Ironwood conducted protocol surveys that covered the Project Study Area for desert tortoise, burrowing owl, and Mohave ground squirrel (MGS) as discussed individually below. In addition, all plant species observed were recorded by botanist Kent Hughes, and all wildlife observed were recorded during all surveys.

2.2 Desert Tortoise

Ironwood conducted a protocol survey (USFWS 2010, revised 2017) for desert tortoise between April 12 and 17, 2017, recording all sign of desert tortoises (live animals, burrows, scat, carcasses, etc.). Desert tortoise surveys were conducted by qualified Ironwood biologists Christopher Fabry, Kent Hughes, Kristin Koeper, Blanca Rivera, and Kathryn Simon. The survey consisted of pedestrian transects spaced 30 feet (10 meters) apart throughout the Project area within the fence, and buffer transects in the remainder of the Project Study Area as shown in Figure 4.

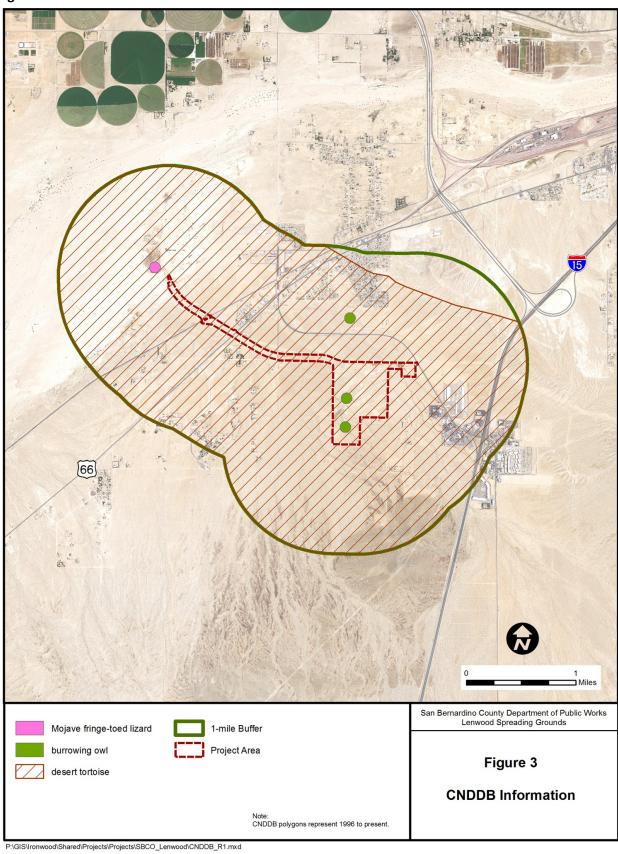
2.3 Burrowing Owl

Ironwood conducted protocol surveys for burrowing owl (BUOW; CDFW 2012) with transects in the fenced Project area at intervals between 15 to 30 meters depending on terrain and vegetation density. A 50-meter buffer area was also included in the survey except where private property in the Project Study Area was avoided. This survey was conducted four times by qualified biologists as listed below on Table 1. Burrowing owl surveys did not occur concurrently with any other wildlife surveys or live-trapping.

Table 1. Burrowing Owl Survey Dates

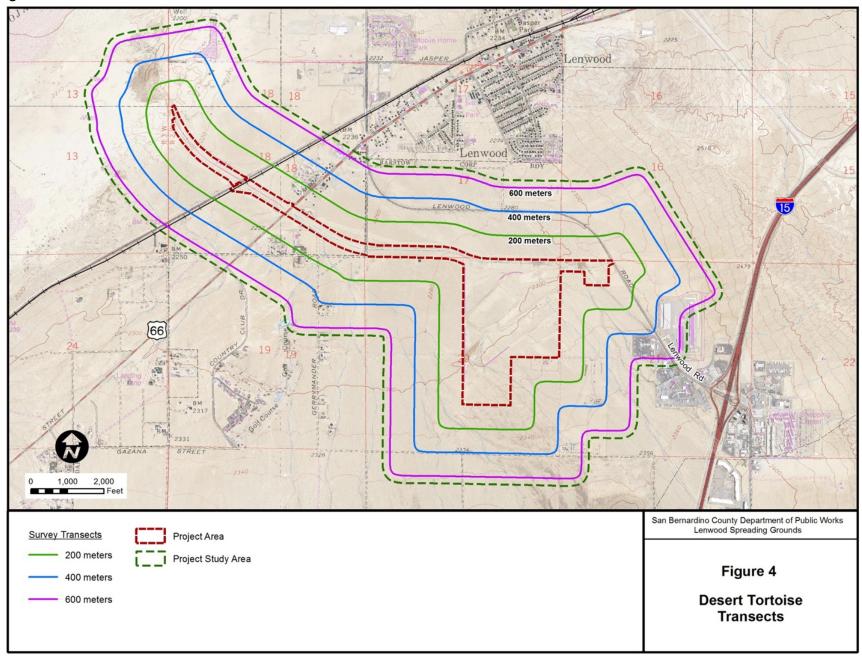
| BUOW visit | Date | Surveying Biologists |
|---------------|---------------------|---|
| 1 | 4/11/2017 | Kent Hughes, Chris Fabry, Blanca Rivera |
| 2 | 5/19/2017-5/22/2017 | Lehong Chow |
| 3 | 6/9/2017 | Lehong Chow |
| 4 | 6/30/2017 | Lehong Chow, Blanca Rivera |

Figure 3. CNDDB Information



Page 9

Figure 4. Desert Tortoise Transects



2.4 Mohave Ground Squirrel

Mohave ground squirrel surveys included live-trapping and camera trapping, all conducted by biologists permitted for these activities by California Department of Fish and Wildlife (CDFW) under Principal Investigator Kathryn Simon. Prior to surveys being conducted, Kathryn Simon and District personnel met with Rebecca Jones of CDFW on April 4, 2017 to determine level of effort and locations for live trapping and camera trapping. It was determined that two live trapping grids would occur in the best areas of native habitat within the fenced Project area, and that camera trapping would occur in the remaining areas of potential habitat within the Project area and Project Study Area. The determination was based on the habitat potential identified in previous surveys in 2016 and observations during the site visit. Figure 5 shows the locations of live trapping and camera trapping and Table 2 below lists dates and personnel conducting the surveys.

Table 2. MGS Trapping and Camera Dates

| Lenwood 1 | Start | End | Surveying Biologist |
|-----------------|-----------|-----------|---------------------------|
| session 1 | 4/16/2017 | 4/20/2017 | Lehong Chow |
| session 2 | 5/15/2017 | 5/19/2017 | Lehong Chow |
| session 3 | 6/26/2017 | 6/30/2017 | Lehong Chow |
| Lenwood 2 | Start | End | Surveying Biologist |
| session 1 | 4/22/2017 | 4/26/2017 | Adam Walters, Lehong Chow |
| session 2 | 5/20/2017 | 5/24/2017 | Lehong Chow |
| session 3 | 6/22/2017 | 6/26/2017 | Adam Walters |
| Camera Stations | Setup | Pickup | Surveying Biologist |
| session 1 | 4/19/2017 | 4/24/2017 | Lehong Chow |
| session 2 | 5/16/2017 | 5/21/2017 | Lehong Chow |
| session 3 | 6/23/2017 | 6/28/2017 | Adam Walters, Lehong Chow |

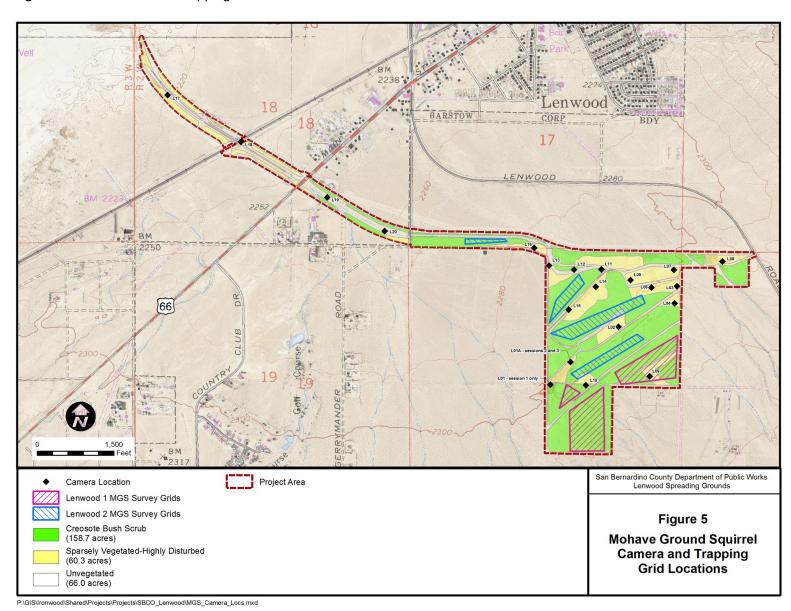
2.4.1 Live Trapping

CDFW guidelines (CDFW 2003, revised 2010) require live trapping for three sessions of trapping- the first session occurs between March and April, the second session in May, and the last session between mid-June and July. Each session consists of five consecutive days of trapping from sunrise to sunset with limits on temperature and inclement weather conditions. Traps were opened near sunrise, checked throughout the day, and then checked and closed before sunset.

Each grid was divided into three portions where the Project area had the best habitat for MGS. Lenwood 1 was located in the southern portion of the Project area while Lenwood 2 was the grid located in the northern portion of the Project area (Figure 5).

One hundred 12-inch aluminum HB Sherman folding live-traps, spaced 35-meters apart, were used for each respective grid during each trapping session. The bait placed into individual traps consisted of a 4-way livestock grain and peanut powder mixture. Cardboard folded in an A-frame and stabilized by soil was placed over each trap to provide shade.

Figure 5. MGS Camera and Trapping Grid Locations



Page **12**

2.4.2 Camera Trapping

The methodology used for camera trapping was based on a camera trapping study conducted by the Desert Tortoise Natural Area that deters raven activity at the camera station (Logan 2015). Twenty camera stations were set using Reconyx HC900 Hyperfire High Output Covert IR Cameras™ - one camera station, L01, was non-productive during session 1 and was moved to another location, L01A for sessions 2 and 3. Cameras were set at high sensitivity to take 3 photos/trigger, rapid-fire interval to take 2 frames/second, and no delay between triggers. Cameras were affixed with zip-ties to two wooden stakes which were also attached together with zip-ties to support the camera weight. Stakes were hammered into the ground so that cameras were 10-13 centimeters (cm) above the ground. Cameras were placed facing north to reduce glare and within large bushes when possible to reduce visibility of cameras to the public.

Bait tubes were used to attract animals to camera locations. These bait tubes were made of 2.54-cm (1 inch) diameter polyvinyl chloride (PVC) pipe cut to 15-cm (5.9 inches) lengths with small holes drilled around the tube. The tubes were filled with 4-way livestock grain, peanut powder, and peanut butter, then capped at each end. Bait tubes were then attached to metal rebar 30.5 cm (12 inches) in length with zip-ties and hammered into the ground in front of cameras to prevent movement of the bait pipe from view of the camera. A smear of peanut butter was placed atop the metal rebar to increase attraction to the station.

Each camera session ran for a minimum of 5 consecutive days for 24 hours each day and were checked within 1-2 days of setting the station to ensure that they were functioning properly. Cameras were picked up after running for 5 full days when each live trapping session ended. Camera trapping days overlapped with live trapping dates from both Lenwood 1 and Lenwood 2. Data cards were downloaded shortly after pickup and photos were reviewed by an authorized MGS biologist

3.0 RESULTS

3.1 General Biological Setting

This section discusses the plants and wildlife recorded incidental to other surveys performed at the site, discussed in detail in the following sections. General site photos are presented in Appendix A and all data sheets from all surveys in Appendix B.

3.1.1 Plants

A list of all plants detected are included in Table 3 on the following page, and no sensitive plant species were detected during surveys. The Project Study Area supports creosote bush scrub (Sawyer 2009; Figure 6), with areas of this community moderately and highly disturbed, as well as unvegetated areas of existing District access roads and facilities. Highly disturbed areas supported many more non-native species.

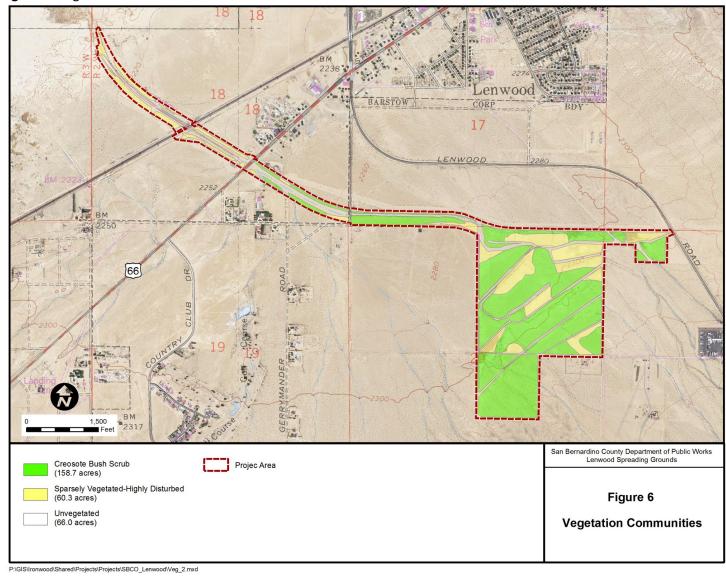
Table 3. Plants Detected

| Scientific Name | Common Name |
|----------------------------------|-------------------------|
| Acamptopappus sphaerocephalus | golden head |
| Ambrosia acanthicarpa | annual bur-sage |
| Ambrosia dumosa | burrobush |
| Ambrosia salsola | cheesebush |
| Amsinckia tessellata | Deill's lettuce |
| Asclepias erosa | desert milkweed |
| Atriplex confertifolia | shadscale |
| Brassica nigra* | black mustard |
| Bromus diandrus* | ripgut brome |
| Bromus madritensis rubens* | red brome |
| Bromus tectorum* | cheat grass |
| Camissonia brevipes | suncups |
| Camissonia campestris campestris | Mojave suncups |
| Chaenactis fremontii | Fremont's pin cushion |
| Chorizanthe brevicornus | brittle spineflower |
| Chorizanthe rigida | rigid spiny spineflower |
| Cryptantha micrantha | cushion cryptantha |
| Cryptantha sp. | cryptantha |
| Cylindropunta echinocarpa | Wiggin's cholla |
| Datura wrightii | jimson weed |
| Delphinium parishii | Parish's larkspur |
| Descurainia pinnata* | western tansy mustard |
| Eriophyllum wallacei | Wallace's woolly daisy |
| Erodium cicutarium* | filaree |
| | |

| Scientific Name | Common Name |
|-----------------------------|-------------------------|
| Eschscholzia californica | California poppy |
| Euphorbia albomarginata | white-margin sandmat |
| Grayia spinosa | spiny hopsage |
| Heliotropium curvassicum | heliotrope |
| Hirschfeldia incana* | short podded mustard |
| Hordeum marinum* | barley |
| Larrea tridentata | creosote bush |
| Lasthenia californica | California goldfields |
| Layia glandulosa | white tidy tips |
| Lycium anersonii | Anderson's boxthorn |
| Lycium cooperi | Cooper's boxthorn |
| Malacothrix glabrata | desert dandelion |
| Menzelia albicaulis | whitestem blazingstar |
| Opuntia basilaris basilaris | beavertail cactus |
| Parkinsonia florida | blue palo verde |
| Pectis papposa | many bristle chinchweed |
| Phacelia crenulata | phacelia |
| Phalaris minor | littleseed canarygrass |
| Prosopsis glandulosa | fatbean mesquite |
| Rafinesguia neomexicana | New Mexican plumseed |
| Salsola tragus* | Russian thistle |
| Schmis barbatus* | Mediterranean grass |
| Senna armata | desert senna |
| Stephanomeria virgata | wirelettuce |
| Sysimbrium irio* | London rocket |

^{*=} non-native species

Figure 6. Vegetation Communities



Page **15**

3.1.2 Wildlife

A list of all wildlife detected are included in Table 4. Three sensitive species were observed incidentally during surveys - burrowing owl (*Athene cuncicularia*), LeConte's thrasher (*Toxostoma lecontei*), and Mojave fringe-toed lizard (*Uma scoparia*). These are California state species of concern, and the two birds are USFWS birds of conservation concern. Mojave fringe-toed lizard was observed at the far western end of the buffer area where there are dune habitats and other recent records of this species. A table of all incidental wildlife species observed is in Table 4.



Photo 1. LeConte's thrasher, camera station LO2, session 1

Table 4. Incidental Species Detected

| Common Name | Scientific Name |
|-------------------------|-------------------------|
| bank swallow | Riparia riparia |
| black phoebe | Sayornis nigricans |
| black-tailed jackrabbit | Lepus californicus |
| black-throated sparrow | Aphispiza bilineata |
| burrowing owl | Athene cunicularia |
| common raven | Corvus corax |
| Costa's humming bird | Calypte costae |
| coyote | Canis latrans |
| desert horned lizard | Phyrnosoma platyrhinos |
| desert spiny lizard | Sceloporus magister |
| desert tortoise | Gopherus agassizii |
| desert woodrat | Neotoma lepida |
| domestic dog | Canis lupis familiaris |
| greater roadrunner | Geococcyx californianus |
| horned lark | Erimophila alpestris |
| horned lizard | Phyrnosoma platyrhinos |
| zebra-tailed lizard | Callisaurus draconoides |

| Common Name | Scientific Name |
|---------------------------|--------------------------|
| house finch | Carpodacus mexicanus |
| LeConte's thrasher | Toxostoma lecontei |
| leopard lizard | Gambelia wislenzenii |
| lesser nighthawk | Chordeilas acutipennis |
| Merriam's kangaroo rat | Dipodymys merriami |
| Mojave fringe-toed lizard | Uma scoparia |
| mourning dove | Zenaida macroura |
| pocket mouse | Chaeotodipus sp. |
| red racer snake | Masticophis flagellum |
| red-tailed hawk | Falco sparverius |
| rock wren | Salpinactes obsoletus |
| sage sparrow | Artemisospiza nevadensis |
| side-blotched lizard | Uta stansburiana |
| turkey vulture | Cathartes aura |
| western whiptail | Aspidoscelis tigris |
| white-crowned sparrow | Zonotrichia leucophrys |

3.2 Desert Tortoise

Two live desert tortoises were observed during the desert tortoise protocol survey – one within the fenced

Project area and one within the Project Study Area as shown on Figure 7. Desert tortoise sign observed included two active burrows, one inactive burrow, an old piece of scat, and a carcass.

Figure 8 shows desert tortoise sign found during the 2017 survey as well as all desert tortoise sign that has been recorded in the Project Study Area in previous surveys.



Photo 2. Adult Male tortoise found in Project Study Area outside fence

3.3 Burrowing Owl

One burrowing owl was observed on three consecutive days during Session 2 surveys in May. These observations were very close to a pair of burrows that were adjacent to one another with white wash and a feather. A burrow with whitewash was also observed north of those burrows. All burrowing owl observations are displayed on Figure 8.

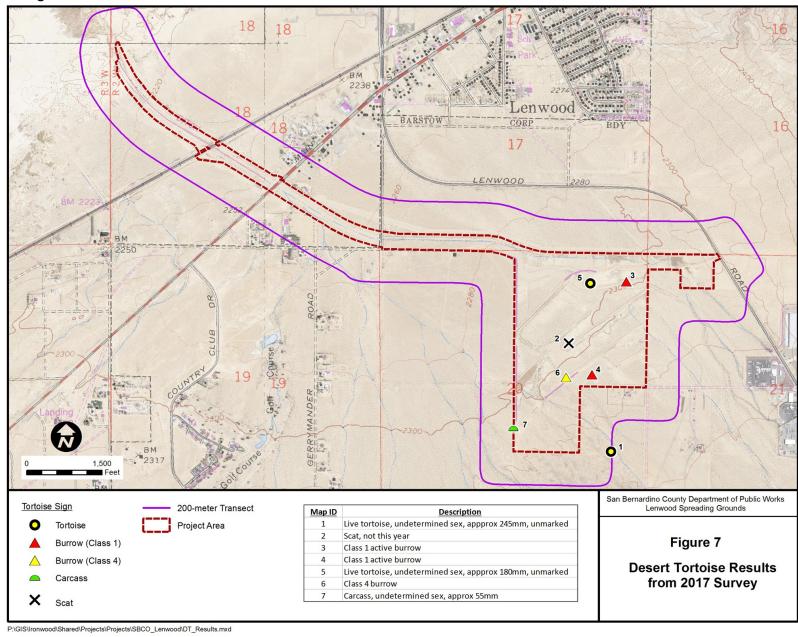


Photo 3. Burrows with feather and white wash



Photo 4. Burrowing owl individual on shrub

Figure 7. Desert Tortoise Results - 2017



Page **18**

Figure 8. Desert Tortoise Results - All

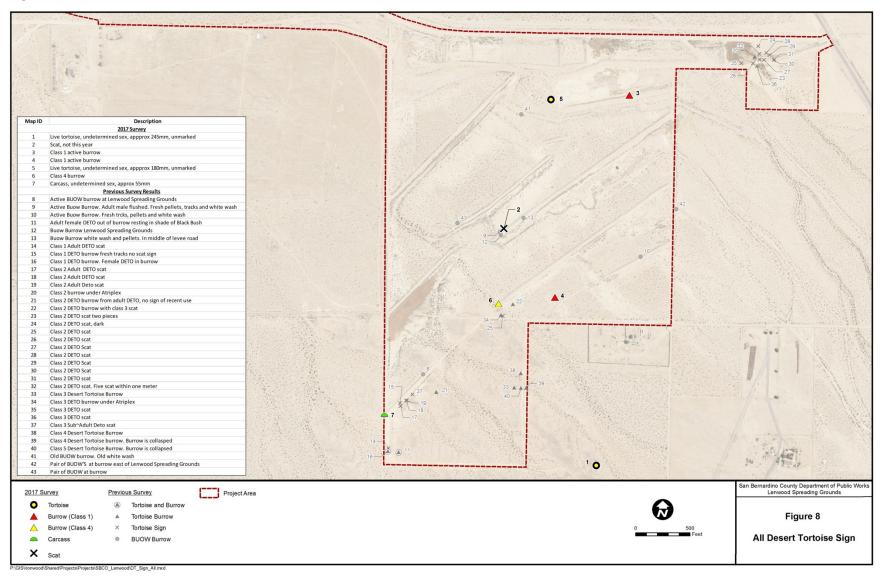
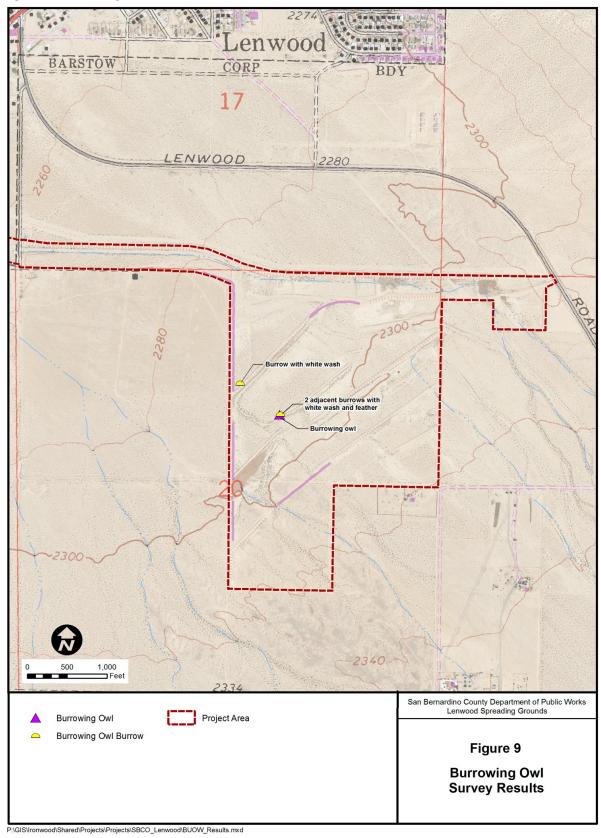


Figure 9. Burrowing Owl Results



3.4 Mohave Ground Squirrel

3.4.1 Live Trapping



Photo 5. RTGS lactating female, Lenwood grid 2, session1

No MGS were trapped during all three trapping sessions. White-railed antelope ground squirrels (*Ammospermophilus leucurus*) were the primary squirrel species live-trapped. Two round-tailed ground squirrels (*Xerospermophilus tereticaudus* - RTGS) were trapped. Both live RTGS individuals trapped were lactating females. A genetic sample was taken from the ear of each individual for genetic analysis. All wildlife species trapped from the live trapping effort is summarized in Table 5 shows results live trapping.



Photo 6. RTGS lactating female, Lenwood grid 1, session 2

Table 5. MGS Live Trapping Results

| | NUMBER OF INDIVIDUALS TRAPPED AT GRIDS | | | | | | | | | | | |
|---|--|---------|---------|---------|-----------|---------|--|--|--|--|--|--|
| WILDLIFE SPECIES TRAPPED | sess | ion 1 | sessi | ion 2 | session 3 | | | | | | | |
| WILDLII E SI EGIES THAT I ED | Lenwood | Lenwood | Lenwood | Lenwood | Lenwood | Lenwood | | | | | | |
| | 1 | 2 | 1 | 2 | 1 | 2 | | | | | | |
| antelope ground squirrel (Ammospermophilus leucurus) | 14 | 14 | 9 | 23 | 47 | 15 | | | | | | |
| desert cottontail (Syvilagus audobonii) | - | 1 | - | - | - | - | | | | | | |
| round-tailed ground squirrel (Xerospermophilus tereticaudus) | - | 1 | 1 | - | - | - | | | | | | |
| desert spiny lizard (Sceloperus magistar) | | - | 1 | - | - | - | | | | | | |
| western whiptail lizard (Aspedoscelis tigris) | 3 | 1 | 3 | 2 | 2 | 1 | | | | | | |

3.4.2 Camera Trapping

No images of MGS were observed from camera trapping. The most abundant species caught on camera images were white-tailed antelope ground squirrels. Three camera trap stations that had images of RTGS, identified by the roundness and long length of the tail. Camera images from L16 did not show the tail of the squirrel, but this individual was assumed to be a RTGS because all live trapping and camera trapping was positive for RTGS and not MGS. Table 6 summarizes the camera trapping results and photos 4-11 show representative images of species observed on the camera traps.



Photo 7. RTGS, camera station L10, session 3



Photo 8. RTGS, camera station L14, session 2



Photo 9. Assumed RTGS, camera station L16, session 2, no images showing tail



Photo 10. Antelope ground squirrel, camera station L12, session 32



Photo 11. Black-tailed jackrabbit, camera station LO4, session 2



Photo 13. kangaroo rat, camera station L05, session 2



Photo 12. Desert kit fox, camera station LO2, session 2



Photo 14. Deer mouse, camera station L18, session 2

Table 6. Camera Trapping Results

| WILDLIFE SPECIES DETECTED | | | | | | | | | CAME | ERA ST | TATION | NUM | IBERS | | | | | | | | |
|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| ON CAMERA | L01 | L01-A | L02 | L03 | L04 | L05 | L06 | L07 | L08 | L09 | L10 | L11 | L12 | L13 | L14 | L15 | L16 | L17 | L18 | L19 | L20 |
| antelope ground squirrel (Ammospermophilus | | | | | | | | | | | | | | | | | | | | | |
| leucurus) | - | 3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | - | 3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2 |
| black-tailed Jackrabbit | | | | | | | | | | | | | | | | | | | | | |
| (Lepus californicus) | - | - | 1,2,3 | 1,3 | 1,2,3 | - | 2,3 | 2,3 | 2 | - | 1,2,3 | - | 1,2,3 | 1,3 | 2 | 2 | 1,2 | - | 3 | 2 | - |
| black-throated sparrow | | | | | | | | | | | | | | | | | | | | | |
| (Aphispiza bilineata) | - | - | - | - | - | - | - | - | ı | - | - | - | - | - | - | - | - | - | - | - | 2 |
| common raven | | | | | | | | | | | | | | | | | | | | | |
| (Corvus corax) | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - |
| desert cottontail rabbit | | | | | | | | | | | | | | | | | | | | | |
| (Syvilagus audobonii) | - | - | - | - | 1 | - | - | - | 3 | - | - | - | - | - | 1 | - | 2,3 | - | 1 | 1,3 | - |
| deer mouse | | | | | | | | | | | | | | | | | | | | | |
| (Peromyscus sp.) | - | - | - | - | 2 | - | - | 2 | 1,3 | - | - | - | - | - | - | - | - | - | 1,2,3 | 2 | - |
| desert iguana (Diposaurus dorsalis) | _ | _ | _ | 1,2 | _ | _ | _ | _ | 2 | 1,2 | _ | 2 | 3 | 2 | _ | _ | 1,3 | _ | _ | _ | _ |
| desert kit fox | | | | | | | | | | | | | | | | | | | | | |
| (Vulpes macrostis) | - | - | 1, 2 | 1 | - | - | 1 | - | - | - | 1,3 | 1 | - | 1 | - | - | 2 | - | - | 1 | - |
| desert spiny lizard | | | | | | | | | | | | | | | | | | | | | |
| (Sceloperus magister) | - | 2 | - | - | - | - | - | 3 | ı | - | - | - | - | 3 | 1 | 1,2 | 3 | - | 2,3 | - | - |
| desert wood rat | | | | | | | | | | | | | | | | | | | | | |
| (Neotoma lepida) | - | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| domestic dog | | | | | | | | | | | | | | | | | | | | | |
| (Canis lupis familiaris) | - | - | - | - | - | - | - | 1 | - | 2,3 | - | 1 | - | 1,2 | 2 | 2 | - | - | - | - | - |
| LeConte's thrasher | | | | | | | | | | | | | | | | | | | | | |
| (Toxostoma lecontei) | - | - | 1 | - | 1 | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| leopard lizard | | | | | | | | | | | | | | | | | | | | | |
| (Gambelia wislizenii) | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - | - | - |

1= session 1 2=session 2 3=session 3

 Table 4. Camera Trapping results (continued)

| WILDLIFE SPECIES DETECTED ON | , | CAMERA STATION NUMBERS | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-----|------------------------|-----|-------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|-----|-----|-------|-----|-----|-----|----------|
| CAMERA | L01 | L01-A | L02 | L03 | L04 | L05 | L06 | L07 | L08 | L09 | L10 | L11 | L12 | L13 | L14 | L15 | L16 | L17 | L18 | L19 | L20 |
| Merriam's kangaroo rat | | | | | | | | | | | | | | | | | | | | | |
| (Dipodomys merriami) | - | 3 | 2 | 1,2,3 | 1 | 1,2,3 | 2,3 | 1,2,3 | 1,2 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 1,2,3 | 2,3 | 1,2 | 1,2,3 | 3 | - | - | 1 |
| mourning dove | | | | | | | | | | | | | | | | | | | | | |
| (Zenaida macroura) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | - | - | 2 | - | - |
| pocket mouse | | | | | | | | | | | | | | | | | | | | | |
| (Chaetodipus sp.) | - | 2,3 | 1,3 | 1 | 2,3 | 2,3 | 2,3 | - | 1,2,3 | 1,3 | 1,2 | - | 2 | 2,3 | 2 | 2,3 | - | 2 | - | 2,3 | 3 |
| red racer snake | | | | | | | | | | | | | | | | | | | | | |
| (Masticophis flagellum) | - | - | - | - | - | - | - | 3 | - | 1 | - | - | - | - | - | - | - | - | - | - | - |
| road runner | | | | | | | | | | | | | | | | | | | | | |
| (Geococcyx californianus) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| round-tailed ground squirrel | | | | | | | | | | | | | | | | | | | | | |
| (Xerespermophilus tereticaudus) | - | - | - | - | - | - | - | | - | - | 3 | - | - | - | 2 | - | 2 | - | - | - | - |
| sage sparrow | | | | | | | | | | | | | | | | | | | | | |
| (Artemisospiza nevadensis) | - | 2 | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | <u> </u> |
| side-blotched lizard | | | | | | | | | | | | | | | | | | | | | |
| (Uta sp.) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| western banded gecko | | | | | | | | | | | | | | | | | | | | | |
| (Coleonyx variegatus) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | - | - |
| western whiptail lizard | | | | | | | | | | | | | | | | | | | | | |
| (Aspedoscelis tigris) | - | - | - | 1 | - | 1 | 1,2 | 1 | - | - | - | - | 2 | 2,3 | 1 | 2 | - | - | 2,3 | - | - |
| zebra-tail lizard | | | | | | | | | | | | | | | | | | | | | |
| (Callisaurus draconoides) | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

1= session 1 2=session 2 3=session 3

4.0 RECOMMENDATIONS

Ironwood recommends that the following biological resources or species be considered in California Environmental Quality Act (CEQA) documentation for the project with the goal of avoidance, minimization, and/or mitigation for these resources known to be present in the Project Study Area and requiring avoidance or minimization/mitigation of potential impacts:

- Desert tortoise
- Burrowing owl
- Mojave fringe-toed lizard
- Nesting Birds; LeConte's thrasher

Ironwood recommends a pre-construction survey conducted within 30 days of Project activities commencing to determine the status of these resources immediately prior to activities commencing. Results of that survey would be used to refine avoidance and minimization actions during Project activities. Additional measures are recommended below for desert tortoise.

All areas of potential Mojave fringe toed lizard habitat that could be affected by the project will be restricted from project access by placement of temporary visual barriers such as snow fence.

Because protocol surveys were negative for this species, Mohave ground squirrels are considered absent from the Project Study Area for at least one year from the completion of trapping. If project activities begin during that time period, no additional activities for this species are recommended or required. If project activities start after one year, it is recommended that a memo be written to support no further MGS trapping or cameras because site conditions remain unchanged (assuming that is correct). No other listed species are likely to be found in the Project Study Area.

4.1 Desert Tortoise

The proposed Project may have both direct and indirect impacts to the species. Direct impacts could occur if an animal is injured or killed during project implementation, possibly from vehicle traffic or being crushed in a burrow during soils excavation activities. Indirect impacts could occur from the removal of creosote bush-white bursage scrub habitat (permanent impact), and from increased dust and noise during construction (temporary impact).

Ironwood recommends using desert tortoise exclusion fencing to exclude those areas of good habitat (intact native creosote bush-white bursage communities with adjacent accessible similar habitats). The area inside the desert tortoise fence would be cleared to determine presence or absence of any desert tortoise or recent sign inside the fence. If no such animals or sign are found project activities will continue with no monitor required for activities conducted inside the fence, assuming the fence remains intact. If any desert tortoise or recent sign are found during the clearance survey, activities will not commence and San Bernardino Flood Control District personnel will contact California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) personnel to initiate formal consultation under the state and federal endangered species acts.

Ironwood recommends that qualified biological monitors be present during ground disturbing activities that are not within a fenced and cleared area, such as monitoring fence installation, and any activities in the eastern portion of Lenwood channel where creosote bush-white bursage habitat is present.

Additional recommended mitigation includes providing replacement habitat for the good quality habitat that would be removed within the desert tortoise fence, as proposed on the following table and figure. All replacement habitat would include nested mitigation for any impacts to burrowing owl and LeConte's thrasher.

| Project Feature | Quality of Existing Desert Tortoise Habitat (Figure 8) | Acres Affected | Mitigation Ratio | Acres |
|---------------------|--|-------------------------|---------------------|--------|
| Lenwood spreading | Creosote bush – white bursage, less disturbed (moderate or good) | 132.0 | 1:1 | 132.0 |
| grounds | Creosote bush – white bursage, highly disturbed or unvegetated | 65.8 | 0:1 | 0.0 |
| | Creosote bush – white bursage, less disturbed | 26.7 | 1:1 | 26.7 |
| Lenwood | | | | |
| channel | Creosote bush – white bursage, highly disturbed | | | |
| | or unvegetated | 58.7 | 0:1 | 0.0 |
| Lenwood spillway | Creosote bush – white bursage, highly disturbed or unvegetated | 0.4 | 0.0 | 0.0 |
| | Proposed acres to be p | provided as compensator | y mitigation | 158.7* |

^{*}Final compensatory mitigation ratios will be arrived at during the regulatory permitting process and included in the Streambed Alteration Agreement prepared under Section 1602 of the Fish and Game code.

Ironwood recommends that the District prepare a Worker Environmental Awareness Plan (WEAP) that will be given to all personnel at the site. The WEAP will include a discussion of each species, all applicable laws, the permit conditions, and the potential consequences.

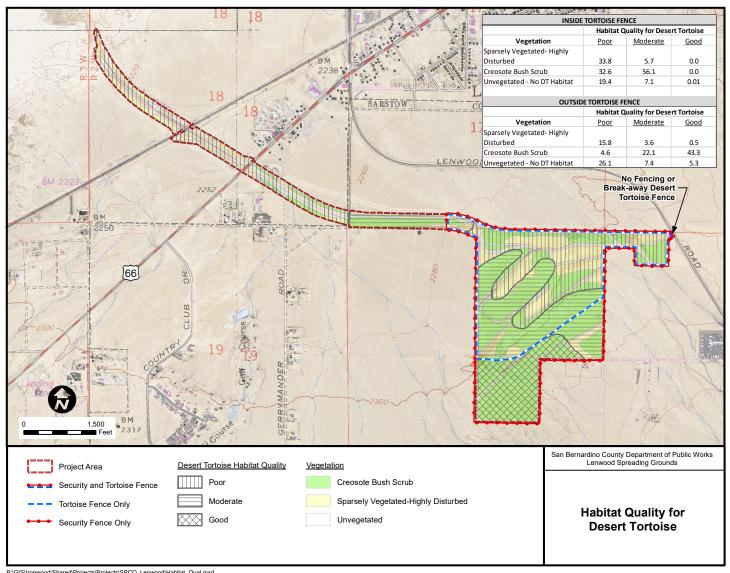
Activities conducted outside the exclusion fence will be monitored where good quality habitat is being removed in the Lenwood channel until the completion of vegetation removal. After vegetation removal and in areas of poor-quality habitat, areas will be spot checked as appropriate to the activity, its timing and duration.

Equipment staging, temporary stockpiling and personnel will within the exclusion fence.

Speeds will be kept to under 20 mph in unpaved areas outside desert tortoise exclusion fence at all times.

Trash will be kept in closed containers at all times and routinely removed from maintenance areas.

Project activities will be limited to daylight hours (approximately 7:00 A.M. to 6:00 P.M.). During night hours, no activities that would unnaturally increase the light or noise within adjacent occupied habitat will occur.



 $P:\label{lem:convoid} Projects\label{lem:convoid} Projec$

Page 28 March 2019

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Appendix A - General Site Photos



Southern portion of grid facing north



Southwestern portion of Project with levee facing south



Western portion of Project facing southwest



Northwest corner of the Project facing southeast

Appendix B – Datasheets

| MGS | Trap | ping | Surve | V |
|-----|------|------|-------|---|
|-----|------|------|-------|---|

Page ___ of ___

| DATE Ho - April | | GRID | d I | Investigat Assistant | | hong | Chon | ~~~~ | | | | |
|---|---|-------------------|---|-------------------------|----------------|-------------------|--|---|---|--|---|---|
| Circle when traps were | | Opening | | Check #1 | | Check #2 | | Check #3 | | Check #4 | | NOTES |
| Ciosca | • | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time | (24 hr) | 410 | 7:58 | 1054 | 1225 | 1648 | 18.18 | | | | 4 | |
| Tem | p (°F) | 49 | 60 | 72 | 82 | 86 | 78 | | | | | |
| Wind | (mph) | 0-2 | 0-2 | 2-3 | 2-3 | 6-9 | 5-10 | | | | | |
| Cloud C | Cover (%) | 40 | 30 | 30 | 30 | 30 | 60 | | | | | |
| Time (24 hr) | Trap# | Spe | ecies | Recap? | Sex | Age | Repro condition | COMMENT | | coordinates: | species measu | (GPS urements, etc.) |
| 1308 | 94 | AM | LE | YN | M F | A SA J | Condition | | | | | , |
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| General N | otes or Ob | servations | : | ~~~ | ~~~~~~ | ***************** | ***************** | *************************************** | | | | |
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MGS Trapping Survey

Page ____ of ___

| End Start | End L2:12 76 8-10 80 90 90 90 90 90 90 9 | Start | End 18:19 74 8-19 100 Repro | Start | k#3 End | Chec Start | End | NOTES |
|--|---|---|---|--|---|--|--|--|
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| | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time | (24 hr) | 6:02 | 7:22 | 10:56 | 1206 | 16:45 | 17:58 | 4.00 | | | | *************************************** |
| Tem | np (°F) | 58 | 41 | 74 | 76 | 76 | 74 | | | | The same of the sa | *************************************** |
| Wind | d (mph) | 1-2 | 5-8 | 10-15 | 11-15 | 14-16 | 14-17 | *************************************** | | | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| Cloud (| Cover (%) | 6 | 5 | 19 | 30 | 30 | 30 | | | | | |
| Time (24 hr) | Trap# | Sp | ecies | Recap? | Sex | Age | Repro condition | COMMENT | | coordinates | enecies meas | (GPS surements, etc.) |
| 1148 | 15 | AM | LF. | (Y) N | M F | A SA J | Condition. | | 10.00 | Joordinas | Species meas. | diemento, etc.) |
| | | - | <u> </u> | ΥN | MF | A SA J | | *************************************** | | | *************************************** | |
| *************************************** |) | | | ΥN | MF | A SA J | | | | *************************************** | | |
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| | | | | ΥN | MF | A SA J | | | | | | |
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| | | | | ΥN | M F | A SA J | | | | - | | |
| | | | | ΥN | MF | A SA J | 114 | | | | | |
| | | | | ΥN | M F | A SA J | | | | *************************************** | *************************************** | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| | | | | ΥN | M F | A SA J | | | | | An experience of the contract | |
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| | | | *************************************** | ΥN | MF | A SA J | | | | | | *************************************** |
| **Reproduct | tive Condition | n: scrotal (SC | CR); non-scro | نصحن | post-scrotal (| | nant (PREG); lac | tating (LAC); po | ost-lactating (| (PLAC); perfc | orate (PERF); imp | perforate (IMP) |
| | | bservations | | | | | | | | | | onorac (, |
| | | | | | | | | •••••••••••• | | | | *************************************** |
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Page _1_ of _1_

| DATE | | GRID Lenwo | od 1 | Investiga Assistant | tor(s): | hong | Chow | ****** | | | L | |
|-----------------|---|---------------|--|------------------------|----------------|--------------|---|---|---|---|---|---|
| Circle when | traps were | | ening | new State Control | ck #1 | Ch | eck #2 | Chec | k #3 | Che | ck #4 | NOTES |
| closed | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time (| (24 hr) | 606 | 7:24 | 10.2 | 12:22 | 16:53 | 18:18 | m- 1102 | | | | |
| Temp | o (°F) | 49 | 55 | 70 | 72 | 81 | 78 | ***************** | | *********** | | *************************************** |
| Wind | (mph) | 1-3 | 1-2 | 0-2 | 2-4 | 0-2 | le-8 | ************ | | *************************************** | | ~ |
| Cloud Co | over (%) | 0 | D | 0 | 3 | 5 | D | | | | | |
| Time | Trap# | Spe | ecies | Recap? | Sex | Age | Repro | COMMENT | | | | (GPS |
| (24 hr) リーりち | | inless | ptail | YN | MF | A SA J | condition | | NAD 63 (| coordinates | species mea | asurements, etc.) |
| 11. 22 | | i worki | PARIL. | ΥN | ΜF | A SA J | | | | *************************************** | | |
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| | | } | | YN | ΜF | A SA J | | - | | | *************************************** | *************************************** |
| | | | | YN | MF | A SA J | | | | | | H 27 - 2 |
| | | | | ΥN | ΜF | A SA J | | | *************************************** | 1 | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |
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| | ********* | | | YN | MF | A SA J | | | | | | |
| | | | an in an | YN | ΜF | A SA J | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | | | | | = |
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| ļ | | | | ΥN | MF | A SA J | | | | ******** | | |
| | | | | YN | M F | A SA J | | | | | | |
| **Reproductiv | ve Condition | : scrotal (SC | R); non-scrot | al (NSCR); p | ost-scrotal (F | PSCR); pregn | ant (PREG); lac | tating (LAC); po | ost-lactating (| PLAC); perfo | rate (PERF); ir | mperforate (IMP) |
| General No | otes or Ob | servations | : | | | ~~~~~ | ~~~~ | | | | ~~~~~~ | ~~~~ |
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Page 1 of 1

| 20-Apr | 11-2016 | GRID LEMWO | od 1 | Investiga Assistant | tor(s): | hong C | how | a Ar u - r | | | | |
|--------------------|---|---|----------------|------------------------|---------------|--------------|--------------------|---|---|---|---|---|
| Circle when closed | 10000 | AND CHEST AND COLUMN | ening | | ck #1 | Ch | eck #2 | Chec | :k #3 | Che | ck #4 | NOTES |
| Cioseu | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time (| 24 hr) | 6:04 | 7:15 | 10:45 | 11:50 | 16:14 | H:56 | | | | | *************************************** |
| Temp | (°F) | 50 | 54 | 70 | 12 | 77 | 75 | **************** | | *************** | | |
| Wind (| (mph) | 4-9 | 5-8 | 8-12 | | 8-14 | 8-10 | *************** | | | | *************************************** |
| Cloud Co | over (%) | D | 0 | 5 | 5 | 5 | 0 | | | | | |
| Time | Trap # | <u> </u> | cies | Recap? | Sex | Age | Repro | COMMENT | | | | (GI |
| 24 hr) | 91 | | | Y (N) | | ASA J | condition | | NAD 83 c | coordinates; | species measu | rements, etc.) |
| <i>W40</i> | | Am | LU | YN | M F | A SA J | | | *************************************** | *************************************** | | |
| | ************ | | | YN | M F | A SA J | | | ************** | ************* | *************** | *************************************** |
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| Ì | | | | ΥN | M F | A SA J | | | | | | |
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| | | | | ΥN | ΜF | A SA J | | | ***** | ********* | ***************** | |
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| | | ******* | | ΥN | MF | A SA J | | | | | | |
| | | ********* | | ΥN | ΜF | A SA J | | | | ************ | # 12 | V |
| | *************************************** | ******* | ~~~~~ | ΥN | M F | A SA J | ****************** | | | | | ******************************* |
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| | | | | ΥN | M F | A SA J | | | ************ | *************************************** | | |
| | | | | ΥN | | A SA J | | | | | | |
| eproductive | e Condition: | scrotal (SCR | R); non-scrota | al (NSCR); po | st-scrotal (P | SCR); pregna | ant (PREG); lact | ating (LAC); po | st-lactating (F | PLAC); perfora | ate (PERF); impe | rforate (IMP) |
| neral Not | tes or Obs | servations: | | ~~~~ | | | | ~~~~ | ~~~~~ | | | ~~~~ |
| - | ********* | ******* | ****** | *********** | ******** | ********* | *********** | ~~~~~~~~ | ********* | ********* | *********** | |
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Page <u>1</u> of <u>1</u>

| date 15-Ma | M-2017 | GRID LUNWI | odl | Assistant | tor(s): \(\(\)(s): | mong | Chow | | | | | |
|--------------------|--------------|---|---|---|----------------------|------------------|---|------------------|-----------------|---|---|--|
| Circle when closed | | Ope | ening | Che | ck #1 | Ch | eck #2 | Chec | k #3 | Chec | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | 201 |
| Tíme (| 24 hr) | 6:50 | જઃાજ | 1225 | 1328 | 1709 | 1806 | 7 7 01 | MB s | LBI | | ****************** |
| Temp | (°F) | 50 | 56 | 64 | 45 | 66 | 43 | 4.1 | 1. | 114 | | *************************************** |
| Wind | (mph) | 8-13 | 9-12 | 9-14 | 13-15 | 10-14 | 11-14 | : h) | | 177- | 1 11-3 | We tell the tell tell tell tell tell tell |
| Cloud Co | over (%) | 5 | 5 | 80 | 80 | 65 | 50 | 0/3 | 1 00 | | | The Later Harris |
| Time (24 hr) | Тгар# | Spe | ecies | Recap? | Sex | Age | Repro condition | COMMENT | | coordinates: | eneries meas | (Gurements, etc.) |
| 2:54 | 40 | AML | E | Y () | M(F) | A)SA J | 1AC | 10 (| 7,7,2,000 | soordinates, | species meas | aremena, etc.) |
| 3:19 | 4 | ٤, | ************* | YO | (M) F | (A) SA J | SCR | | | (1) | *************************************** | |
| | | | | ΥN | ΜF | A SA J | | | | | | 1 1 |
| | | | | ΥN | ΜF | A SA J | | | | | | II TAI |
| | J. Section 1 | . UPX | | YN | MF | A SA J | pl. llj = | | A Die Mary | | 3) | and the second s |
| | | | | ΥN | MF | A SA J | | | ****** | | ~~~~ | n A - 24 |
| | | ************ | | ΥN | M F | A SA J | | | *********** | ******** | ******* | |
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| | | *************************************** | | YN | M F | A SA J | | | | ****************** | | |
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| <u> </u> | ~~~~~ | | ······································ | Y N Y N | | A SA J A SA J | | | | *************************************** | ······································ | |
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| | | | | ΥN | MF | A SA J | | L F21 | 4 | | | - N |
| | | | | ΥN | ΜF | A SA J | | | | *************************************** | | |
| | | | | ΥN | ΜF | A SA J | | | | | | |
| | | | | ΥN | ΜF | A SA J | | | | | | |
| | | | | YN | ΜF | A SA J | | | | | | |
| | | : scrotal (SC servations | | tal (NSCR); p | ost-scrotal (F | PSCR); pregn | ant (PREG); lac | tating (LAC); po | ost-lactating (| PLAC); perfor | ate (PERF); imp | erforate (IMP) |
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Page _ [of

| | 4-2017 | GRID VMW(| od 1 | Investiga Assistant | | eliong 1 | Chow | AC) ALVO | MAD 19 | | 4) // | MAN AS II | |
|-----------------|--------------|----------------------------|--------|------------------------|---------------|--------------|------------------|-------------------|----------------|---|---|---|--|
| Circle when | n traps were | Ope | ening | Che | ck #1 | Ch | eck #2 | Chec | k #3 | Chec | ck #4 | NO. | TES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | nust© - | |
| Time | (24 hr) | 409 | 728 | 11:52 | 12:51 | 1705 | 1824 | T POS | 188 | 7.25 | 33:7 | la la | 10 2514 |
| Tem | p (°F) | 51 | 55 | 71 | 76 | 76 | 73 | d an | 13 | l Wy | 1.08 | | *************************************** |
| Wind | (mph) | 4-6 | 8-11 | 7-10 | 5-8 | 7-14 | 7-13 | 1 1 ju-c | 131- | ji luski | SI- | 1 lery l | ********* |
| Cloud C | over (%) | Ø | 0 | 10 | 35 | 80 | 90 | - i >. | 1 00 | 1 1 | 1 8 | 1 2 1 | My tarks |
| Time (24 hr) | Trap# | Spe | ecies | Recap? | Sex | Age | Repro | COMMENTS | | Paganes | | 34ese | (|
| 206 | 90 | AW | ILE | Y (N) | (M) F | (A)SA J | condition | V Last | NAD 83 (| coordinates; | species m | neasurements, etc | -) |
| 209 | 93 | '\ | | Y (N) | M (F) | <u> </u> | | | | ~~~~~ | ************* | | *************************************** |
| 213 | 97 | western ferril | N Bard | ΥN | M F | A SA J | | 1 48 | | *************************************** | *************** | ****************************** | |
| 247 | 70 | whiph | | ΥN | M F | A SA J | **************** | ***************** | 200 | 2070 | | *************************************** | |
| 812 | 18 | XET | | Y (N) | M (F) | (A) SA J | LAC | 490173 | 385 | | *********** | T: 89mm | 106a |
| 745 | 15 | AW | | Y (N) | (M) F | (A)SA J | SUR | 11.78 | | \$ 09 0 | | 1.0 (100) | 1000 |
| | | | , | ΥN | M F | A SA J | ~~~~~ | - 11 A8 / | A J A M | ************************************** | | ******************* | ******** |
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| | 1 | | | ΥN | MF | A SA J | | 11 48 | 11 | | **** | *************************************** | *************************************** |
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| | | | ~~~~ | ΥN | ΜF | A SA J | | It AB. | 1 7 1 | 1 18 9 | | | The state of the s |
| <u></u> | | ************** | / | ΥN | MF | A SA J | | 14.00 | 1 9 0 | 1 12 - | | | *********** |
| | | | | ΥN | ΜF | A SA J | 1 | I L AZ | 1 1 14 | N v | | | |
| | | | | ΥN | M F | A SA J | | | | h V | | | |
| | | | | ΥN | MF | A SA J | 1 | 1. 76. / | | - ∮ M X. | | | |
| | | *********** | | ΥN | MF | A SA J | | i o Ato a | 3 16 | | | | |
| | | | | ΥN | | A SA J | | L SE F | 4 3 M | | | ****************** | |
| | | | | YN | MF | A SA J | | AS A | | | ******* | **** | ~~~~ |
| | | | | YN | MF | A SA J | | t 48) | | *************************************** | ~~~~~~~ | ******************** | |
| | | | - | YN | MF | A SA J | - | e l 143 1 | N 18 | MA N | | | |
| | | ************** | | YN | MF | A SA J | | | 1 3 ta | M X | | ••••• | |
| | | | | YN | MF | A SA J | | 1.1. AS 7 | | Y | | ···· | ~~~~~ |
| | | ······ | | YN | M F | A SA J | | | ~~~~~~ | | | ~~~~~ | |
| | | | | YN | M F | A SA J | | 11, A2 A | - 1 3 M | W Y | *************************************** | | |
| i | | | | YN | | A SA J | | | | 18 18 | | | |
| | | scrotal (SCR ervations: | | ii (NSCR); po | st-scrotal (P | SCR); pregna | ant (PREG); lact | ating (LAC); pos | t-lactating (F | PLAC); perfora | te (PERF); | imperforate (IMP) | |

Page ___ of __

| | 4-2017 | GRID LUNW | i boo | Assistan | t(s): | enong | Chow | | | | A) | 13.72 |
|----------------|--|--|------------------|----------|------------|----------|---|---|---|---|--|---|
| | n traps were | Оре | ening | Che | ck #1 | Che | eck #2 | Chec | k #3 | Chec | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | man I |
| Time | (24 hr) | 604 | 709 | 1220 | 1321 | 1705 | 1810 | | | | | *************************************** |
| Tem | p (°F) | 55 | 55 | 71 | 72 | 71 | 68 | *************************************** | | | | *************************************** |
| Wind | (mph) | 12-16 | 12-15 | 9-12 | 12-16 | 12-17 | 14-19 | | *************************************** | | | *************************************** |
| Cloud C | over (%) | 70 | 70 | 20 | 15 | 20 | 15 | | | | 1 | |
| Time 24 hr) | Trap# | Spe | cies | Recap? | Sex | Age | Repro | COMMENTS | | | Halian I | (0 |
| 259 | 55 | AM | W | Y (N) | M F | (A)SA J | condition | L AS | NAD 83 (| coordinates; | species measu | rements, etc.) |
| | ······································ | للنظيلة | | ΥN | M F | A SA J | | 16.43 | Ad 1 H | A N | | |
| | | *************************************** | **************** | ΥN | ΜF | A SA J | *************************************** | 11.72. | A de A D | *************************************** | ********* | ************************* |
| | | | | ΥN | ΜF | A SA J | *************************************** | L A3 | o [: 9: 14 | | | |
| _ | | | | ΥN | MF | A SA J | | L A | u ji si y | . 17 (4. 1 | į | |
| | | ************ | | YN | MF | A SA J | | fu as | A 3 48 | 4 4 4 | The second secon | |
| | | | | ΥN | ΜF | A SA J | ***************************** | A8- | ******** | ********** | ************** | ************************* |
| | | | ~~~ | ΥN | ΜF | A SA J | | 1. AB; / | A 9 M | N Y | | ************************ |
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| | | - Company of the Comp | | ΥN | M F | A SA J | | LAB | 4 4 8 | 1 8 7 | | |
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| | | | | ΥN | M F | A SA J | | Į L A2 | 8 B E | <u> </u> | | |
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| <u>i</u> | | | | YN | MF | | | | • | | ~~~~~ | |
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| | | ····· | | YN | MF | A SA J | | | | *************************************** | | ····· |
| | | *************************************** | | YN | M F | | | Ap | | | ······································ | |
| | re Condition: | |); non-scrota | | | | int (PREG); lact | ating (LAC); pos | st-lactating (P | 'LAC); perfora | ite (PERF); imper | forate (IMP) |

Page | of

| | W-2017 | GRID LEM WI | ood 1 | Investiga Assistan | t(s): | hong | Chow | | de | li egi ey | | rageor |
|-----------------|---------------|---|---------------|-----------------------|-----------------------|----------------------|---|---|---|------------------|---|---|
| Circle whe | en traps were | Оре | ening | | ck #1 | Ch | eck #2 | Chec | ck #3 | Cher | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | NOTES |
| Time | (24 hr) | 605 | 707 | 1205 | 1305 | 1700 | 1801 | | | | Lite | |
| Tem | p (°F) | 49 | 55 | 73 | 82 | 82 | 82 | - | | | | |
| Wind | (mph) | 13 | 1-2 | 4-5 | 2-4 | 3-6 | 1-2 | · | | | | ***************************** |
| Cloud C | over (%) | 0 | D | 5 | 5 | 5 | 5 | | | | | |
| Time (24 hr) | Trap# | Spe | cies | Recap? | Sex | Age | Repro | COMMENTS | | | | (G |
| 215 | 83 | whip | otail | ΥN | ΜF | A SA J | condition | LAS | NAD 83 c | oordinates; | species meas | urements, etc.) |
| 701 | 73 | ١١ | | ΥN | ΜF | A SA J | ~~~~ | L AS | | | *************************************** | |
| | | | | ΥN | MF | A SA J | ************* | L AA | ************* | *************** | ******** | *************************************** |
| | | | | ΥN | MF | A SA J | | A an | | | *************************************** | |
| | | | | YN | MF | A SA J | | 1 22 2 | | ····· | | |
| | | ********** | | ΥN | MF | A SA J | | 1.787 | L A M | - M 7 | | |
| | | ************ | | ΥN | MF | A SA J | | ************ | *********** | | ******* | ****************************** |
| | | | | ΥN | MF | A SA J | | 1 5 72 1 | ************* | ************ | ************* | ******************************* |
| | | | | ΥN | M F | A SA J | | 11.02.4 | 9 34 | | | |
| | | | | YN | MF | A SA J | | 11.48.4 | LE R. M | 31. 3 | | |
| | | | | YN | M F | A SA J | ì | · Laaa | 9 9 | i n e | | |
| <u> </u> - | | | | ΥN | MF | A SA J | | U 48 A | F 18 | И | | |
| | | | | YN | M F | A SA J | | il Az A | 1 4 14 | | ***************** | |
| | | | | YN | MF | A SA J | | ilas a | 1 9 10 | M F | *************************************** | |
| - | | | | YN | | A SA J | | LASA | 1 4 14 | l in in | | |
| | | | | YN | | A SA J | | L AS A | 3 18 | 19 P | | |
| | | | | •••••••••••••• | M F | A SA J | | L AE A | *************************************** | | | |
| | | | | | ~~~~~ ~- | A SA J | | 1 10 A | ******** | 10 7 | | |
| | | | | i | | A SA J | | A, SA J | | | | |
| | | | - | | | A SA J | | 1 L AS A | 1 9 M | M. Y. | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |
| | | ····· | | | | A SA J | | | Î A N | ИХ | | |
| | | | ~~~~ <u>~</u> | | | SA J | | AS A | 1 A 14 | 92. 5 | | |
| | | *************************************** | | | | SA J | | - A6 6 | | | *************************************** | |
| | | *************************************** | <u>-</u> | | | SA J | | I AS A | 4 14 | M = Y | | |
| oductive | Condition: so | crotal (SCR); | - | - | | SA J R); pregnant | t (PREG); lactat | ing (LAC); post-l | lactating /DI | AC): porfessi | (DEDE): | |
| ral Note | es or Obser | vations: | | | | ,. , g. will | , | g (LAC), post- | actaing (PL) | с); periorate | (PERF); imperf | orate (IMP) |
| | | | | | ~~~~~~ | **** | | *************************************** | ~~~~ | | | work would be eated for |
| ********** | ~~~~~ | ************* | ************* | ********** | ************* | | | | ************* | ************* | ************* | |
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| End Start 709 1206 40 76 2-3 4-7 0 0 ecies Recap? Y N Y N Y N Y N Y N Y N Y N Y N Y N | 1305 77 5-8 0 Sex M (5) | Start | End 1814 85 0-1 2 Reprocondition | Start COMMENTS | End | Start | End End | NOTES ements, etc.) |
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| 709 1206 40 76 2-3 4-7 0 0 ecies Recap? Y (N) Y N Y N Y N Y N Y N Y N Y N Y N | 1305 77 58 0 Sex M (F) M (F) M (F) M (F) M (F) M (F) M (F) M (F) | Age A | 1814 85 0-1 2 Repro | | | Start | End | |
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| ecies Recap? Y Y Y Y Y N | Sex M F M F M F M F M F M F M F | Age A A A A A A A A A A A A A A A A A A A | 2 Repro condition | COMMENTS | | pordinates; s | species measur | ements, etc.) |
| ecies Recap? Y Y Y Y Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Sex M F M F M F M F M F M F M F | Age A A A A A A A A A A A A A A A A A A A | Repro condition | COMMENTS | | pordinates; s | species measur | ements, etc.) |
| Y R Y N Y N Y N Y N Y N Y N | M F M F M F M F M F M F M F M F | A SA J A SA J A SA J A SA J A SA J A SA J A SA J | condition | COMMENTS | | oordinates; s | species measur | rements, etc.) |
| Y (R) Y (N) Y N Y N Y N Y N Y N Y N Y N Y N | M F M F M F M F M F M F | A SA J A SA J A SA J A SA J A SA J A SA J | | LAZA | NAD 83 co | pordinates; s | species measur | ements, etc.) |
| Y (R) Y (N) Y N Y N Y N Y N Y N Y N Y N Y N | M F M F M F M F M F M F M F | A SA J A SA J A SA J A SA J A SA J A SA J | LAC | A SA J. L. SA SA J. SA SA J. L. SA SA J. SA J. SA SA J. SA SA J. SA SA J. SA | 7 M | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | |
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| Y N Y N Y N Y N Y N | M F M F M F | A SA J A SA J | | | | ± м ү | | |
| Y N Y N Y N | M F | A SA J | | i Laga | ********** | | | |
| Y N Y N | ΜF | | | I LASA | ********** | *************** | | |
| ΥN | | A SA J | | *************************************** | | la y | ~~~~ | **************** |
| | M - | | II | | - F W | i N Y | | |
| | IVI F | A SA J | | L AS A | 1 14 | H H | *************************************** | |
| YN | MF | A SA J | | LASA | 1 H | И У | | |
| ΥN | MF | A SA J | | L AB. A | 1 7 4 | | *************************************** | |
| ΥN | MF | A SA J | | L Ali A | 111 | W Y | *********** | |
| ΥN | MF | A SA J | | L AT A | | 47 Y | *************************************** | |
| YN | MF | A SA J | 1 | 1 At A | 7 M | | *************************************** | *************************************** |
| ΥN | MF | A SA J | , | L A2 A | 9 1/2 | M Y | | |
| YN | MF | A SA J | | LANK | 3 34 | I H V | *************************************** | |
| YN | MF | A SA J | | 1.46.4 | 7 14 | M Y | *************************************** | ••••• |
| YN | MF | A SA J | | 1.66.A | | in in | ***************** | *************************************** |
| | MF | A SA J | = 1 | 11 AS A | | 11 | | **************** |
| YN | MF | A SA J | | LADA | 7 18 | n Y | | |
| YN | MF | A SA J | | LAGA | 7. 14 | 4 / [| ~~~~~ | |
| YN | MF | A SA J | | i Laen | 9 81 | 4 | | |
| | | A SA J | | i i as a i | 7 18 | W. F. | *************************************** | |
| YN | | | 1 | L AS A | 7 14 | *************************************** | *************************************** | |
| | Y N Y N Y N Y N Y N Y N Y N Y N Y N Y N | Y N M F Y N M F Y N M F Y N M F Y N M F Y N M F Y N M F Y N M F Y N M F Y N M F Y N M F | Y N M F A SA J | Y N M F A SA J | Y N M F A SA J Y N M F A SA J Y N M F A SA J YN MF ASAJ

| MGS | Trap | ping | Surve | ν |
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| | 120,1000,000,000 | | | |

Page 1 of 1

| | | Lenwo | oda 1 | Assistant | (s): | ehong (| 210014 | V see | | | | |
|-----------------|---------------|---|---|---------------|----------------|---------------|---|------------------|---|---|---|---|
| Circle when | n traps were | Ope | ening | Che | ck #1 | Che | eck #2 | Chec | k #3 | Che | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time | (24 hr) | 526 | 727 | 823 | 936 | | | | | | | |
| Tem | p (°F) | 76 | 83 | 89 | 94 | | | 1 | | | | |
| Wind | (mph) | 2-4 | 6-7 | 4-6 | 8-11 | | ••••••• | | | | | |
| Cloud C | over (%) | hazy | 0 | D | 5 | | •••••• | | | | | |
| Time | Trap# | Spe | cies | Recap? | Sex | Age | Repro | COMMENT | | | | |
| (24 hr) 82.6 | 72 | AMI | | Y (N) | M F | | condition | | NAD 83 | coordinates; | species measu | rements, etc.) |
| 856 | | HYN | | YN | MF | A SA J | *************************************** | | | ~~~~~~~~~~~ | | |
| 915 | 21 | , I | | Y N | MF | A(SA) J | | l | | ······································ | | |
| 125 | 8 | ١ | (| Y (Ñ) | M (F) | · | | | *************************************** | | | |
| 931 | le | ` | .(| Y (N) | (M) F | A SA(J) | | | •••••• | | ••••••••• | |
| 10 | | | | YN | ΜF | A SA J | | | | | | |
| | | | ********* | ΥN | M F | A SA J | | | ************* | *************************************** | *************************************** | *************************************** |
| | | *************************************** | *************************************** | ΥN | MF | A SA J | | ······ | ***************** | | *************************************** | *************************************** |
| | | | ~~~ | ΥN | M F | A SA J | | | ~~~~ | ······································ | | ····· |
| | | | | ΥN | ŅΕ | A SA J | | | | | | |
| | | | | ΥN | ΜF | A SA J | | | | | | |
| | | | | ΥN | MF | A SA J | | | | | | |
| | | | | ΥN | МF | A SA J | | | | | | |
| | | | | ΥN | M F | A SA J | | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | |
| | | | | ΥN | МF | A SA J | | | | | | |
| | | | | ΥN | MF | A SA J | | | | | * | |
| | | | | ΥN | MF | A SA J | | | | | | |
| | | | ,,,,,, ,,,,,,, | ΥN | MF | A SA J | | | | ********* | | |
| | | | | ΥN | ΜF | A SA J | | | | *************************************** | | |
| | | | | ΥN | M F | A SA J | | | | | | |
| | | | | ΥN | M F | | | | | | | |
| | | | | ΥN | MF | | | | | *************************************** | | |
| | | | | ΥN | M F | A SA J | | | | | | |
| | | | | ΥN | M F | | | ļ | | | | |
| | | | | YN | M F | A SA J | | | | | | |
| Reproducti | ve Condition: | scrotal (SCR | R); non-scrot | al (NSCR); po | ost-scrotal (F | PSCR); pregna | ant (PREG); lac | tating (LAC); po | st-lactating (I | PLAC); perfor | ate (PERF); impe | rforate (IMP) |
| eneral No | otes or Obs | servations: | | | | | 1 | | ~~~~ | | | |
| | | | | | | | | | | | | |

Page <u>l</u> of <u>l</u>

| DATE | | -2017 | GRID Lemmo | nd I | Investiga Assistant | tor(s): | chong | Chow | | | | L | |
|---------|----------|--------------|---|---------------------------------------|------------------------|---|--------------|-----------------|------------------|---|---|---|---|
| | | traps were | all the transfer of the state of | ening | Che | | Ch | eck #2 | Chec | k #3 | Cho | ck #4 | NOTES |
| - | closed | • | | | | | | | | | | | NOTES |
| - | | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Т | ime (| 24 hr) | 5:21 | 447 | 837 | 1011 | | | | | | | |
| | Temp | (°F) | 75 | 79 | 89 | 94 | | | | | | | |
| V | Nind (| (mph) | 4-5 | 0-2 | 10-7 | 8-11 | | | | | | | ••••••••••••••••••••••••••••••••••••••• |
| Clo | ud C | over (%) | hazy | hozy | | nazva | | | İ | | | | |
| Tim | ne : | | | | 1 | | | Repro | COMMENT | s | | | (GPS |
| (24 1 | | Trap# | | cies | Recap? | Sex | Age | condition | | | coordinates; | species measu | urements, etc.) |
| N N | | 73 | *************************************** | NE | YN | | A 🔊 | ~~~~ | ļ | | · | | |
| 85 | ••••• | 87 | " | · · · · · · · · · · · · · · · · · · · | Y | M (F) | | | | | | | |
| 90 | | 99 | | \ .\ | Y (N) Y N | M F | A(SA)J | | | | | | |
| 91 | ******* | 55 54 | | | Y (N) | M F | A SA J | | | •••••• | ······································ | | |
| 92 | : | 53 | | .(| Y (N) | M (F) | A SA J | | | | | *************************************** | |
| 94 | | 23 | ` | ^ | ΥN | (M) F | A (SA) J | | | ************ | ***************** | *************************************** | *************************************** |
| 95 | | 17 | ,1 | | ΥN | M F | A SA J | ~~~~ | | •••••••• | | ****** | |
| 100 | | l | ١ | V. | ŶN | M F | A SA J | ~~~~~ | | | | | *************************************** |
| 0 100 | 3 | 2 | 1 | | Y (N) | (M) F | A SAJ | | | | | *************************************** | |
| 1 | | | | | ΥN | МЕ | A SA J | | | | | | |
| 2 | | | | | ΥN | M F | A SA J | | | | | ******************************* | |
| 3 | | | | | ΥN | M F | A SA J | | | | *************************************** | | |
| 4 | | | | | ΥN | M F | A SA J | | | | ••••• | | |
| 5 | _ | | | | YN | | A SA J | | | | - | | |
| 6 | | | | | YN | | A SA J | | | •••••• | | *************************************** | |
| 7 | | | | | YN | ••••••••••••••••••••••••••••••••••••••• | A SA J | | ļ | •••••• | | | |
| В | | | | | | M F | | | ļ | • | | | |
| | + | | | | Y N Y N | M F | A SA J | | | | ************ | | *************************************** |
| | + | | | | YN | MF | A SA J | | | | · · · · · · · · · · · · · · · · · · · | | |
| ? | \dashv | | | | ΥN | M F | A SA J | | | | | | |
| 3 | \neg | | | | ΥN | M F | A SA J | | | | *************************************** | | |
| 1 | 7 | | *************************************** | | ΥN | M F | A SA J | ~~~~~ | | | | | |
| 5 | | | | | ΥN | M F | A SA J | | | | | | |
| **Repro | oductiv | e Condition: | scrotal (SCR | R); non-scrota | al (NSCR); po | ost-scrotal (F | SCR); pregna | ant (PREG); lac | tating (LAC); po | st-lactating (F | PLAC); perfor | ate (PERF); impe | erforate (IMP) |
| Genera | al No | tes or Obs | servations: | | | _ | | | | | | | |
| | | | | • | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | *************************************** | | | |

Page <u>| | of | |</u>

| DATE 28 Ju | ne 2017 | GRID LON WOL | sd 1 | Investiga Assistant | tor(s):) | ehong | Chow | | | | I | |
|---------------|--------------|-----------------|---|------------------------|---|---------------|---|------------------|---|---|---|----------------|
| Circle whe | n traps were | Оре | ening | Che | ck #1 | Che | eck #2 | Chec | k #3 | Che | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time | (24 hr) | 517 | 629 | 849 | 1017 | | | | | | | |
| Tem | p (°F) | 76 | 77 | 88 | 91 | | | İ | | ******************* | | |
| Wind | (mph) | 7.8 | 3-4 | 5-6 | 7-9 | | | | | | | |
| Cloud C | Cover (%) | D | 0 | D | D | | | | | | | |
| Time | Trap# | Spe | cies | Recap? | Sex | Age | Repro | COMMENT | | oordinatas | | (GPS |
| (24 hr) | 73 | AM | I.F. | YN | M F | ASA J | condition | - 3 | NAD 63 C | coordinates; | species measu | rements, etc.) |
| 916 | 104 | 11111 | 00 | YN | (M)F | A(SA)J | *************************************** | | | *************************************** | | |
| 926 | 55 | , | 1 | (y) N | M F | A SA J | | I | | ************ | | |
| 930 | 49 | 1.1 | <u>, </u> | (Y) N | ΜF | A SA J | 4.4 | | ••••••••••• | •••••• | | |
| 940 | 37 | | ч | Y N | MF | A SA J | | | | ••••••• | •••••••••• | |
| 955 | 14 | p | | YN | MF | A SAJ | | | | | | |
| 959 | D | ١ | 1 | YN | M F | A SA J | | | | | | |
| 1001 | 9 | • | | YN | MF | A SA J | | | *************************************** | | | |
| 1007 | 3 | ١, | | YN | M (F) | A(SA)J | ~~~~ | | | | *************************************** | |
| 1009 | 5 | * | | Y N | M F | A SA J | | | | | | |
| IDID | 6 | ^\ | | YN | M F | A SA J | | | ···· | | | |
| 1012 | 67 | ١ | • | YN | M F | A SA J | | | | | | |
| | | | | YN | | A SA J | | | | ••••••• | | |
| | | | | YN | | A SA J | | | | | | |
| | | | | YN | | A SA J | | | | | | |
| | | | | YN | | A SA J | | | •••••• | | | |
| | | | | ΥN | • | A SA J | •••••• | | •••••• | •••••• | | |
| | | | *************************************** | ΥN | M F | · | | | *************************************** | | ************* | |
| | | | | ΥN | | A SA J | *************************************** | | ************* | ************ | | |
| | | | | ΥN | M F | A SA J | | | | - | | |
| | | | | ΥN | M F | A SA J | *************************************** | | | *************************************** | | |
| | | | | ΥN | M F | A SA J | | | | *************************************** | | |
| | | | | ΥN | M F | A SA J | ~~~~ | | | | | |
| Živi. | | | | ΥN | M F | A SA J | | | | | | |
| Reproducti | ve Condition | : scrotal (SCF | R); non-scro | tal (NSCR); po | ost-scrotal (I | PSCR); pregna | ant (PREG); lac | tating (LAC); po | st-lactating (F | PLAC); perfor | ate (PERF); impe | rforate (IMP) |
| General No | otes or Obs | servations: | | | , | ; | , | | | | | |
| | | | | | | | | | ••••• | | | |
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| MGS Trapping Survey | N | 1 | GS | Tr | ap | ping | Su | irve |
|---------------------|---|---|----|----|----|------|----|------|
|---------------------|---|---|----|----|----|------|----|------|

Page ___ of __

| 29-Ju | 1-2017 | Lenwo | od 1 | Assistant | tor(s): Le (s): | hong (| how | | | ••••• | L | |
|-----------|---|-------------|--------|---------------|--------------------|---------------|----------------|------------------|---|---|---|---|
| | when traps were Openin osed Start Start | ening | Che | | Che | eck #2 | Chec | k #3 | Che | ck #4 | NOTES | |
| Close | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time | (24 hr) | 521 | 640 | 908 | 1025 | | | | | | | |
| Tem | p (°F) | 73 | 76 | 88 | 91 | | | | | | | |
| Wind | (mph) | 4-6 | 5-7 | 4-7 | 4-6 | | •••••• | | | | | |
| Cloud C | Cover (%) | D | D | D | 0 | | | | | | | |
| Time | Trap# | | cies | Recap? | Sex | Age | Repro | COMMENT | | | | (GPS |
| (24 hr) | 71 | AM | | (Ŷ) N | M F | A SA J | condition | - | NAD 83 d | coordinates; | species measu | rements, etc.) |
| 925 | 92 | '' | | YN | (M) F | A (SA)J | ~~~~~~ | | | ~~~~ | | |
| 928 | 93 | 1 | ,1 | ΥN | M (F) | ASAJ | | 4 | | 1 | | |
| 930 | 94 | | ,l | ΥN | (M) F | (A)SA J | | | *************************************** | *************************************** | | |
| 938 | 65 | V | (| ΥN | M F | A SA | | | | •••••• | •••••••• | |
| 939 | 43 | whi | itail | ΥN | ΜF | A SA J | | | | | | |
| 941 | 64 | AM | LE | ΥN | M F | A(SA) J | . 1-1 | | | *************************************** | | *************************************** |
| 942 | 44 | 10 | | YN | M F | A SA J | | | | | *************************************** | |
| 944 | 63 | whip | tall | ΥN | M F | A SA J | | | | | | |
| 953 | 55 | AMI | | YN | ΜF | A SA J | | | | | | |
| 1007 | 14 | ` | | ΥN | M (F) | A SA J | ~~~~~ | | | ~~~~~ | | |
| 1010 | 12 | U | · | ΥN | MF | A SA J | | | | | | |
| 1010 | 3 | | | YN | МF | A SA J | | | | | | |
| 1018 | 4 | | .1 | (Y)N | | A SA J | | | | | | |
| | | | | YN | M F | A SA J | | | | | | |
| | | | | ΥN | M F | A SA J | | | *************************************** | ••••• | | |
| | | | | ΥN | | A SA J | | ļ | •••••• | | | |
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| P.Darra I | en Caratina | seeds! (OCT | Di nes | | | | not (BDEC): I | totion (I AC): | nat lactor " | OLACY | ente (DEDE) : | of coals (BAD) |
| | | | | ar (NOCK); po | se-scrotal (F | -SCK); pregna | in (PREG); IBC | lading (LAC); po | st-lactating (F | LAC); perfor | rate (PERF); impe | morate (IMP) |
| General N | otes or Obs | servations: | ····· | | | | | | | | | ······································ |
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Page _ 1 of _ 1

| DATE 30-June-2017 | GRID | odl | Investigat Assistant | tor(s): | hong i | Chow Rivera | | | | | |
|-------------------------------|-----------------|--|-------------------------|------------------|---------------|---|------------------|---|---|-------------------------|---|
| Circle when traps were closed | 400045000000 | ening | Che | The Later of the | | eck #2 | Chec | k #3 | Chec | ck #4 | NOTES |
| | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time (24 hr) | 520 | 626 | 833 | 1014 | | | | | | | *************************************** |
| Temp (°F) | 74 | 75 | 86 | 92 | | | | | | | |
| Wind (mph) | 0-1 | 0-1 | 0-2 | 2-4 | | •••••• | | | | | |
| Cloud Cover (%) | D | 0 | 0 | D | | ••••• | | | | | |
| Time Trap# | Spe | ecies | Recap? | Sex | Age | Repro condition | COMMENT | | coordinates: | species measu | (GPS |
| 8:58 93 | AMI | E | YN | M F | (A)SA J | CONGRECI | Esca | | oordinatoo, | opedico medad | ionionis, etc.) |
| 904 100 | 11 | | PA | M F | A SA J | | | | D 101 | | |
| 912 63 | | | ŶN | M F | A SA J | Emile Ji | 5 | 9.1 | *************************************** | | |
| 927 29 | ,,, | | YN | M (F | A(SA)J | 4 4 | A 3 | 6 | | | |
| 930 35 | ", | | YN | MF | A SA J | Ser. | | | | | |
| 945 16 | " | | YN | MF | A SA J | | | | | *********************** | *************************************** |
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| | | | ΥN | M F | A SA J | | | | ••••••• | | |
| 2 3 1/3 | <u> </u> | | ΥN | M F | A SA J | ********** | | ******* | *************** | | |
| | | | ΥN | M F | A SA J | | | | | | |
| | | | ΥN | ЙF | A SA J | | | • | | | |
| | | | ΥN | M F | A SA J | | | | | | T. B. A. |
| | | | ΥN | ŅΕ | A SA J | | | | | | |
| | | | YN | ΜF | A SA J | | | | | | |
| *Reproductive Condition | n: scrotal (SCF | R); non-scrot | tal (NSCR); po | ost-scrotal (F | PSCR); pregna | ant (PREG); lac | tating (LAC); po | st-lactating (F | PLAC); perfora | ate (PERF); impe | rforate (IMP) |
| General Notes or Ob | servations: | | | 1 | | | | | | | |
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Page | of |

| | 2, 17 | GRID | od 2 | Investiga Assistan | ator(s): A | dam U | Ja lters | | | | <u> </u> | |
|---------------------------|----------|---------------|------------------|-----------------------|--------------|---------------|--|---|--|--|---|---|
| Circle when tra closed | eps were | Оре | ening | Ghe | ck #1 | CI | neck #2 | Che | ck #3 | Che | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time (24 | hr) | 0640 | 1005 | 1220 | 1343 | 1640 | 1800 | | | | | |
| Temp (°F | F) | 50° | 73° | 88.6 | 89.1 | 90.2 | 90.3 | *************************************** | | | | |
| Wind (mp | ph) | Louph | Inph | 4mph | 4mph | Impl | Imph | | | | | |
| Cloud Cove | er (%) | 20% | 20% | 15% | 10% | 10% | 20% | | | | | *************************************** |
| Time 24 hr) Ti | rap# | Spe | cies | Recap? | Sex | Age | Repro condition | COMMENT | | | | (|
| 302 6 | 63 | AG | S | Y Ø | ₫ В F | ⊘ SA J | SCR | | NAD 63 C | oordinates; | species measur | rements, etc.) |
| 310 7 | 71 | AG | | YO | | | SCR | † | *************************************** | | | |
| 315 7 | 78 | 46 | **************** | Y 🕥 | | | PSCR | | | ************** | | |
| | 64 | AGS | | Ø N | M F | A SA J | 1300 | | ***************** | | | |
| 134 7 | 73 | AG | | Y 10 | | ************ | PREG | | | *************************************** | | |
| | | | | Y N | MF | A SA J | | | | | | |
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| | | | | ΥN | MF | A SA J | | | | *************************************** | ······································ | *************************************** |
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| | | | 1 | YN | M F | A SA J | | | | ***************** | | |

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| | 23, 17 | GRID Lenwo | od Z | Investig: Assistan | ator(s): | Adam | Walter | 5 | | | L | · age _t_ oi |
|----------------|---|---|---------------|-----------------------|------------------|---------------|---|----------------|--|---|---|--|
| closed | n tråps were | | ening | | eck #1 | Ci | neck #2 | Che | ck #3 | Che | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time | (24 hr) | 0645 | 0800 | 1205 | 1328 | 1620 | 1733 | | | | | |
| Tem | p (°F) | 59° | 65.9° | 84° | 86.4° | 86° | 80° | | | | | |
| Wind | (mph) | Zmph | 5mph | 6mpl | 10mph | 15mph | 15mph | | | | | ************************ |
| Cloud C | over (%) | 30% | 20% | 15% | 10% | 30% | 25% | | | | | |
| Time 24 hr) | Trap# | | ecies | Recap? | Sex | Age | Repro condition | COMMENT | | coordinates | | |
| 215 | 30 | Deser | toutail | Y (N) | MF | A (A) J | | | 14AD 03 (| oordinates; | species measur | ements, etc.) |
| 220 | 25 | AG | | Y 🚳 | мВ | ***** | | 2000 | a C . | | | |
| 229 | 10 | AG | 5 | Y | ************* | ⊘ SA J | SCR | . re ca | Tro | m pre | NIOUS T | apping |
| 322 | 95 | AG: | 5 | Y 🔞 | | | PREG | ************** | | | **************** | |
| | | | e ger | ΥN | ΜF | A SA J | | | ••••••• | | *************************************** | |
| | **** | | | ΥN | MF | A SA J | | | | | - | |
| | | ^^~^ | | ΥN | MF | A SA J | ************** | ******* | | ********* | ********* | |
| <u>-</u> | nanan ing mananan kananan kananan kananan kananan kananan kanan kananan kananan kanan kanan kanan kanan kanan | - | | ΥN | MF | A SA J | ************ | *********** | ******** | ************ | ************* | |
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| ·····- | | *************************************** | | ΥN | MF | A SA J | | | | | | |
| | | ••••• | | YN | MF | <u>l</u> . | | | | | | |
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| | | | | YN | - | A SA J | | | | | | |
| | | | ; non-scrotal | (NSCR); pos | st-scrotal (PS | CR); pregna | nt (PREG); lactat | ing (LAC); pos | t-lactating (PL | AC); perforate | e (PERF); imperfo | rate (IMP) |
| eral Note | es or Obse | ervations: | | *********** | *** | ********** | | - | >+********************** | | | |
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| MGS | Trapp | oina | Sur | vev |

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| ATE | GRID | 1 2 | Investigat | tor(s): Le | hong | Chow | | | | L | |
|---|----------------|---|---------------|---------------|------------------|---|---|-----------------|------------------|---|---|
| 4-April-2017 | | 101 2 | ASSISTANT | (5). | 3 | | | | | | |
| closed C | Ope | ening | Chec | ck #1 | Che | eck #2 | Chec | :k #3 | Che | ck #4 | NOTES |
| | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time (24 hr) | 6:06 | 7:32 | 11:12 | 13:21 | | | | | | - | y l |
| Temp (°F) | 53 | 55 | 68 | 74 | | | *************************************** | | **************** | | |
| Wind (mph) | 8-12 | ****** | 22-24 | 23-26 | ********** | ********** | **************** | | | | ********************************* |
| Cloud Cover (%) | 60 | 70 | 70 | | | *************************************** | | | | | |
| Time Trap# | | ecies | Recap? | Sex | Age | Repro | COMMENT | | | : 11 | (0 |
| 24 hr) | none | | Y N | M F | A SA J | condition | | NAD 83 (| coordinates | ; species measu | rements, etc.) |
| | 700.0 | *************************************** | YN | M F | A SA J | ~~~~ | | | ************ | *************************************** | |
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| | 1 | *************************************** | ΥN | MF | A SA J | | | ••••• | | | ************************* |
| | | | YN | MF | A SA J | | | | | | |
| | | *************** | YN | MF | A SA J | | | | | | *************************************** |
| | | | ΥN | ΜF | A SA J | | | | | | |
| | - | | YN | MF | A SA J | | | | | | |
| | | | YN | MF | A SA J | | | | | | |
| | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | YN | M F | A SA J | | | | ~~~~ | | |
| | | | YN | MF | A SA J | | | ************ | | | |
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| | | | YN | MF | A SA J | | | | | | |
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| | - | | } | M F | | | | | ******* | | *************************************** |
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| | | | ΥN | M F | A SA J | *************************************** | | | | | |
| | | | YN | ΜF | A SA J | | | | 1200 | | * |
| eproductive Condition | n: scrotal (SC | R); non-scro | tal (NSCR); p | ost-scrotal (| PSCR); pregr | ant (PREG); lac | tating (LAC); p | ost-lactating (| (PLAC); perfo | orate (PERF); impe | erforate (IMP) |
| eneral Notes or O | | | | | | | | | ~~~~~ | | |
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Page ___ of ___

| DATE 25- Apr | vil-2017 | GRID LANNOT | d 2 | Investigat Assistant | tor(s): Le (s): | hong | Chow | | | *********** | | |
|-----------------|----------------|--|---|-------------------------|---|--------------|---|--------------------|---|--|--|---|
| Circle when | n traps were | Ope | ening | Che | ck #1 | (Ch | eck #2 | Chec | k #3 | Che | ck #4 | NOTES |
| Gidae | | Start | End | Start | End | Start | End | Start | End | Start | End | - |
| Time | (24 hr) | 6:06 | 7:23 | 11:16 | 13:34 | 17:02 | 1807 | | | | | |
| Tem | p (°F) | 50 | 54 | 69 | 72 | 72 | 70 | | 7 | | | |
| Wind | (mph) | 8-11 | 9-14 | 6-9 | 6-9 | 4-7 | 11-12 | 1-1 | | | | |
| Cloud C | Cover (%) | 40 | 30 | HD | 40 | 40 | 40 | ****************** | | | | |
| Time (24 hr) | Trap# | Spe | cies | Recap? | Sex | Age | Repro condition | COMMENT | | coordinates | enecies mes | (GPS asurements, etc.) |
| 1217 | 62 | XE. | TE | Y N | M F | (A)SA J | LAC | 49035 | 3/385 | VIII CONTRACTOR OF THE PARTY OF | sample, | |
| 1324 | 98 | | LE | Y (N) | ΜF | A SA J | | 1.10 | | | Sample | |
| 17-09 | 8 | | LE | Y (Ñ) | M F | A SA J | | | *********** | ********** | | |
| 1749 | 69 | V | | Y (N) | ∭ F | A SA J | | | *************************************** | | | |
| 1756 | 86 | A STATE OF THE PARTY OF THE PAR | (| (Y) N | M F | A SA J | | | | | 19 - 19 - 19 - 19 - 19 - 19 - 19 - 19 - | |
| 1758 | 91 | | \t | YN | M)F | (A)SA J | SCR | | | | | |
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| **Reproduct | tive Condition | n: scrotal (SC | R); non-scro | tal (NSCR); p | ost-scrotal (| PSCR); pregr | nant (PREG); lac | tating (LAC); po | ost-lactating (| PLAC); perfo | orate (PERF); i | mperforate (IMP) |
| General N | lotes or Ob | servations | : | | | | | | | | | * |
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Page ___ of __

| | nt-2017 | GRID | rd 2 | Investiga Assistan | tor(s): | hong | Chow | | | ********* | I I | |
|--|---|---|---------------|-----------------------|--------------|--------|---|---|--|---|---|--|
| Circle whe | n traps were | Оре | ening | Che | ck #1 | Ćh | eck #2 | Chec | k #3 | Che | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time | (24 hr) | 6:06 | 7:16 | 11:09 | 12:04 | 16.06 | 17:31 | | | | | *************************************** |
| Tem | p (°F) | 57 | 61 | 71 | 77 | 76 | 74 | ********** | | | | ************************************ |
| Wind | (mph) | 1-2 | 0-1 | 3-7 | 4-8 | 1623 | | *********** | | | | *************************************** |
| Cloud C | over (%) | 50 | 40 | 40 | 40 | 75 | 40 | | | | | |
| Time (24 hr) | Trap# | Spe | | Recap? | Sex | Age | Repro | COMMENT | | 0.00 | | (G |
| 1112 | 18 | whip | | ΥN | M F | A SA J | condition | | NAD 83 c | coordinates; | species mea | asurements, etc.) |
| 1609 | 1 | AMI | ************* | N | M F | A SA J | | *************** | ************* | ************** | ************ | |
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| 7 2 2 | | • | | ΥN | M F | A SA J | | | | •••••• | | · · · · · · · · · · · · · · · · · · · |
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| | | | | ΥN | ΜF | A SA J | *********** | ~~~~~~~~~~ | ^^ <i>\</i> \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | ******** | ********** | ****************************** |
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| | | *************************************** | | YN | ~~~~ <u></u> | A SA J | | *************************************** | - | ~~~~~~~~~ | | |
| | | ~~~~~~ | | Y N Y N | MF | A SA J | | | | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | |
| | | | | YN | M F | A SA J | | | ~~~~ | *************************************** | | *************************************** |
| THE RESIDENCE OF THE PARTY OF T | AND DESCRIPTION OF THE PARTY NAMED IN | scrotal (SCR) |); non-scrota | | | | int (PREG); lacta | ating (LAC); pos | it-lactating (P | LAC); perfora | ate (PERF); im | perforate (IMP) |
| | | | | ************ | | | | ************* | *************** | | | |

MGS Trapping Survey Page l of I DATE Investigator(s): LeMong Chow 20-May-207 Lenwood 2 Assistant(s): Opening Check #1 Check #2 Check #3 Check #4 NOTES Start End Start End Start End Start End Start End Time (24 hr) 608 744 1112 1235 Temp (°F) 60 67 88 90 Wind (mph) 0-1 1-2 3-4 3-4 Cloud Cover (%) D 0 D Trap# **Species** Repro COMMENTS Recap? (24 hr) Sex Age (GPS condition NAD 83 coordinates; species measurements, etc.) 11:50 M B B SA J 69 YED AMLE LAC 11:58 Y M (F) (A) SA J 18 LAC 1200 10 Y 🔞 M (E) A SA(I) 85 Y (N) 1205 93 M F A SA 11 1207 95 M F A SA J Y (N) 1209 97 YW M (F) A SA (I) 1219 2 Y (M) F (A) SA J 1223 whiptail Y N M F A SA J YN M F A SA J Y MF A SA J YN MF A SA J MF A SA J M F A SA J YN MF A SA J YN M F A SA J Y N M F A SA J YN MF A SA J YN M F A SA J MF A SA J YN MF A SA J YN M F A SA J YN M F A SA J YN M F A SA J Y N M F A SA J Y N M F A SA J "Reproductive Condition: scrotal (SCR); non-scrotal (NSCR); post-scrotal (PSCR); pregnant (PREG); lactating (LAC); post-lactating (PLAC); perforate (PERF); imperforate (IMP) General Notes or Observations:

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MGS Trapping Survey Page 1 of 1 DATE GRID Investigator(s): WWW (WWW 21-May-2017 Lenwood 2 Assistant(s): Opening Check #1 closed • Check #2 Check #3 Check #4 NOTES Start End Start End Start End Start End Start End Time (24 hr) 545 653 1013 1129 Temp (°F) 69 89 90 Wind (mph) 0-1 2-8 1-4 Cloud Cover (%) 0 0 5 10 Trap# **Species** Repro COMMENTS (24 hr) Recap? Sex Age (GPS condition NAD 83 coordinates; species measurements, etc.) 1048 Y(N) M F 69 ASA J AMILE 1059 83 M (F) A SA(J) YN 1103 89 M F Y (N) A SA M (ASA J PREG 1105 92 . YN 8011 96 M (F) A SA(3) 1109 97 11 YN M F A (SA) J 11:11 100 Y N M F A SA(J) 11:21 YN (M) F (A)SA J YN M F A SA J M F A SA J YN MF A SA J YN M F A SA J Y N A SA J YN MF A SA J M F A SA J YN M F A SA J YN MF A SA J YN MF A SA J YN M F A SA J Y N MF A SA J YN M F A SA J YN MF A SA J YN MF A SA J YN MF A SA J YN M F A SA J

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**Reproductive Condition: scrotal (SCR); non-scrotal (NSCR); post-scrotal (PSCR); pregnant (PREG); lactating (LAC); post-lactating (PLAC); perforate (PERF); imperforate (IMP)

General Notes or Observations:

| ATE 22 - Ma | M-2017 | GRID | | Investiga | ator(s): | Mona | S Trapp | | | (a)90.0eg/s2 | ration of | Page |
|----------------|--------------|----------------|---------|-----------|----------|---------------|--------------------|--------------------|-----------|---|--|---|
| | n traps were | I | 00d2 | riodistal | 11(3). | a lastrasians | | | | 10,604 | | *************************************** |
| closed | • | Ope | ening | Che | eck #1 | Ch | eck #2 | Cher | ck #3 | Che | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End . | i was |
| Time | (24 hr) | 550 | 455 | 954 | 1100 | | | | -1 | | | |
| Tem | p (°F) | 62 | 72 | 88 | 90 | | | | | | | ********************* |
| Wind | (mph) | 2-4 | 0-1 | 3-9 | 2-3 | | | | <u> </u> | | | *************************************** |
| Cloud C | over (%) | 0 | 5 | 1 | | | | | | | | *************************************** |
| Time | Trap# | | | 25 | 25 | | Perre | COMMENT | | | | |
| 24 hr) | | Spe | 4 | Recap? | Sex | Age | Repro condition | COMMENT | | pordinates; | species measu | rements, etc.) |
| 25 | le] | whip | | YN | M F | A SA J | | | | 34 T W | | |
| 038 | 81 | AMI | | YN | M (F) | A SA(J) | | 10 | E A B | M H | 4 | |
| 042 | 88 | 16 | | Ø N | MF | A SA J | | 12 - 7 | E2 # 3 | 94 P | | *************************************** |
| 46 | 100 | | | (D) N | MF | A SA J | | J.A. | | | | *************************************** |
| 155 | 18 | 11 | | ΥN | M F | A SA J | | - <u>1</u> 17 | | M H | | |
| | | ********** | | ΥN | MF | A SA J | | 12 6 | 2 A S | H I W | | |
| | <u>.</u> | ******* | ******* | ΥN | MF | A SA J | | IL A | | 14 M | | ***************************** |
| | | ~~~~~~~ | | ΥN | MF | A SA J | | | 8 4 1 3 | | | *************************************** |
| | | | | ΥN | MF | A SA J | | 11 / | 23 A = 3, | N N | Y 1 3 | |
| | | | | YN | MF | A SA J | | 1.00 | e A l a | Maria Maria | | |
| | | | | ΥN | MF | A SA J | ī | i L A | BAST | 86 -14 | Y | |
| | | ************** | | ΥN | MF | A SA J | | 1. 4 | 3 A - 3 | M F | | |
| | | | | ΥN | MF | A SA J | | i L A | a A i i | *************************************** | | *************************************** |
| | | | | ΥN | MF | A SA J | | - (- A | E A | ,74 · 16 | | |
| | | | | ΥN | MF | A SA J | | | | M : M | `````````````````````````````````````` | |
| | | ****** | | ΥN | MF | A SA J | | LA | 8 4 5 | M. J. M. | | -i |
| | | | | ΥN | MF | A SA J | | | 2 A 1 3 | 44 14 | *************** | *************************************** |
| | | *********** | | ΥN | M F | A SA J | | | 2 / 1 3 | M : M | | |
| | | ************* | | ΥN | MF | A SA J | | | 2 A = | ******* | | ************************ |
| | | | | ΥN | M F | A SA J | | ****************** | 9 A 9 | | **************** | ************************ |
| | | | | ΥN | M F | A SA J | | Į L A | 2 A 1 5 | N I A | | |
| | | - | | ΥN | M F | A SA J | | | 8 4 1 3 | M M | | |
| | | ***** | | ΥN | M F | A SA J | | - L A | | M | | ······································ |
| | | | | YN | M F | A SA J | | | | | | |
| 1 1 | | | | YN | M F | A SA J | | | 8 A i 1 | DA ES | | |

MGS Trapping Survey Page 1 of 1 DATE GRID Investigator(s): Whong Chow Assistant(s): Maribel Loyez 23-May-2017 Lenwood 2 Opening Check #1 Check #2 Check #3 Check #4 NOTES Start End Start End Start End Start End Start End Time (24 hr) 545 649 905 959 Temp (°F) 72 88 91 Wind (mph) 1-2 0-1 Cloud Cover (%) 10 10 10 10 Time Species Repro COMMENTS (24 hr) Recap? Sex Age (GPS condition NAD 83 coordinates; species measurements, etc.) 955 11 AMLE Y N M F A SA J A SA J M F A SA J MF A SA J Y N M F A SA J N MF A SA J Y N MF A SA J YN MF A SA J Ν MF A SA J M F A SA J YN M F A SA J MF A SA J YN M F A SA J YN M F A SA J YN M F A SA J YN MF A SA J YN MF A SA J Y N MF A SA J Y N M F A SA J YN MF A SA J YN M F A SA J Y N MF A SA J YN M F A SA J YN M F A SA J Y N A SA J

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**Reproductive Condition: scrotal (SCR); non-scrotal (NSCR); post-scrotal (PSCR); pregnant (PREG); lactating (LAC); post-lactating (PLAC); perforate (PERF); imperforate (IMP)

General Notes or Observations:

Page of (

| DATE 24-Ma | m-2017 | GRID Lewwo | od Z | Investiga Assistan | t(s): | ehong | Chow | | | (a) who ite | witill washin | |
|-----------------|----------------|---|---------------|-----------------------|----------------|----------------|---|---|------------------|---|---|---|
| Circle when | n traps were | Оре | ening | Che | eck #1 | Ch | eck #2 | Che | ck #3 | Che | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | i. i hakk j |
| Time | (24 hr) | 542 | 6:45 | 928 | 1054 | | | 1 | | | | 1 |
| Tem | p (°F) | 45 | 72 | 89 | 92 | | | | | ************* | | 1 117 |
| Wind | (mph) | 0-1 | 1-2 | 4-8 | 11/13 | - 1 | *************************************** | | | | | *************************************** |
| Cloud C | over (%) | 10 | 15 | 3D | 40 | | | | | | | 1. |
| Time (24 hr) | Trap# | Spe | cies | Recap? | Sex | Age | Repro condition | COMMENT | | 340 | voluncia (G | |
| 16 | 46 | AM | ιŧ | YN | м 🕞 | (A)SA J | LAC | 10 | NAD 03 (| oordinates, | species me | easurements, etc.) |
| 1009 | 66 | 1/ | | Y (10) | M (F) | A SA(J) | K.I.I.V | 100 | 42 A I 3 | M M | | |
| 29 | 98 | // | | (D) N | ΜF | A SA J | | 1 | NE A 3 | H I F | *************************************** | *************************************** |
| | | | | ΥN | ΜF | A SA J | į al | 1 | 42 A [3 | | | *************************************** |
| | | | | ΥN | M F | A SA J | No. | .] [| 43 A . 9 | W_L H | 1 | |
| | | | | ΥN | M F | A SA J | | | | | *************************************** | |
| | | ******* | | Y N | M F | A SA J | | | 42 A 4 | E A | | |
| | | | | ΥN | M F | | | 100 | AS A 7 | 10 TV | | |
| | | | | YN | M F | | | | | M | | |
| | | | | YN | M F | A SA J | | | | M i h | | |
| | | ······································ | | YN | M F | A SA J | | | | | ~~~~~ | |
| | | | | Y N | M F | A SA J | | | F0 A 1 4 | | | *************************************** |
| | | | | ΥN | M F | A SA J | | | | *************************************** | | |
| | | | | ΥN | M F | A SA J | | | AR A | | | |
| | | | | ΥN | MF | A SA J | | | 12 A 1 4 | M | Y | |
| | | ***************** | | ΥN | M F | A SA J | | *************************************** | AR A I R | M K | ····· | *************************************** |
| | | | | ΥN | MF | A SA J | | *************************************** | A8 A 1 A | 12 W | Υ | |
| | | | | YN | MF | A SA J | | | AB A A | | *********** | |
| | | | | ΥN | MF | A SA J | | 16 | id a la | 16 6 | ************************************** | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |
| | | | | YN | MF | A SA J | | į. | 48 8 7 7 | 14. 14 | | |
| | | *************************************** | | ΥN | MF | A SA J | | | A A A | | | |
| | | | | ΥN | MF | A SA J | | | AR A SA | 14 L H | | |
| | | ***************** | | ΥN | MF | A SA J | | | AL A 1 | W I M | Y | |
| | | | | YN | | A SA J | | | 88 A] B | | Υ | |
| | e Condition: s | The second of the last of the | ; non-scrotal | (NSCR); pos | st-scrotal (PS | SCR); pregna | nt (PREG); lacta | ating (LAC); pos | st-lactating (Pl | AC); perfora | te (PERF); im | perforate (IMP) |
| ********** | ******* | | | ************* | | | *************************************** | | | · | | |
| | | | | ***************** | ************* | ************** | | *************************************** | | ************** | ., | |

Page ___ of ___

MGS Trapping Survey

| 6/22/17 Lenwi | | Lenwood | 2 | Assistant(s): | | | | | | <u> </u> | | |
|-----------------------|---|--|--------------|---------------|----------------|-----------------|---|------------------|---|---------------|---|---|
| Circle when closed | | Openir | ng | Chec | *# | Che | eck #2 | Chec | :k #3 | Che | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time (| (24 hr) | 05200 | 710 | 0820 | 0930 | | | | | | | |
| Tem | o (°F) | 770 8 | | | 93° | | ••••••••• | | | ••••••• | | |
| Wind | (mph) | ···· | 2 | 2 | 5 | | ••••••• | • | | | | ••••••••••••••••••••••••••••••••••••••• |
| Cloud C | over (%) | ļi | 0 | 0 | 0 | | | | | | | |
| Time (24 hr) | Trap# | Specie | | Recap? | Sex | Age | Repro | COMMENT | | cordinatos | coocies mass | ((surements, etc.) |
| 850 | 89 | wester | n | ΥN | M F | A SA J | condition | | 1470 03 1 | Journales, | species meas | surements, etc.) |
| 900 | | AGS | | Y 🚱 | м 🕝 | A (SA) J | •••••• | | ******* | | •••••••••• | ••••••••••• |
| 1902 | ************ | AGS | | Y 🔞 | Ø F | (A)SA J | •••••• | ••••• | ******** | | •••••••••••• | •••••••••••••• |
| 904 | 95 | AGS | ************ | Y (N) | мФ | a © A J | ••••••••• | | | •••••••••• | *************************************** | |
| 920 | l | AG5 | | YD | мŒ | A 🚰 J | *************************************** | | *************************************** | ••••••• | ••••••• | ••••••••••••••••••••••••••••••••••••••• |
| 925 | 9 | A65 | 5 | Y (N) | M ⊳F | A 🔊 J | | | | | | |
| 928 | 7 | AGS | ••••• | Y 🔞 | M F | (A)SA J | ~ | | | | | |
| | *************************************** | •••••••••••••••••••••••••••••••••••••• | | ΥN | MF | A SA J | *************************************** | | | | | |
| | | | | ΥN | M F | A SA J | | | | | | |
| ٠. | | | | ΥN | M F | A SA J | | | | | | • |
| | | | | ΥN | МF | A SA J | | | | | | |
| | | | | ΥN | M F | A SA J | | | | | | |
| | •••• | | | YN | ΜF | A SA J | | | | ••••••• | | |
| | | | | YN | M F | A SA J | | | | •••••• | ••••• | |
| | | |) | ΥN | M F | A SA J | | | | | | |
| | | | | ΥN | ΜF | A SA J | | | | | | |
| | | | | ΥN | M F | A SA J | | | ****** | ***** | | |
| | | | | ΥN | M F | A SA J | | | ***************************** | ****** | | |
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| | | | | ΥN | M F | A SA J | | | · · · · · · · · · · · · · · · · · · · | | | |
| | | | | ΥN | M F | A SA J | | | - L | | | |
| | | | | ΥN | M F | A SA J | | | | | | |
| | | | | ΥN | M F | A SA J | | | ···· | ····· | | ~~~~ |
| | | | | ΥN | M F | A SA J | | <u> </u> | | · | | |
| | | | 1 | ΥN | MF | A SA J | | | , | | · · · · · · · · · · · · · · · · · · · | |
| eproducti | ve Condition | : scrotal (SCR); r | non-scrotal | (NSCR); pc | ost-scrotal (F | SCR); pregna | ent (PREG); lac | tating (LAC); po | ost-lactating (| PLAC); perfo | rate (PERF); im | perforate (IMP) |
| | | servations: | Owl | . ov | 1 51 | fe | | | | | | |

Page ___ of ___

| 6/23 | /17 | GRID Lenwoo | d 2 | Assistant | tor(s): <i>4</i> (s): | dam V | Valters | | | **************** | 1 | |
|---|--------------------|----------------|---|--------------|--------------------------|-------------|---|------------------|---|---|---|--|
| Circle wher | traps were | Оре | ning | Che | k#1 | Che | eck #2 | Chec | :k #3 | Che | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time (| (24 hr) | 0520 | 0630 | 0600 | 0910 | | | | | | | |
| Tem | p (°F) | 1 | 74° | 84.8° | , | | *************************************** | | • | •••••• | | |
| Wind | (mph) | 2 | 2 | l | 3 | | | | | • | | |
| Cloud C | over (%) | 0 | O | 0 | 0 | | *************************************** | | | • | | |
| Time (24 hr) | Trap# | Spe | cies | Recap? | Sex | Age | Repro | COMMENT | | oordinatoo | | (GPS |
| 0818 | 27 | AG | <u>-</u> -S | Y Ø | F | A(SA) J | condition | | NAD 63 (| 200rdinates | species me | easurements, etc.) |
| 0834 | | AG | | Y 🚳 | ····· | A)SA J | *************** | | · · · · · · · · · · · · · · · · · · · | ~~~~~ | **************** | |
| | ****************** | | *************************************** | ΥN | M F | A SA J | *************************************** | | •••••••••••• | ~~~~ | ··· | *************************************** |
| *************************************** | ••••••• | †••••• | | ΥN | M F | A SA J | | | •••••••••• | • * • • • • • • • • • • • • • • • • • • | ••••••••• | *************************************** |
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| | | | | ΥN | M F | A SA J | | | | | | |
| | | | | ΥN | MF | A SA J | | | | | | *************************************** |
| | | | | ΥN | МF | A SA J | | | | | *************************************** | 1 00 00 00 00 00 00 00 00 00 00 00 00 00 |
| | ~~~ | <u></u> | | ΥN | M F | A SA J | | | *************************************** | | | |
| ` | | <u> </u> | | ΥN | M F | A SA J | | | | | | |
| | | <u> </u> | | ΥN | M F | A SA J | | | ······ | | | **** |
| | | | | ΥN | MF | A SA J | | | | | | |
| | | <u>.</u> | | ΥN | M F | A SA J | | | | ******************************* | | |
| | | | | ΥN | MF | A SA J | •••••••• | | | *************************************** | | •••••• |
| | | | | ΥN | M F | A SA J | | | | | | |
| | | | | ΥN | MF | A SA J | • | | ************ | *************************************** | | *************************************** |
| | | | | ΥN | M F | A SA J | | ••••• | •••••• | | | ••••• |
| | | | | YN | | A SA J | | | | ****** | ····· | *************************************** |
| | | | | YN | M F | | ······································ | | | | ····· | |
| | | | | YN | M F | A SA J | · · · · · · · · · · · · · · · · · · · | | | | | |
| <u> </u> | | | | YN | M F | A SA J | | | | ***** | | |
| | | | | YN | M F | A SA J | | | | ····· | | ······································ |
| | | | | YN | M F | A SA J | ······································ | | | ······································ | | |
| | ••••••••• | | | YN | | A SA J | | | | •••••• | ********* | |
| ************************************** | Co- 4'2' | | | YN | M F | A SA J | (DDEC): / | totion (I A O) | | DI ACN | | incode to (MAT) |
| | | | | e (NSCR); po | ost-scrotal (F | SUK); pregn | ant (PREG); lac | ialing (LAC); po | Pri-iactating (| rLAU); perfo | rate (PERF); | imperforate (IMP) |
| | | servations: | | 1 | Z:1 | | | | | | | |
| D <u>U</u> | <u>, , , o</u> | wing | $-\omega$ | ı on | 217 | e ago | -41 N J | | •••••• | ••••••• | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Page ___ of ___

| DATE 6/24 | 1/17 | GRID Lenwoo | d 2 | Investiga Assistant | tor(s): | Idam | Walte | r 5 | | | <u> </u> | |
|-----------------|--------------|----------------|-------------|------------------------|----------------|----------------|---|------------------|---------------------------------------|---|--|---|
| Circle whe | n traps were | Ope | ening | Che | ck #1 | Che | eck #2 | Chec | k #3 | Che | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time | (24 hr) | 0520 | 0620 | 0720 | 0830 | | | | | | | |
| Tem | np (°F) | 750 | ! | • | 91.90 | | | | | • | | • |
| Wind | l (mph) | 3 | 1 | 2 | 2 | | *************************************** | ••••• | | | | |
| Cloud C | Cover (%) | 30 | 30 | 25 | ····· | | | | | ••••• | | |
| Time | Trap# | Spe | cies | Recap? | Sex | Age | Repro | COMMENT | | | | (GPS |
| (24 hr) 0731 | 26 | AG | 2.5 | Ø N | € F | A SA J | condition | | NAD 83 C | pordinates; | species me | easurements, etc.) |
| 0753 | 73 | | | Y 👩 | * | Ø SA) J | ********* | | | | •••••• | |
| 0800 | | AG | | Y 🔞 | • | ⊘ SA J | *************************************** | ••••• | •••••••••••• | ************** | ······································ | ••••••••••••••••••••••••••••••••••••••• |
| | | | ••••••• | ΥN | MF | A SA J | *************************************** | | ************** | ••••••• | •••••••• | |
| | | | | YN | M F | A SA J | | | | | | |
| | | | | Y N | M F | A SA J | | | | | | |
| | | | | ΥN | M F | A SA J | | | | | | |
| | | | | ΥN | M F | A SA J | | | | | | |
| | | | ···· | ΥN | M F | A SA J | | | 0.45 *nhs - name e al avec manusca ac | · | | |
| , | | | | YN | M F | A SA J | | | | | | |
| | | | | ΥN | M F | A SA J | ~~~ | | ~~~~ | ······································ | | |
| | | | | ΥN | MF | A SA J | | | ···· | | ···· | |
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| | • | | ••••• | ΥN | M F | A SA J | | | | ••••• | •••••• | |
| | - | | | YN | M F | A SA J | | | | | | |
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| | | | | YN | MF | | r ^e | | | | | |
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MGS Trapping Survey Page 1 of 1

| DATE 6/25/17 Circle when traps were | | od 2 | Investigator(s): Adom Walters Assistant(s): | | | | | | | .L | | |
|---|---------------|---------------|---|--------------|----------------|-------------|---|-----------------|---|---|--|---|
| Circle when | • | Ope | ning | Che | ck #1 | Che | eck #2 | Chec | :k #3 | Che | ck #4 | NOTES |
| | | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time (| (24 hr) | 0520 | 0620 | 0720 | 0830 | | | | | | | |
| Tem | p (°F) | 790 | 78° | * | 90.2° | | • | | | | | |
| Wind | (mph) | 0 | 0 | Z | 0 | | | | | | | |
| Cloud C | over (%) | Z | 0 | 0 | O | | | | | | | |
| Time (24 hr) | Trap# | Spe | cies | Recap? | Sex | Age | Repro condition | COMMENT | | coordinates | : species me | (Geasurements, etc.) |
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| 6/26/17 | LENHOO | 12 | Assistant | (s): | 70LLUV \ | waite | | | ••••••• | 1 | |
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| Circle when traps were closed | Оре | ening | | ck #1 | Chi | eck #2 | Chec | k #3 | Che | ck #4 | NOTES |
| | Start | End | Start | End | Start | End | Start | End | Start | End | |
| Time (24 hr) | 0520 | 0620 | 0715 | 0835 | | | | | | | <u> </u> |
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| Wind (mph) | 3 | 4 | 8 | 8 | | ••••••• | ••••• | | ļ | | •••••• |
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| **Reproductive Condition | n: scrotal (SC | R); non-scrot | al (NSCR); p | ost-scrotal (l | PSCR); pregn | ant (PREG); lac | tating (LAC); po | ost-lactating (| PLAC); perfo | rate (PERF); | imperforate (IMP) |
| General Notes or Ob | | _ | | | | | | | | | |
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10063 San Bernaldino 42423

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

| P Da | Please submit a com 17.AP ate of survey: | ril. 2017 Survey | ction agency and biologist(s): | l local USF Chr. | WS office within 30-0 | lays of survey col | mpletion 60.223.170 <u>Cyfa</u> bry@g: 1 Amb Dum | o mail. |
|---------------------|--|-----------------------------------|--------------------------------|----------------------|--|---|---|------------|
| Sit | te description: | nonth, year) | wash | with | (name, email, and phone nu | mber) | Amb Dum | should |
| Co | ounty: San Bei | nadina Quad:_ | (project name and s | Lo Zone | cation: | | | |
| Cir | rcle one: 100% coverag | e or Sampling Area size | e to be surveyed | Tone | Transect #: | s, lat-long, and/or TRS; n Transect length: | eap datum) | |
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| Transect num | ıbe | er: | |

Mail to:

California Natural Diversity Database California Dept. of Fish & Wildlife

| For | Office Use Only |
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| Source Code: | Quad Code: |
| Elm Code: | Occ No.: |
| EO Index: | Map Index: |

| 1416 9th Street, Suite 1266 | | Source | | Quad Code. | |
|---|----------------------|-----------------|-------------------|-----------------------------------|-------------------------|
| Sacramento, CA 95814 | | Elm C | nde: | Occ No.: | |
| Fax: (916) 324-0475 email: CNDDB@wildlife. | ca.gov | Linic | oue | Occ No | |
| Date of Field Work (mm/dd/yyyy): っぱ/ | 3/2017 | EO Inc | lex: | Map Index: | |
| Clear Form California N | lative Spe | ecies | Field S | urvey Form | Print Form |
| Scientific Name: Athene Cu | micula | Lria | | | |
| Common Name: Surrow. | y Ow | 1 | | | |
| Species Found? 🔗 🔾 | 0 | | Reporter: C | hris Fabry | |
| Yes No If not | found, why? | | | 51 Sieva Hein | 14 De |
| Total No. Individuals: Subseque | nt Visit? Yes | O _{No} | | | , |
| Is this an existing NDDB occurrence? | No | Unk. | | Henderson, | |
| Yes, O | cc. # | | E-mail Addres | s: citalonge | gma.l.com |
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| | nimal Informatio | on | | | |
| Phenology: | # adults | # iuv | eniles # la | # egg masses | # unknown |
| % vegetative % flowering % fruiting | _ | reeding | | 3 53 | lek other |
| | | | | | |
| Location Description (please attach ma | • | out yo | ur choice of | coordinates, below) | |
| Sun Bernardino | | | | | |
| County: San Bernatiaes | Landowner | / Mgr: _ | | <u> </u> | |
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| DATUM: NAD27 O NAD83 O | NGS84 🤣 | ı | Horizontal Accura | ıcy: 5 m | meters/feet |
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| | | | | <u></u> | ···· |
| Habitat Description (plants & animals) plant co Animal Behavior (Describe observed behavior, suc | | | | • • | nacially for avifauna): |
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| LarTri, Amb Dum | scrub wi | 76 | a lot of | rinvosive g | rasses. |
| One adult was flush | ed from . | • | 2 entrac | me canne d | an lata |
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| White wood sollat | . 4. 1 - | L | 5 | MOUNTEAN TEA | ./44.5 |
| of tracks on apromobile west, Pellets Please fill out separate form for other rare taxa seen at | this site. | 3 | | ing rike more | man ou |
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| Determination: (check one or more, and fill in blanks) | | | Ph | otographs: (check one or mor | 9) Slide Diet Diete |
| Keyed (cite reference): | | | | Plant / animal | Slide Print Digital |
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USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

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| | | Bernard Rus Bor Sampling Area siz | | d: 380 ⁺ | Acres (UTM coordinates Transect #: | s, lat-long, and/or TRS, Transect length | map datum) |
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| | | | Live To | ortoises | | | ···· |
| Detection number | | location Northing | Time | (in burrow, al | toise location of tortoise beneath plane of pening, or <i>not in burrow</i>) | Approx MCL >160-mm? (Yes, No or Unknown) | Existing tag # and color, if present |
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| | | Tortoise S | ign (burrows | , scats, ca | rcasses, etc) | | |
| Detection number | | ocation Northing | Type of (burrows, scats, | sign carcass, etc) | Descri | ption and comr | nents |
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| 2 | | | | | Year old. | | |
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Transect number: ____

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

| Dat | e of survey:(day, | month, year) | ey biologist(s): D | - 11/12 | (name, email, and phone nu | C) taboy | egmail. |
|------------------|----------------------|-----------------------------------|---------------------------------|----------------------|--|---|------------------------------------|
| Site | description: | | | ize; general loca | tion) | | |
| Cou | inty: Jan Per | Ade the Guad: | • | Lo | ocation: | s lations and/or TDC: | mon dohan) |
| Circ | cle one: 100% covera | ge or Sampling Area siz | ze to be surveyed | 380 | Acres (UTM coordinate Transect #: | Transect length | |
| GP: | S Start-point: | easting, northing, elevation in n | netera) | | Start time: | | am/pm |
| GP | S End-point: | easting, northing, elevation in n | • | | End time: | | am/pm |
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| | | | Live To | | | - <u> </u> | |
| Detection number | 3 | location Northing | Time | To | rtoise location Il of tortoise beneath plane of ppening, or <i>not in burrow</i>) | Approx MCL >160-mm? (Yes, Na or Unknown) | Existing tag and color, if present |
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| | | Tortoise \$ | Sign (burrows, | scats, ca | rcasses, etc) | | 1 |
| Detection number | ł | location Northing | Type of (burrows, scats, calls) | Sign arcass, etc) | Descri | iption and comm | nents |
| 1 | 490489 | 3857172 | Burron | ١ | tunnel s | 1 260 i | |
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| Transect no | umber: | |

Project Name Lenwood Basin Date DDMMMYYYY The 2017

Your Name Chris Fabry Add'l Fieldworkers Kent Hybes

San Bernadino CAUNTY CA Blanca River

ecies

Incidental **Species** Form ver. 9/9/15

| | San E |
|----|-------------------------------|
| | Avian Species |
| | Ash-throated Flycatcher |
| 4 | Bank Swallow |
| | Barn Swallow |
| X | Black Phoebe |
| | Black-tailed Gnatcatcher |
| X | Black-throated Sparrow |
| | Blue-gray Gnatcatcher |
| - | Brewer's Sparrow |
| | Bullock's Oriole |
| | Common Poorwill |
| Q | Common Raven |
| 2 | Costa's Hummingbird |
| | Gambel's Quail |
| | Great Blue Heron |
| X | Greater Roadrunner |
| S | Horned Lark |
| X | House Finch |
| - | Lesser Goldfinch |
| SO | Lesser Nighthawk |
| X | Mourning Dove |
| | Northern Rough-winged Swallow |
| 40 | Phainopepla |
| | Rock Wren |
| | Sage Thrasher |
| | Say's Phoebe |
| | Scott's Oriole |
| H | Tree Swallow |
| X | Turkey Vulture |
| V | Verdin |
| ~ | F-107-1 |

Violet-green Swallow Western Kingbird Western Scrub-Jay White-crowned Sparrow White-throated sparrow White-throated Swift Wilson's Warbler Yellow-rumped Warbler

| | Mammals |
|---|--|
| S | Black-tailed Jackrabbit |
| | Burro Deer |
| | California Myotis |
| | Canyon Bat |
| X | Desert Cottontail |
| | Desert Woodrat |
| | Great Basin Pocket Mouse |
| | Hoary Bat |
| | Little Pocket Mouse |
| | Merriam's Kangaroo Rate |
| | Mexican Free-tailed Bat |
| | Palid Bat |
| | Palm Spring Round-tailed Ground Squirrel |
| | Small-footed Myotis |
| | Spiny Pocket Mouse |
| | Townsend's Big-eared Bat |
| X | White-tailed Antelope Ground Squirrel |
| | Yuma Myotis |

| | risten Kaper Reptiles |
|---|----------------------------|
| | California Kingsnake |
| | Coachwhip |
| 0 | Desert Horned Lizard |
| X | Desert Iguana |
| | Gopher Snake |
| X | Long-nosed Leopard Lizard |
| 0 | Side-blotched Lizard |
| | Sidewinder |
| | Speckled Rattlesnake |
| | Western Patch-nosed Snake |
| | Western Shovel-nosed Snake |
| 0 | Western Whiptail |
| 0 | Zebra-tailed Lizard |

| | Additional Incidental Species | |
|---|--|---|
| | Excules thrasher Fringe-toad Lizard Coyote | |
| 1 | Fringe- toad Lizard | _ |
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