



**SNOWLINE SCHOOL DISTRICT WHITE ROAD
SOLAR PV PROJECT**

GENERAL BIOLOGICAL RESOURCES ASSESSMENT

**PHELAN AREA OF UNINCORPORATED SAN BERNARDINO COUNTY,
CALIFORNIA
USGS 7.5' BALDY MESA, CA QUADRANGLE
TOWNSHIP 4 NORTH, RANGE 6 WEST, SOUTHEAST ¼ OF SECTION 23
APN 3065-561-07**

Prepared for Owner/Applicant:

Reno Contracting, Inc.

1450 Frazee Road, Suite 100

San Diego, CA 92108

Office: (619) 220-0224 x 6228

Contact: Eric Scheidlinger

Project Manager

Prepared by:

AMEC Environment & Infrastructure, Inc.

3120 Chicago Avenue, Suite 110

Riverside, California 92507

Office: (951) 369-8060

Principal Investigator:

Nathan T. Moorhatch, Biologist

Biologists Who Performed Fieldwork On-Site:

Nathan T. Moorhatch

Scot Chandler

Ted Rado

Phillip Clevinger

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AMEC Project No. 1355400534

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1.0 EXECUTIVE SUMMARY

AMEC Environment & Infrastructure, Inc. (AMEC) conducted a general biological resources assessment at the site of a proposed photovoltaic (PV) solar project site located approximately 5.8 miles east of Phelan (a census-designated place or CDP), south of Phelan Road on the west side of White Road, in unincorporated San Bernardino County, California. Two special status wildlife species were observed on the project site: Coast horned lizard (*Phrynosoma blainvillii*) and Prairie Falcon (*Falco mexicanus*). Additionally, Joshua trees (*Yucca brevifolia*) which are protected by county ordinance, are present. Potential habitat for several special status species is present. In addition, AMEC performed a habitat assessment and initiated focused surveys for burrowing owl (*Athene cunicularia*); and completed protocol United States Fish and Wildlife Service (USFWS) desert tortoise (*Gopherus agassizii*) surveys on the project site (complete with buffer surveys). No tortoises or their sign were detected on the project site or buffer transects. AMEC also performed surveys for rare plants, and no rare plant species were found on the project site. The remains of what appeared to be a short-joint beavertail cactus (*Opuntia basilaris* var. *brachyclada*) were found close to the abandoned residential dwelling on the southern portion of the site, and were located near two other species of cactus that are not known from this region of the Mojave Desert. AMEC biologists believe all three cacti had been formerly planted at this location. AMEC recommends preservation and/or relocation of the Joshua trees present on the site per county guidelines if applicable (the School District qualifies as exempt from this measure per County Code 88.01.030 [b]), and pre-construction nesting bird surveys if construction activities are scheduled during the nesting bird season. AMEC also recommends completing the protocol burrowing owl survey on the project site and buffer in accordance with the current California Department of Fish and Wildlife (CDFW – formerly CDFG) survey guidelines.

2.0 INTRODUCTION

AMEC was contracted by Reno Contracting, Inc. to conduct a general biological resources assessment at the site of a proposed PV solar project site (Project) located approximately 5.8 miles ESE of Phelan, in unincorporated San Bernardino County (see Figure 1 in Appendix A). AMEC was also contracted to perform habitat assessments and focused surveys for a variety of sensitive biological resources that have potential to occur on or adjacent to the Project site. This Biological Resources Assessment Report (BRAR) provides results and discussion of the assessment, and the results of those focused surveys that have been completed at the time of this writing.

2.1 Project and Property Description

The Project site consists of one parcel: APN: 3065-561-07 which is 47.80 acres. The property is bordered by Nielson Road, vacant land, and low density residential development on the north; White Road, vacant land, and low density residential development to the east and south; and low density residential, vacant land, and Pueblo Trail on the west. Hollister Road more or less bisects the site, from east to west (see Figures 2-5 in Appendix A). The property is located on the 7.5-minute Baldy Mesa, CA United States Geological Survey (USGS) quadrangle in Township 4 North, Range 6 West, southeast ¼ of Section 23 (see Appendix A). The Project site is almost level, gently sloping from an elevation of approximately 3,910 feet above mean sea level (AMSL) on the southern edge of the site to approximately 3,830 feet AMSL on the northern edge of the site.

Vegetation on the Project site is an intergrade between Joshua Tree Woodland and Mojavean Juniper Woodland and Scrub, with understory elements from Mojave Mixed Woody Scrub. Arborescent species include Joshua tree (*Yucca brevifolia*), California juniper (*Juniperus californica*), and on the southwestern portion of the site a fairly dense stand of Tucker's oak (*Quercus john-tuckeri*). Dominant "understory" species include peach thorn (*Lycium cooperi*), Great Basin sagebrush (*Artemisia tridentata*), blue sage (*Salvia dorrii*), California buckwheat (*Eriogonum fasciculatum*), Cooper's goldenbush (*Ericameria cooperi* var. *cooperi*), Interior goldenbush (*Ericameria linearifolia*), rubber rabbitbrush (*Ericameria nauseosa*), and bladder-sage (*Scutellaria mexicana*). Creosote bush (*Larrea tridentata*) is not present on the Project site, reflecting a stronger montane/coastal influence in the vegetation communities on this site. The habitat shows extensive signs of anthropogenic disturbance, such as mechanical disturbance of soil, vegetation removal, off road vehicle tracks, presence of dirt roads on some parts of the site, domestic dog "diggings" (dug out burrows), trash deposition, and the presence of an abandoned residential dwelling on the southern portion of the parcel. No drainages were observed on the Project site.

Two soil types are mapped on the Project site (USDA 2013): Hesperia Loamy Fine Sand, 2 to 5 percent slopes, is the only soil type mapped on the southern "half" of the site (from just below where Hollister Road crosses the site). The remainder of the parcel is mapped as Cajon Sand, 0 to 2 percent slopes (see Figure 2 in Appendix A). The Cajon series consists of very deep, somewhat excessively drained soils on alluvial fans and river terraces. Cajon soils formed in alluvium from dominantly granitic sources. Soils in this series have slopes ranging from 0 to 15 percent. Hesperia Loamy Fine Sand is also a very deep, well-drained soil formed in alluvium derived from granitic material, and is usually vegetated with junipers, desert shrubs, grasses and forbs.

The solar power developer for this project will be Sun Edison (in partnership with Reno Consulting, Inc.). This Project site is one of three sites that taken in sum total approximately 66.6 acres. These three sites are considered Phase 2 of a past project completed by Sun Edison and Reno Contracting in 2011. The surrounding area is a patchwork of undeveloped lands, unpaved roads, and low density rural residences. The undeveloped lands provide potential wildlife corridors to/from the site between disturbed areas.

3.0 METHODS

3.1 Literature Review and Records Search

A literature review and records search was conducted to identify the historical occurrences of special status biological resources in the project vicinity. The review included:

- The California Native Plant Society (CNPS)
- The Jepson Herbarium (University of California, Berkeley)
- A report from the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Data Base (CNDDDB) for nine quadrangles around the Project site including records from the following California USGS 7.5-minute topographic quadrangles: Adelanto, Victorville, Phelan, Baldy Mesa, Shadow Mountains SE, Hesperia, Silverwood Lake, Cajon, and Telegraph Peak (CDFW 2013)
- Recent aerial photographs



- Pertinent documents from the AMEC library and project files (e.g., other biological surveys from the general vicinity)

3.2 General Biological Resources Assessment

A general biological assessment, focused USFWS protocol desert tortoise survey, and CDFW protocol burrowing owl habitat assessment/initial survey was conducted by AMEC Biologist Nathan T. Moorhatch and subconsultants Ted Rado and Phillip Clevinger on April 11, 12, and 15, 2013. AMEC biologist Scot Chandler also participated on the surveys on April 12, 2013. On May 1, 2013 Mr. Moorhatch and Mr. Rado visited the site to look for rare plants and any plant species in general that may have been overlooked during the previous visits. The time and weather data for the various biological surveys is presented in Table 1 below.

Table 1. Biological Survey Data for the White Road Surveys

Date/Survey Type	Observer(s)	Time	Temp. (°F) Wind (mph)	Sensitive species observed?
11 April 2013	Moorhatch, Rado, & Clevinger	0900-1355	67-75°F 3-13 mph	Yes (Coast Horned Lizard)
12 April 2013	Moorhatch, Rado, Chandler, & Clevinger	0644-0926	54-75°F 0-4 mph	Yes (Prairie Falcon)
15 April 2013	Moorhatch, Rado & Clevinger	1050-1108	53-53°F 0-6 mph	No
1 May 2013	Moorhatch & Rado	1520-1630	80-80°F 4-14 mph	No

The biologists walked ten-meter wide belt transects throughout the Project site (as per USFWS 2010 survey protocol for desert tortoise), identifying habitat type, all plant and wildlife species observed, and sign. “Zone of Influence” transects were also surveyed for desert tortoise around the project site, spaced at 200, 400, and 600 meters from the project boundary (see Figure 3 in Appendix A). The biologists also surveyed a 500 foot buffer around the project site (utilizing 20 meter wide transects) for sign of burrowing owl (see Figure 4 in Appendix A). Special attention was paid for any sign of the desert tortoise and the burrowing owl. Walking the site in ten-meter wide transects exceeds the minimum requirement of twenty-meter wide transects as outlined in the most current CDFW survey protocol for the burrowing owl, and is also appropriate for the detection of rare plants. Note was also taken of any plant species meeting the criteria of the San Bernardino County Development Code, Chapter 88.01 *Plant Protection and Management* (Ordinance). This ordinance contains provisions for the protection of certain desert plants (88.01.060 Desert Native Plant Protection) as follows:

1. The following desert native plants with stems two inches or greater in diameter or six feet or greater in height:
 - a. *Psoralea argophylla* (smoketree).
 - b. All species of the genus *Prosopis* (mesquites).
2. All species of the family Agavaceae (century plants, nolin, yuccas).



3. Creosote rings, 10 feet or greater in diameter.
4. All Joshua trees.
5. Any part of any of the following species, whether living or dead:
 - a. *Olneya tesota* (desert ironwood).
 - b. All species of the genus *Prosopis* (mesquites).
 - c. All species of the genus *Cercidium* (palo verdes).

Chapter 88.01.060 also states “Removal of all plants protected or regulated by the Desert Native Plants Act (Food and Agricultural Code Section 80001 et seq.) shall comply with the provisions of the Act before the issuance of development permit or approval of a land use application. All members of the family Cactaceae (Cactus Family) require a permit for harvesting under the Desert Native Plants Act.

According to the San Bernardino County Development Code Section 88.01.030 Exempt Activities:

The provisions in this Chapter, except those of Section 88.01.090 (Tree Protection From Insects and Disease) shall not apply to the removal of regulated trees or plants that may occur in the following situations: (b) Government owned lands. Removal from lands owned by the United States, State of California, or local government entity, excluding Special Districts (i.e., Special Districts shall be subject to the provisions of this Division.).

According to the San Bernardino County Code, the Snowline School District (as a local government entity) is exempt from the requirements of 88.01.060 Desert Native Plant Protection, as outlined above.

4.0 RESULTS

4.1 Literature Review and Records Search

The results of the literature review and records search are presented in Table 2 which lists the special status biological resources with the potential to occur in the vicinity of the proposed Project.

Table 2. Special-Status Biological Resources with the Potential to Occur in the Vicinity of the Proposed Project						
Scientific Name	Common Name	Status ¹			Habitat (for plants may include elevational range in meters & blooming period)	Occurrence Probability ²
		Federal	State	CNPS (plants)		
Plants						
<i>Asclepias nyctaginifolia</i>	Mojave milkweed	None	S2	2.1	Mojavean desert scrub, Pinyon-Juniper Woodland. 875 - 1700 m., May-June	Absent No milkweed observed on site, CNDDDB record from Cajon Quad is from 1916
<i>Astragalus lentiginosus</i> var. <i>antonius</i>	San Antonio milk-vetch	None	S1?	1B.3	Lower and Upper Montane Coniferous Forest, dry slopes in open yellow pine forest. 1500-2,600m., April-July	Absent Habitat not present on site, site is below elevational range of species
<i>Botrychium crenulatum</i>	Scalloped moonwort	None	S2.2	2.2	Bogs, fens, and meadows in lower montane coniferous forest, freshwater marshes. 1,268 – 3,280 m., June-Sept.	Absent Habitat not present on site, site is below elevational range of species



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<i>Botrychium minganense</i>	Mingan moonwort	None	S2	2.2	Lower and Upper montane coniferous forest, bogs and fens. 1,455-2,105 m. July-Sept.	Absent Habitat not present on site, site is below elevational range of species
<i>Calochortus palmeri</i> var. <i>palmeri</i>	Palmer's mariposa-lily	None	S2.1	1B.2	Vernally moist areas in Yellow-pine forest & chaparral, such as meadows and seeps. 1,000-2,390m. April-July	Absent Moist microhabitat not present on site
<i>Calochortus plummerae</i>	Plummer's mariposa-lily	None	S4	4.2	Usually rocky areas in coastal scrub, chaparral, grasslands, and woodlands. 100-1,700m. May-July.	Absent Rocky habitat not present on site, author is familiar with this species' habitat requirements (field observations)
<i>Canbya candida</i>	White pygmy-poppy	None	S3.2	4.2	Joshua Tree woodland, Pinyon and Juniper Woodland, Mojavean Desert Scrub. Sandy and gravelly places, 725-1,250m., March-June	Low Potential habitat onsite, not observed during surveys, but poor rain year
<i>Castilleja lasiorhyncha</i>	San Bernardino Mtns. Owl's-clover	None	S2.2	1B.2	Meadow, pebble plains, upper montane coniferous forest, chaparral. 1,135-2,390m. May-August	Absent Habitat not present on site
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	White-bracted spineflower	None	S2	1B.2	Mojavean desert scrub, pinyon-juniper woodland, alluvial coastal scrub, sandy/gravelly areas. 300-1,200m. April-June	Low No spineflowers found onsite during surveys
<i>Claytonia lanceolata</i> var. <i>peirsonii</i>	Peirson's Spring Beauty	None	S1	3.1	Upper and subalpine coniferous forests, granitic scree slopes often with some sandy or fine soil, 2,360-2,485m. May-June	Absent Habitat not present on site, site is below elevational range of species
<i>Deinandra mohavensis</i>	Mojave tarplant	None	SE	1B.3	Low sand bars in river beds in riparian scrub and chaparral, or ephemeral grassy areas. 850-1,600m. (May), June-Oct. (Jan.)	Absent Habitat not present on site
<i>Dodecahema leptoceras</i>	Slender-horned spineflower	FE	SE	1B.1	Older alluvial terraces with associated cyrtogamic crusts, alluvial fan sage scrub, openings in chaparral and cismontane woodland. 200-760m. March-June	Absent Habitat not present on site, site is above elevational range of species, author has extensive experience in surveying for this species
<i>Eremothera boothii</i> ssp. <i>boothii</i>	Booth's evening-primrose	None	S2	2.3	Joshua Tree Woodland, Pinyon-Juniper Woodland. 900-2,400m. April-September	Low Not found onsite during surveys
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	None	SH	1A	Believed extinct, historically known from coastal salt and freshwater marshes and swamps. 5-1,675m. August-October	Absent Habitat not present on site, species thought to be extinct
<i>Heuchera parishii</i>	Parish's alumroot	None	S3	1B.3	Alpine boulder and rock fields in lower through subalpine coniferous forests. 1,500-3,800m. June-August	Absent Habitat not present on site, site is below elevational range of species



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<i>Lilium parryi</i>	Lemon lily	None	S2	1B.2	Lower and upper montane coniferous forests, riparian forests, microhabitat is meadows and seeps. 1,300-2,790m. July-August	Absent Habitat not present on site, site is below elevational range of species
<i>Linanthus concinnus</i>	San Gabriel linanthus	None	S2?	1B.2	Lower and Upper Montane Coniferous Forest . Dry rocky slopes in Jeffrey Pine/Canyon Oak Forest. 1,575-2,545m., April-July	Absent Site is below known elevational range, no habitat present on site.
<i>Loeflingia squarrosa</i> var. <i>artemisiarum</i>	Sagebrush loeflingia	None	S2.2	2.2	Sandy flats, dunes, often around alkaline clay slicks in Great Basin scrub, Sonoran desert scrub. 700-1,200m. April-May	Absent No habitat onsite
<i>Lycium parishii</i>	Parish's desert-thorn	None	S2S3	2.3	Coastal and Sonoran Desert Scrubs. 300-1,000m. March-April	Absent No habitat onsite, site is above elevation range of species
<i>Mimulus mohavensis</i>	Mojave monkeyflower	None	S2	1B.2	Dry sandy or rocky washes along the Mojave River. 600-1,175 m. April-June	Absent Habitat not present onsite
<i>Monardella australis</i> ssp. <i>jokerstii</i>	Jokerst's monardella	None	S1	1B.1	Steep scree/talus slopes, also secondary alluvial benches along washes in chaparral and lower montane coniferous forest. 1,350-1,750m. July-September	Absent Habitat not present on site, site is below elevation range of species
<i>Muhlenbergia californica</i>	California muhly	None	S3.3	4.3	Coastal sage, Chaparral, Lower Montane Coniferous Forest, Meadows, usually near streams or seeps. 400-2,000m., June-September	Absent Habitat not present onsite
<i>Opuntia basilaris</i> var. <i>brachyclada</i>	Short-joint beavertail	None	S3	1B.2	Chaparral, Mojavean desert scrub, Joshua Tree woodland, Riparian Woodland, and Pinyon-Juniper Woodland. Sandy soil or coarse, granitic loam. 425-1,800m., April-August	Absent This perennial cactus was not observed onsite during the surveys
<i>Oreonana vestita</i>	Woolly mountain-parsley	None	S3	1B.3	High ridges; scree, talus, and gravel areas in Subalpine and Upper Montane Coniferous forest. 2,410-3,500m	Absent Habitat not present on site, site is far below elevational range of species
<i>Orobanche valida</i> ssp. <i>valida</i>	Rock Creek broomrape	None	S2	1B.2	Decomposed granite slopes in chaparral, pinyon-juniper woodland; 1,705-1,820m	Absent Habitat not present on site, site is below elevational range of species
<i>Pediomelum castoreum</i>	Beaver Dam breadroot	None	S2	1B.2	Sandy soils in washes, (also roadcuts) in Joshua Tree Woodland and Mojavean Desert Scrub. 610-825m. April-May	Absent Site is well above elevation range of species
<i>Schoenus nigricans</i>	Black bog-rush	None	S2.2	2.2	Alkaline marshes and swamps. 150-2,000m. August-September	Absent Habitat not present on site
<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	Southern mountains skullcap	None	S2	1B.2	Gravelly soils on streambanks or mesic sites in chaparral, woodlands (cismontane and coniferous). 425-2,000m., June-August	Absent Habitat not present on site



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		Federal	State	CNPS (plants)		
<i>Symphotrichum defoliatum</i>	San Bernardino aster	None	S2	1B.2	Meadows, seeps, marshes, swamps in coastal scrub, cismontane and lower montane coniferous forests, grasslands. 2-2,040m.	Absent Habitat not present on site
<i>Yucca brevifolia</i>	Joshua tree	San Bernardino County Development Code 88.01.060 Desert Native Plant Protection			Various desert habitats	Occurs
Invertebrates						
<i>Euchloe hyantis andrewsi</i>	Andrew's Marble Butterfly	None	S1		Yellow pine forest near Big Bear and Arrowhead Lakes in the San Bndo. Mtns. 5,000-6,000 ft.	Absent No habitat onsite, site is below elevation range of species
<i>Helminthoglypta mohaveana</i>	Victorville shoulderband	None	S1		Known only from along the Mojave River in San Bernardino County	Absent No habitat onsite
<i>Helminthoglypta taylori</i>	Westfork shoulderband	None	S1		Vicinity of the Mojave River, under leaves and logs.	Absent No habitat onsite
<i>Plebejus saepiolus aureolus</i>	San Gabriel Mountains Blue Butterfly	None	S1		Type locality is a wet meadow seep in Yellow Pine Forest. Foodplant is <i>Trifolium wormskioldii</i> .	Absent No habitat onsite
<i>Plebulina emigdionis</i>	San Emigdio blue butterfly	None	S2S3		Desert canyons and along riverbeds on the southernmost edge of the San Joaquin Valley, hostplant is <i>Atriplex canescens</i> , possibly <i>Lotus purshianus</i> .	Absent Site is south of known range, hostplants not present onsite
Amphibians & Reptiles						
<i>Batrachoseps gabrieli</i>	San Gabriel slender salamander	None	S2		Only known from the San Gabriel Mountains. Only surface active in winter and early spring, found under rocks, soil at base of talus slopes.	Absent No habitat onsite
<i>Anaxyrus californicus</i>	Arroyo Toad	FE	S2S3, SC		Sandy wash and intermittent stream habitats (low gradient with low velocity flow including valley-foothill and desert edge areas)	Absent No habitat onsite
<i>Rana draytonii</i>	California red-legged frog	FT	S2S3, SC		Permanent sources of deep water (ponds, pools, etc.) in lowlands and foothills in our area, with dense or emergent riparian vegetation.	Absent No habitat onsite
<i>Rana muscosa</i>	Sierra Madre Yellow-legged Frog	FE	CE		In the mountains of southern California, inhabits rocky streams in narrow canyons and in the chaparral belt. Deep pools are important as summer refugia and for overwintering larvae	Absent No habitat onsite
<i>Aspidoscelis tigris stejnegeri</i>	Coastal Whiptail	None	S2S3		Semiarid habitats with sparse vegetation, also woodland and riparian areas, mainly cismontane	Absent Great Basin whiptail (<i>Aspidoscelis tigris tigris</i>) onsite



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Scientific Name	Common Name	Status ¹			Habitat (for plants may include elevational range in meters & blooming period)	Occurrence Probability ²
		Federal	State	CNPS (plants)		
<i>Emys marmorata</i>	Western pond turtle	None	S3, SC		An aquatic turtle that inhabits ponds, marshes, rivers, streams and irrigation ditches.	Absent No habitat onsite
<i>Gopherus agassizii</i>	Desert Tortoise	FT	ST, S2		Most common in desert scrub, desert wash, and Joshua Tree habitats; occurs in almost every desert habitat. Require friable soil for burrow and nest construction. Creosote bush habitat with large annual wildflower blooms preferred.	Absent No sign observed on or adjacent to site during USFWS protocol surveys, habitat is not typical for this species
<i>Phrynosoma blainvillii</i>	Coast Horned Lizard	None	SC, S3S4		Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Occurs Found on project site during surveys
<i>Diadophis punctatus modestus</i>	San Bernardino ringneck snake	None	S2?		Rocky areas usually near moist microhabitats with abundant cover.	Absent No habitat onsite
<i>Thamnophis hammondi</i>	Two-striped Garter Snake	None	SC, S2		This highly aquatic snake is found in or near permanent/intermittent streams or ponds with rocky beds (streams) and riparian vegetation	Absent No habitat onsite
Birds						
<i>Accipiter cooperii</i>	Cooper's Hawk	None	S3		Prefers open or marginal woodlands, nests mainly in riparian, live oak, or canyon bottom woodlands	Moderate (foraging) Low (nesting)
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Delisted	SE, S2		Ocean shore, margins of lakes and rivers, usually nests within 1 mile of water.	Absent No habitat onsite for foraging or nesting
<i>Asio otus</i>	Long-eared Owl	None	S3, SC		Riparian (tall willows and cottonwoods) also oak belts along streams, forages over adjacent open land – uses old crow or hawk nests for breeding	Low (foraging) Absent (nesting)
<i>Athene cunicularia</i>	Burrowing Owl	BCC	SC, S2		Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, especially California Ground Squirrel.	Low Burrows capable of supporting owls found, but no owl sign found, CDFW protocol surveys underway on site
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	FC	SE		Nests in riparian forests, prefers lower flood-bottoms of larger rivers.	Absent No habitat onsite
<i>Falco mexicanus</i>	Prairie Falcon	BCC	S3		Dry, open terrain (level or hilly), nests on cliffs	Occurs (foraging) Absent (nesting)



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		Federal	State	CNPS (plants)		
<i>Empidonax traillii extimus</i>	Southwestern Willow Flycatcher	FE	SE		Breeds in riparian woodlands in southern California.	Absent No habitat onsite
<i>Vireo bellii pusillus</i>	Least Bell's Vireo	FE	SE		Summer breeder in low riparian near water (sometimes in dry river bottoms) below 2,000 feet.	Absent No habitat onsite, site is almost 4,000 feet in elevation
<i>Vireo vicinior</i>	Gray Vireo	None	S2, SC		Dry, chamise-dominated chaparral, also with juniper and sagebrush in mountains of Mojave, also west of the desert.	Absent No chamise onsite, habitat not correct type or quality
<i>Lanius ludovicianus</i>	Loggerhead Shrike	BCC	SC, S4		Open areas in woodlands, savannah, Pinyon-Juniper, Joshua tree, and riparian woodlands. Also desert oases, scrub and washes. Needs fairly dense shrubs and/or small trees for nesting.	Low (nesting) Foraging and nesting habitat present, not observed during surveys
<i>Setophaga petechia brewsteri</i>	Yellow Warbler	None	S2, SC		In our area usually in riparian woodlands (willows, cottonwoods, aspens, sycamores) for both nesting and foraging.	Absent (both foraging and nesting, habitat not present)
<i>Icteria virens</i>	Yellow-breasted Chat	None	S3, SC		Summer resident of riparian thickets (willow and other brushy tangles) nests in low, dense riparian habitat	Absent (both foraging and nesting, habitat not present)
<i>Toxostoma lecontei</i>	Le Conte's Thrasher	BCC	SC, S3		Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.	Absent Only California thrashers observed onsite during multiple visits, habitat is more cismontane than desert
<i>Piranga rubra</i>	Summer tanager	None	S2, SC		Summer resident of desert riparian along lower Colorado River and elsewhere in our deserts. Nests in cottonwood-willow (also foraging habitat).	Absent (both foraging and nesting, habitat not present)
Mammals						
<i>Chaetodipus fallax pallidus</i>	Pallid San Diego Pocket Mouse	None	SC, S3		In desert wash, desert scrub, desert succulent scrub, pinyon-juniper, etc. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Low No CNDDDB records from Baldy Mesa Quad. Closest records (on Victorville Quad.) are from 1920 and 1921.
<i>Eumops perotis californicus</i>	Western Mastiff Bat	None	SC, S3?		A variety of open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Absent (roosting) Low (foraging over site)



Table 2. Special-Status Biological Resources with the Potential to Occur in the Vicinity of the Proposed Project						
Scientific Name	Common Name	Status ¹			Habitat (for plants may include elevational range in meters & blooming period)	Occurrence Probability ²
		Federal	State	CNPS (plants)		
<i>Glaucomys sabrinus californicus</i>	San Bernardino Flying Squirrel	None	S2S3, SC		Black oak and/or white fir dominated woodlands between 5,200-8,500 ft. in the San Bernardino and San Jacinto Mtns.	Absent No habitat onsite, site too low in elevation
<i>Neotamias speciosus speciosus</i>	Lodgepole chipmunk	None	S2S3		Inhabits summits of Piute, San Bernardino and San Jacinto Mountains, usually in open-canopy forests.	Absent No habitat onsite, site too low in elevation
<i>Lasiurus cinereus</i>	Hoary Bat	None	S4?		Open habitats or habitat "mosaics" with access to roosting trees and open areas or edge habitats for foraging.	Moderate Habitat for roosting and foraging present
<i>Microtus californicus mohavensis</i>	Mohave River Vole	None	S1, SC		Only in weedy growth in wet areas along the Mojave River, sometimes in adjacent irrigated pastures.	Absent No habitat onsite
<i>Taxidea taxus</i>	American Badger	None	SC, S4		Most abundant in drier, open stages of most shrub, forest, and herbaceous habitats. Needs friable soils and open, uncultivated ground for burrows.	Absent No sign observed, not likely in close proximity to residential development
<i>Xerospermophilus mohavensis</i>	Mohave Ground Squirrel	None	ST, S2S3		Open desert scrub, alkali scrub, and Joshua Tree Woodland, also feeds in annual grasslands. Prefers sandy to gravelly soils, avoids rocky areas, burrows usually at base of shrubs.	Low Protocol trapping program ongoing on Project site at the time of this writing.
<i>Ovis canadensis nelsoni</i>	Nelson's bighorn sheep	None	S3		Mountainous areas with open, rocky, steep terrain with water and forage	Absent No habitat onsite
Habitats						
Southern Sycamore Alder Riparian Woodland		None	S4		Open (seldom closed-canopy), broad-leaved, deciduous streamside forest dominated by California sycamore and white alder	Absent Habitat not present on or adjacent to site



¹Status Codes:	
Federal	CNPS
FP = Fully Protected	1A = Presumed Extinct in California
FE = Federal Endangered	1B = Rare, Threatened, or Endangered in California and elsewhere
FT = Federal Threatened	2 = Rare, Threatened, or Endangered in California but more common elsewhere
FC = Federal Candidate	3 = More information needed (Review List)
BCC = Bird of Conservation Concern	4 = Limited distribution (Watch List)
	0.1 = Seriously Threatened in California
	0.2 = Fairly Threatened in California
	0.3 = Not very Threatened in California
State	
SE = State Endangered	
ST = State Threatened	
SR = State Rare	
CE = State Candidate for listing as Endangered	
SC = State Species of Concern	
INV = Communities that are known or believed to be of high priority for inventory in CNDDB	
	S2 = Imperiled. 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres
	S2.1 = very threatened
	S2.2 = threatened
	S2.3 = no current threats known
	S3 = Vulnerable. 21-80 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres
	S3.1 = very threatened
	S3.2 = threatened
	S3.3 = no current threats known
	S4 = Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern; e.g. there is some threat, or somewhat narrow habitat. No threat designation.
	S5 = Demonstrably secure to ineradicable in California. No threat designation.
	SH : All known California sites are historical, not extant
CDFW state rankings are a reflection of the overall condition of an element throughout its California range. The number after the decimal point represents a <u>threat</u> designation attached to the rank:	
S1 = Critically Imperiled. Less than 6 Element Occurrences (EOs) OR less than 1,000 individuals OR less than 2,000 acres	
S1.1 = very threatened	
S1.2 = threatened	
S1.3 = no current threats known	
²Occurrence Probability	
<i>Occurs:</i>	Observed on the site by AMEC personnel, or recorded there by other qualified biologists.
<i>High:</i>	Observed in similar habitat in region by qualified biologists, or habitat on the site is a type often utilized by the species and the site is within the known range of the species.
<i>Moderate:</i>	Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.
<i>Low:</i>	Site is within the known range of the species but habitat on the site is rarely used by the species.
<i>Absent:</i>	A focused study failed to detect the species, or no suitable habitat is present.
<i>Unknown:</i>	Distribution and habitat use has not been clearly determined.

4.2 General Biological Resources Assessment

The vegetation community present throughout the Project site is an intergrade between Joshua Tree Woodland and Mojavean Juniper Woodland and Scrub, with understory elements from Mojave Mixed Woody Scrub. Dominant species include: Joshua tree, California juniper, Tucker's oak (southwest portion of site only), Great Basin sagebrush, peach thorn, bladder-sage, blue sage, Cooper's goldenbush, Interior goldenbush, and California buckwheat (see Appendix B for photos). Wildlife and plant species observed are included in Appendix C. Annual plant numbers and diversity were very low, and two nonnative, weedy species: redstem filaree (*Erodium cicutarium*) and Mediterranean schismus (*Schismus barbatus*) were the dominant annuals that had germinated on the site at the time of the surveys, although some native annual plants were also identified on the site. A variety of small mammal burrows, not identifiable to the species using them, were also present onsite, although many of them

had been dug out by canids (likely domestic dogs and coyotes). Four bird nests were also observed on the site, all on the southern portion of the parcel (see Figure 5, Appendix A). There were areas of relatively recent ground disturbance and areas that had been formerly cleared (see Photos in Appendix B). Several Joshua trees protected by county code are present onsite.

It should be noted that relatively short-term inventories of this nature are limited in their scope by the seasonality, timing and duration of surveys, and the nocturnal and fossorial habits of many desert-dwelling animals. Therefore, the species observed does not necessarily reflect the total number of species that potentially occupy the Project site.

5.0 IMPACTS AND RECOMMENDATIONS

5.1 Plants

No rare plants were observed on the Project site during the field visits or during a focused survey performed specifically for rare plants. It should be noted that the remains of what appeared to be one short-joint beavertail cacti (*Opuntia basilaris* var. *brachyclada*) were found close to the abandoned residential dwelling on the southern portion of the site. This individual definitely appeared to have been planted at this location, as there was also a California barrel cactus (*Ferocactus cylindraceus*) and grizzly bear prickly-pear (*Opuntia polyacantha* var. *erinacea*) located adjacent to this plant in an area that appeared to have been a former small “cactus garden”. It should be noted that neither the barrel cactus or grizzly bear cactus are expected in this area of the Mojave. The only other cacti observed on the Project site were golden cholla (*Cylindropuntia echinocarpa*). Most rare plants known from the surrounding area lack appropriate habitat at the Project site, and would not be expected to occur on the site. Of the thirty rare plants listed in Table 2, only three species: white pygmy-poppy (*Canbya candida*), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), and Booth’s evening-primrose (*Eremothera boothii* ssp. *boothii*) are considered to have any probability (low for all three) of occurrence on the Project site. Precipitation in general has been very low this year in the Phelan area, with just 0.16 inches of rainfall recorded for March, and none recorded for April. This represents approximately 15% of the average rainfall total of 1.08 inches for March and April in the Project area. Germination of annual plants has been negatively affected by the lack of rain, and some annual plants simply may not have germinated this year. Therefore we cannot totally rule out the possibility of the three plants listed above occurring on the Project site at this time, although we believe there is very little chance that these species occur onsite, and on a disturbed site no population of significance would be expected to occur. These plants are not state or federally listed as threatened or endangered. Therefore, no significant impacts to rare plants are anticipated.

The Joshua trees located on the Project site are usually required to be preserved/transplanted or removed by permit in accordance with the San Bernardino County’s *Title 8 Development Code, Division 9: Plant Protection and Management, Chapter 4: Desert Native Plant Protection*. If preservation were to be required, the provisions for this code can be found in Sections 89.0401 to 89.0435. Permits and authorization to remove, transport, or otherwise impact these plants would need to be obtained prior to Project approval and the Joshua trees would be relocated to pre-determined, agency-approved locations, made available to a local adoption program, transplanted per facility landscape design plans, and/or used in site habitat restoration. However, as a local government entity, the School District qualifies as exempt from this measure per County Code 88.01.030 [b].

5.2 Special Status (Unlisted) Wildlife

Two special status wildlife species were observed on the project site: Coast horned lizard (*Phrynosoma blainvillii*) and Prairie Falcon (*Falco mexicanus*). One Coast horned lizard was found on the southwestern portion of the parcel, on the edge of the Tucker's oak "woodland" (see Figure 5 in Appendix A). One Prairie falcon was observed flying over the central portion of the site on April 12, 2013. None of these species are formally listed as threatened or endangered by the state and federal agencies, but the Coast horned lizard is considered a "Species of Concern" by the CDFW. The Prairie falcon is not expected to nest on the Project site, as this falcon nests on cliffs. It is likely that Prairie falcons occasionally utilize the site to forage over, or simply fly over the site while enroute to other parts of their home range. AMEC biologists are not aware of any specific mitigation applicable to foraging habitat for sensitive, but unlisted bird species such as the Prairie falcon. Similarly, there is no specific mitigation measure applied to Coast horned lizards, although AMEC biologists have performed construction monitoring on past projects to ensure that no Coast horned lizards were harmed. Impacts to any populations of the unlisted species discussed above on this relatively small, disturbed parcel would be insignificant.

There is a low possibility that seven unlisted and one State-listed sensitive species could occur onsite (or periodically utilize the site for foraging): Cooper's hawk (*Accipiter cooperii*), burrowing owl, long-eared owl (*Asio otus*), loggerhead shrike (*Lanius ludovicianus*), pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*), western mastiff bat (*Eumops perotis californicus*), hoary bat (*Lasiurus cinereus*), and Mohave ground squirrel (*Xerospermophilus mohavensis*). Potential foraging and nesting habitat for Cooper's hawk, long-eared owl, and loggerhead shrike is present on the Project site, with potential nesting habitat located primarily on the southwest portion of the site in the Tucker oaks. Both the western mastiff bat and hoary bat have potential to occasionally forage over the site, and the Tucker oaks provide potential roost sites for the hoary bat. Roosting habitat for the western mastiff bat is not present on the site. Marginal habitat is present on the site for pallid San Diego pocket mouse. None of these six species are formally listed as threatened or endangered by the state and federal agencies, although all but the Cooper's hawk are considered "Species of Concern" by the CDFW. Even if present, impacts to any populations of the unlisted species discussed above on this relatively small, disturbed parcel would be insignificant. Apart from the conditions of the Migratory Bird Treaty Act (MBTA – see Section 5.6) and State Code ("mirrors" the MBTA), there are no specific mitigations that are applied to the unlisted species discussed above. However, burrowing owls and Mohave ground squirrels are an exception, and will be discussed in more detail in Sections 5.4 and 5.5 respectively in this report.

5.3 Desert Tortoise

The Mojave population segment of the desert tortoise is federally and state listed as threatened by the USFWS and CDFW, respectively. The Mojave population segment includes all tortoises occurring west and north of the Colorado River. The desert tortoise is most common in desert scrub, desert wash, and Joshua tree habitats in a variety of terrain types, including alluvial fans, valleys, rocky hillsides, and washes. They require friable soil for burrow and nest construction. Burrows are typically found at the base of shrubs, in the interspaces between shrubs, and occasionally in caliche soil bank areas or underneath boulders/rocks. They are herbivores and feed on a variety of plants including annual herbs and perennial grasses.

Tortoise activity is greatest during the spring and early summer, and to a lesser extent during the fall; however, tortoises can be active at any time of the year during appropriate weather conditions. Although tortoises hibernate during the winter and typically emerge in late February or early March, hatchlings and juveniles can be fairly active during the winter months. Adults will also emerge from their burrows to drink if water resources have been limited during the previous activity season and/or winter precipitation has provided standing water. Their activity is usually much reduced during hot summer months, but they may be active following summer rains or if temperatures are moderate (Boarman 2003).

Threats to desert tortoises include loss or degradation of habitat, vandalism, poaching, intentional killing, predation on young tortoises by the common raven (*Corvus corax*) and other predators (e.g. kit fox, snakes, etc.), and disease (e.g. Mycoplasmosis). Off-road vehicles, military training maneuvers, mining, and livestock grazing also affect tortoise habitat by collapsing burrows, eroding soils, reducing availability of food plants, eliminating shrubs which would provide shade for tortoises and support for their burrows, and ultimately results in surface disturbance that promotes conditions more conducive to invasion by exotic plant species, which provide less nutritional value to tortoises than the native species that were replaced. Human activities, including garbage dumping, landfills, roads, increased nesting opportunities, irrigation, and increased vehicle use have led to increased numbers of common ravens in California deserts. Ultimately, the increased predation on young tortoises by common ravens reduces recruitment into breeding populations (Boarman 2003).

Tortoises are most often detected by their scats and burrows. Tortoises themselves can sometimes be detected in burrows by reflecting sunlight inside the burrow with a mirror. Other tortoise sign include carcasses, or fragments thereof, courtship rings, and drinking depressions. Any of these signs are an indication that tortoises either occur, or have recently occurred, at a particular location. Sign can be detected at any time of the year and always indicates suitable habitat, if not occupied habitat.

There is no desert tortoise critical habitat present on or near the Project site. Additionally, the vegetation community occurring on and around the Project site is not typically associated with desert tortoise occupation. However, due to the relative proximity to known tortoise range, AMEC biologists felt it prudent to perform focused surveys for this species on the project site. AMEC performed a USFWS protocol focused survey for the desert tortoise on the site and no tortoises or sign were observed. AMEC biologists also performed three belt transect rings spaced at 200, 400, and 600 meters from the perimeter of the project to determine if tortoises were present in the immediate project vicinity (see Figure 2 Appendix A). No tortoises or their sign were encountered during these "Zone of Influence" surveys. The presence of busy roads and residential development, together with the fragmented nature of the habitat around the Project site make it unlikely that a desert tortoise would wander onto the Project site from adjacent lands. Based on the results of the focused survey, desert tortoise is not present on the Project site, or in the immediate vicinity.

5.4 Burrowing Owl

The burrowing owl is federally designated as a Bird of Conservation Concern (BCC) and state designated as a California Species of Concern. It is a small ground-dwelling owl that occurs in open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation (Haug et al. 1993). In southern California, burrowing owls are not only found in undisturbed natural areas, but also follow agricultural fields, margins of active agricultural areas, livestock farms, airports, and vacant lots. It is a subterranean nester, typically utilizing pre-existing burrows (e.g. California

ground squirrel, kit fox, drain pipes, culverts, etc.). The entrance of the burrow is often adorned with animal dung, feathers, debris, and other small objects (CDFG 2005). Among the avian species of our region, their underground nests and roosts make them uniquely vulnerable to ground disturbing activities.

The species is active both day and night, and may be seen perching conspicuously on fence posts or standing at the entrance of their burrows. Burrowing owl populations in California are clearly declining and, if declines continue, the species may qualify for listing under the state and/or federal ESA(s) (CDFG 1995). The declines in burrowing owl populations are attributed to loss and degradation of habitat, ongoing residential and commercial development, and rodent control programs.

Although no burrowing owls or their sign were observed on the Project site during the focused survey, several California ground squirrel (*Spermophilus beecheyi*) burrows are present throughout the parcel and within the 500 foot buffer area around the site (area established by the CDFG 2012 survey protocol – see Figure 4 Appendix A). AMEC has already completed two of four required survey visits, and recommends completion of a focused survey conducted in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) on the site and buffer area. Impacts and mitigation measures would be determined if focused surveys detected burrowing owls on or adjacent to the Project site.

5.5 Mohave Ground Squirrel

The Mohave ground squirrel is a medium-sized squirrel that is endemic to the Mohave Desert. Total length, including the tail, is about 9 inches. Tail length accounts for about 2.5 inches of the total length. The average weight of an adult is about 3.5 ounces. The upper body is grayish brown, pinkish gray, cinnamon gray, and/or pinkish cinnamon, without stripes or spots. The underparts of the body and the tail are silvery white and the tail is bushy. This species is listed as threatened by the State of California, but is not listed as threatened or endangered by the federal government. AMEC is currently conducting a protocol trapping program for Mohave ground squirrel on the Project site, the results of which will be presented in a separate report.

5.6 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits actions resulting in the pursuit, capture, killing, and/or possession of any protected native migratory bird, nest, egg or parts thereof. State code also protects these species. Birds nesting within the Project site could be impacted by Project activities. To comply with the MBTA, any vegetation removal or grading occurring during the bird nesting season (generally February 1 through August 31) would require at least one nesting bird survey (more if deemed necessary) to be conducted by a qualified biologist. If no nests are found, construction would proceed. If active nests are found, impact avoidance measures (e.g., buffers) would be required. The measures above will also protect any special status bird species found onsite. AMEC biologists observed four bird nests on the Project site, located on the southern portion of the parcel (see Figure 5 in Appendix A).

5.7 Jurisdictional Waters

No drainages are present on the Project site.

6.0 REFERENCES

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7.0 CERTIFICATION

CERTIFICATION: "I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project."

DATE: 30 May 2013

SIGNED:

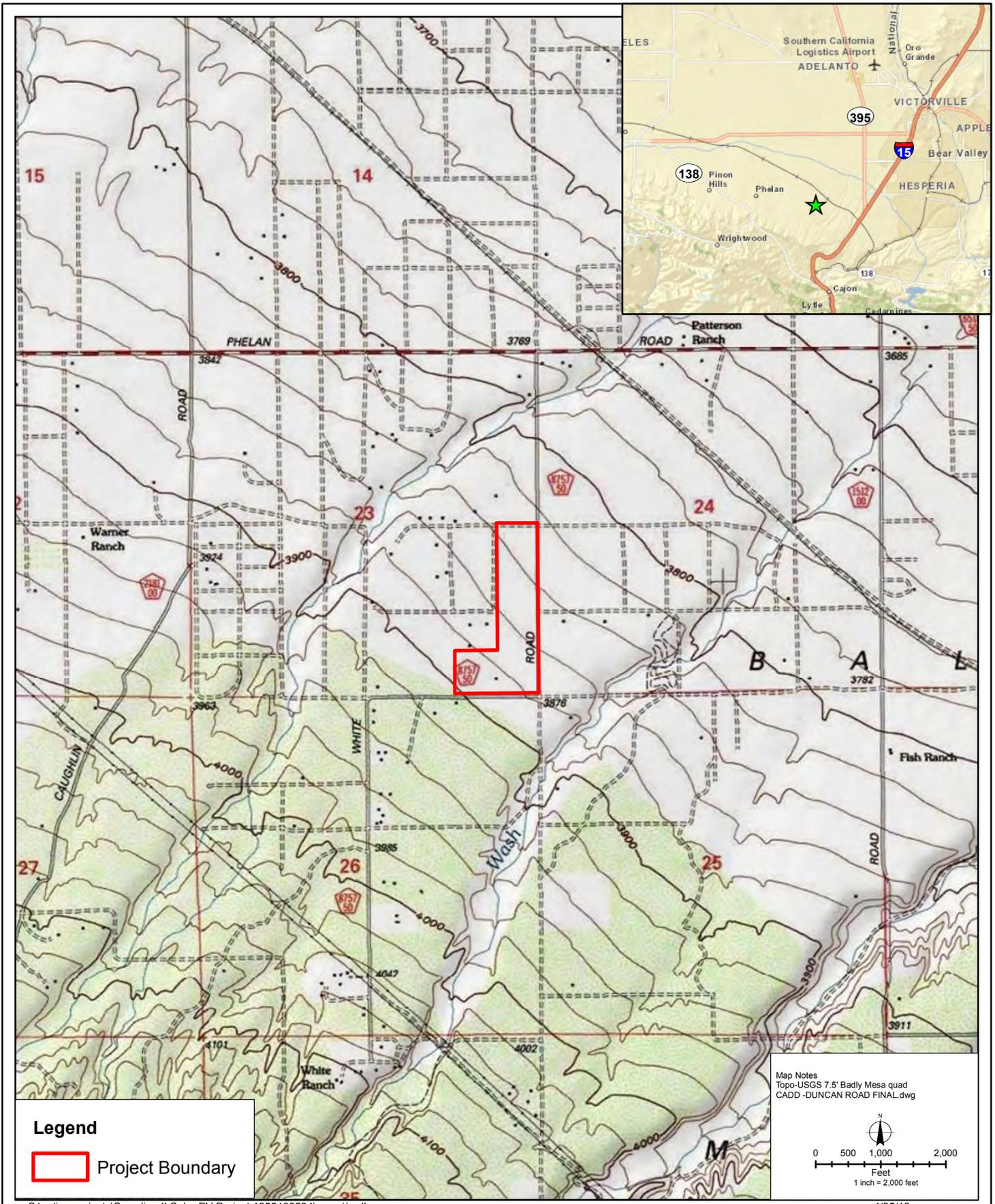


1) Fieldwork Performed By:

Nathan T. Moorhatch



Appendix A Project Map Figures



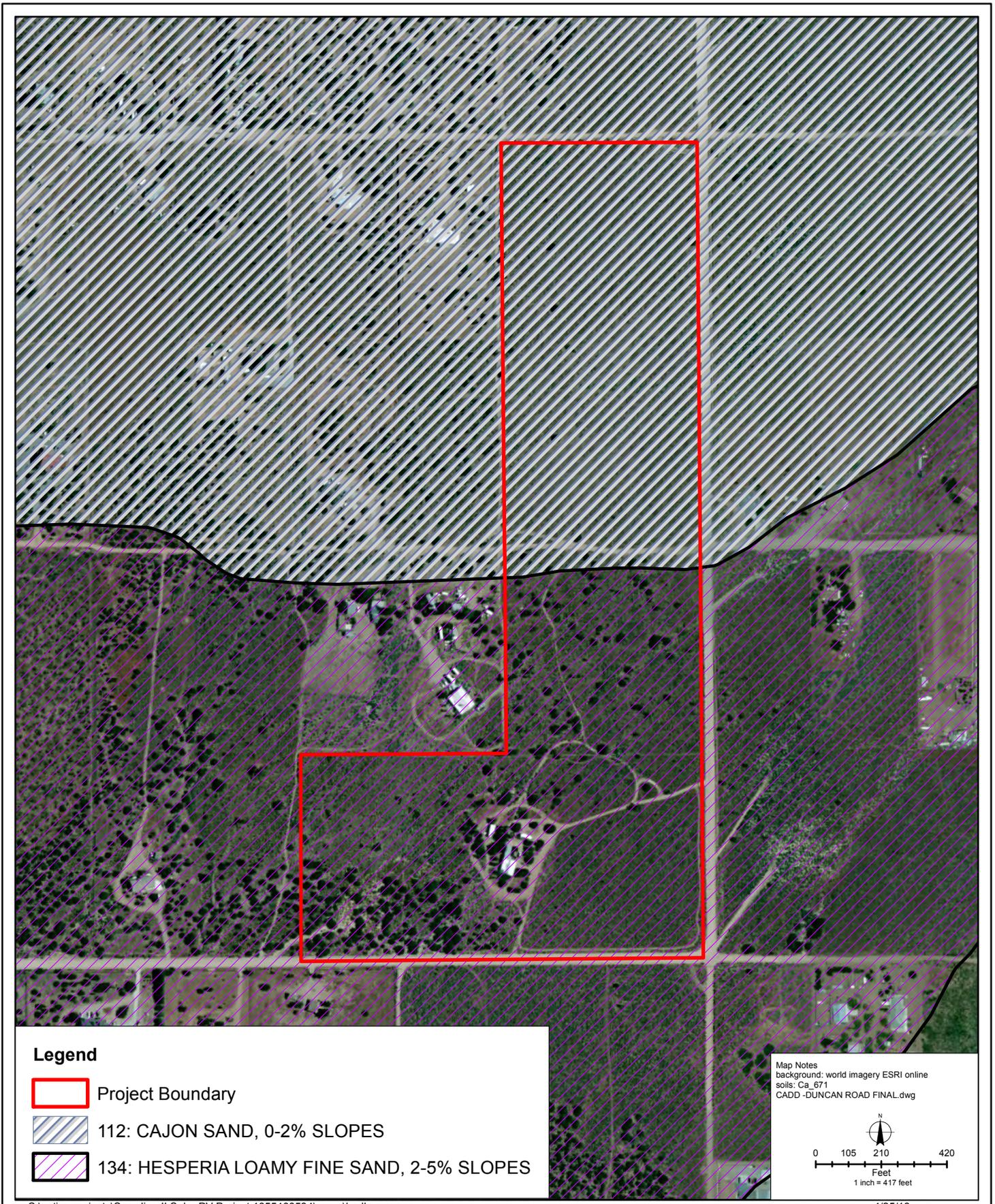
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Vicinity & Location
General Biological Assessment

FIGURE
1





FIGURE

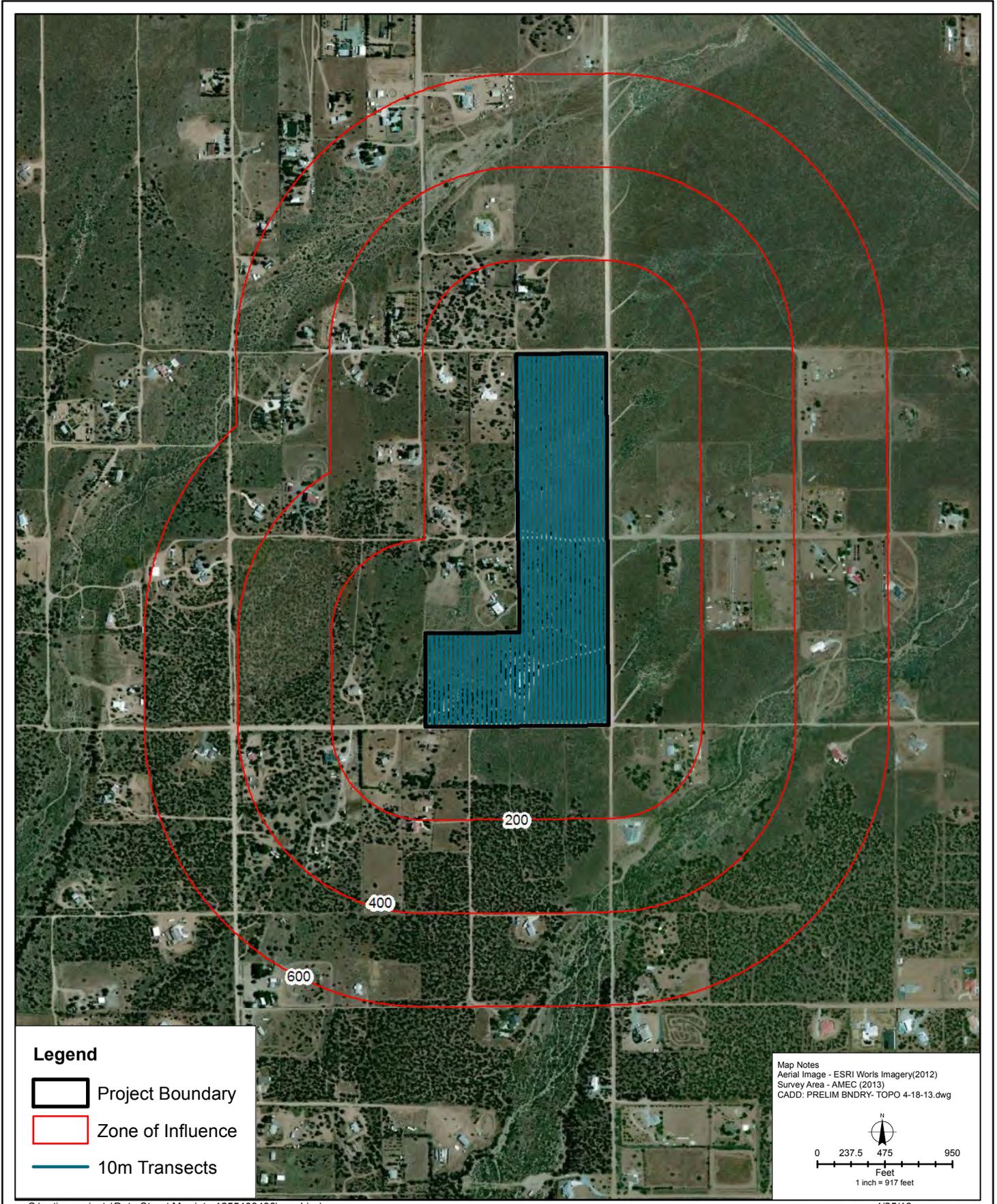
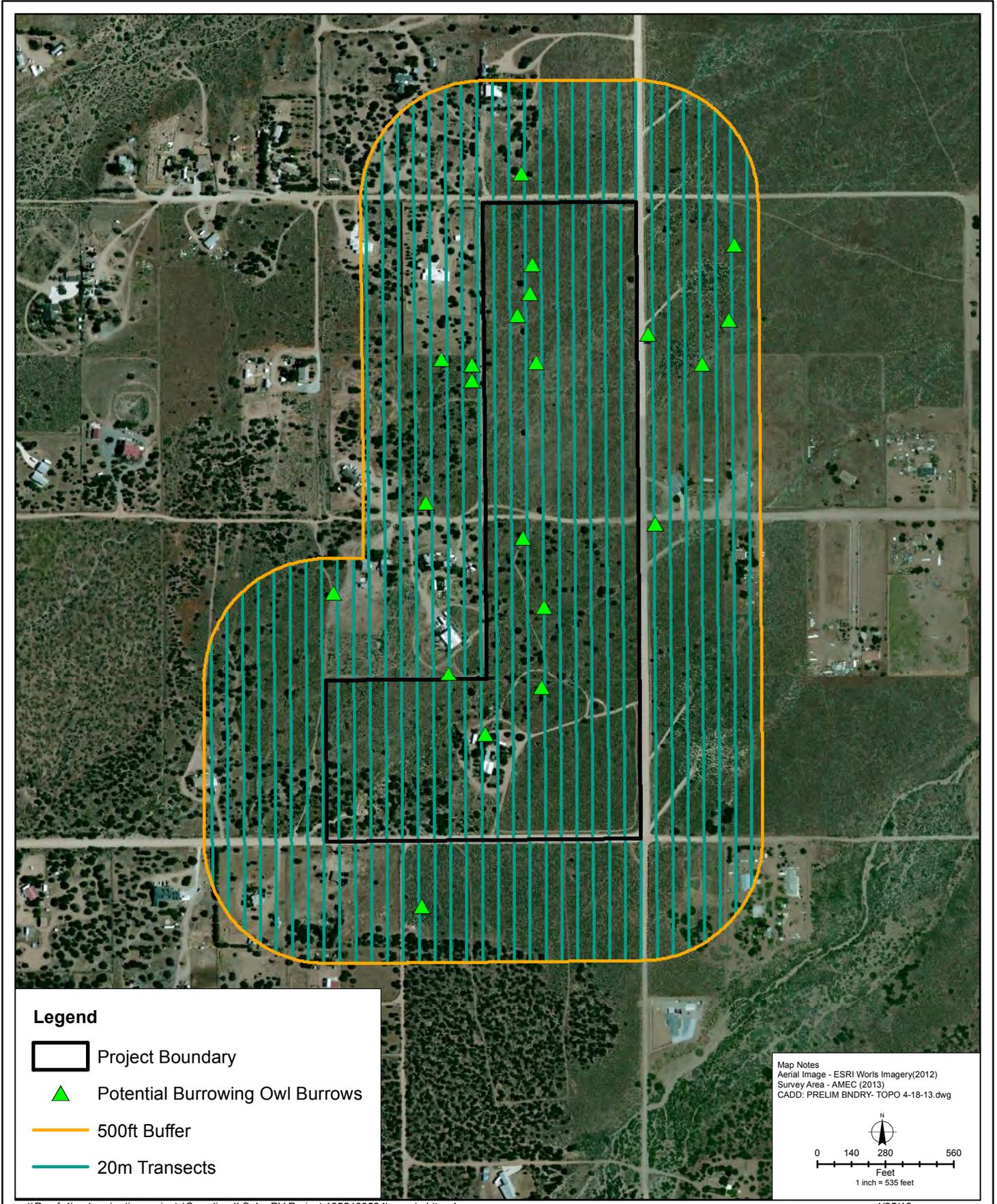


FIGURE
3



**Desert Tortoise Survey Areas
 General Biological Assessment**



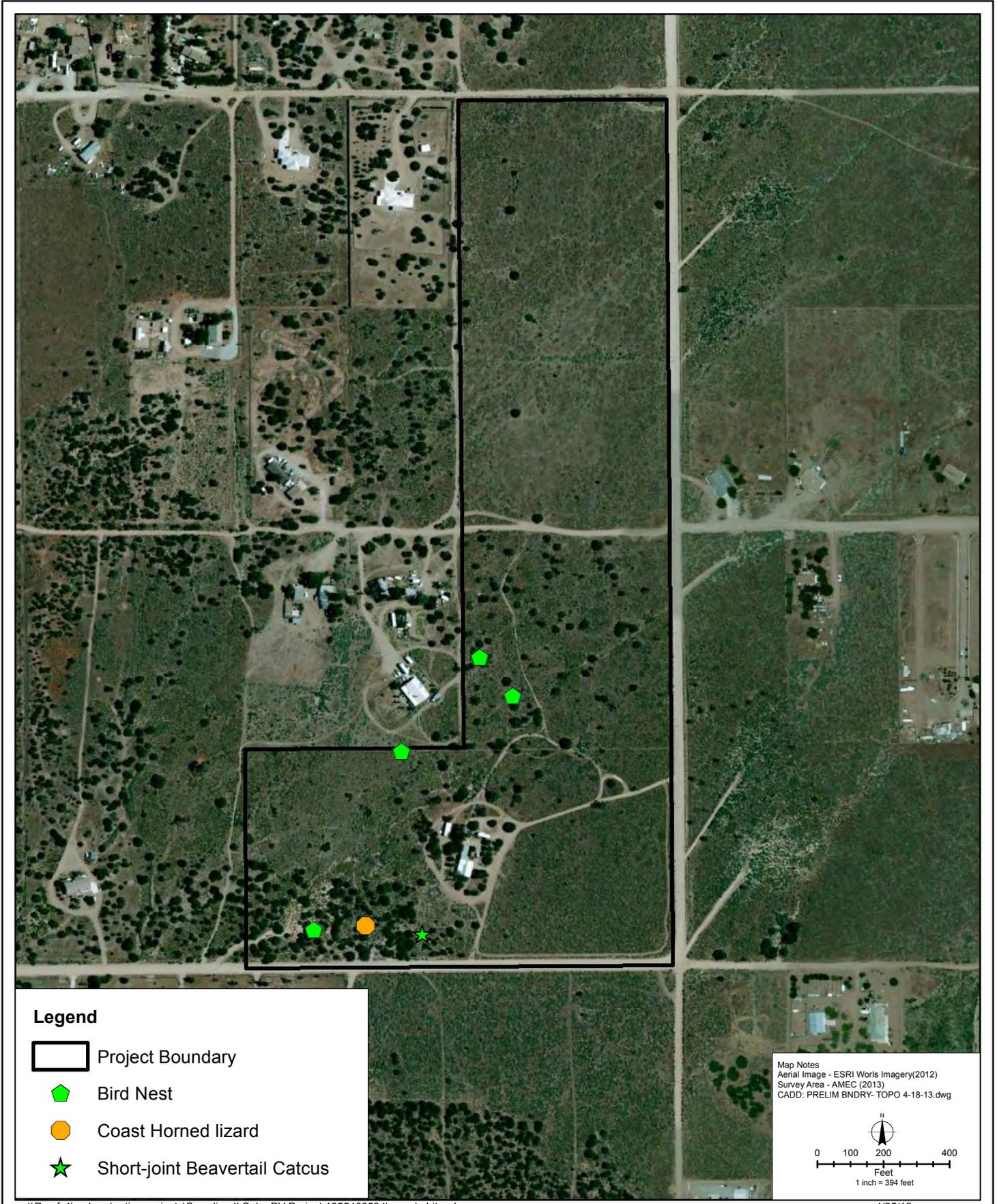
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FIGURE

4



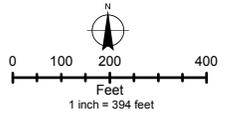
Burrowing Owl survey Areas & Results
General Biological Assessment



Legend

-  Project Boundary
-  Bird Nest
-  Coast Horned lizard
-  Short-joint Beavertail Cactus

Map Notes
 Aerial Image - ESRI World Imagery(2012)
 Survey Area - AMEC (2013)
 CADD: PRELIM BNDRY- TOPO 4-18-13.dwg



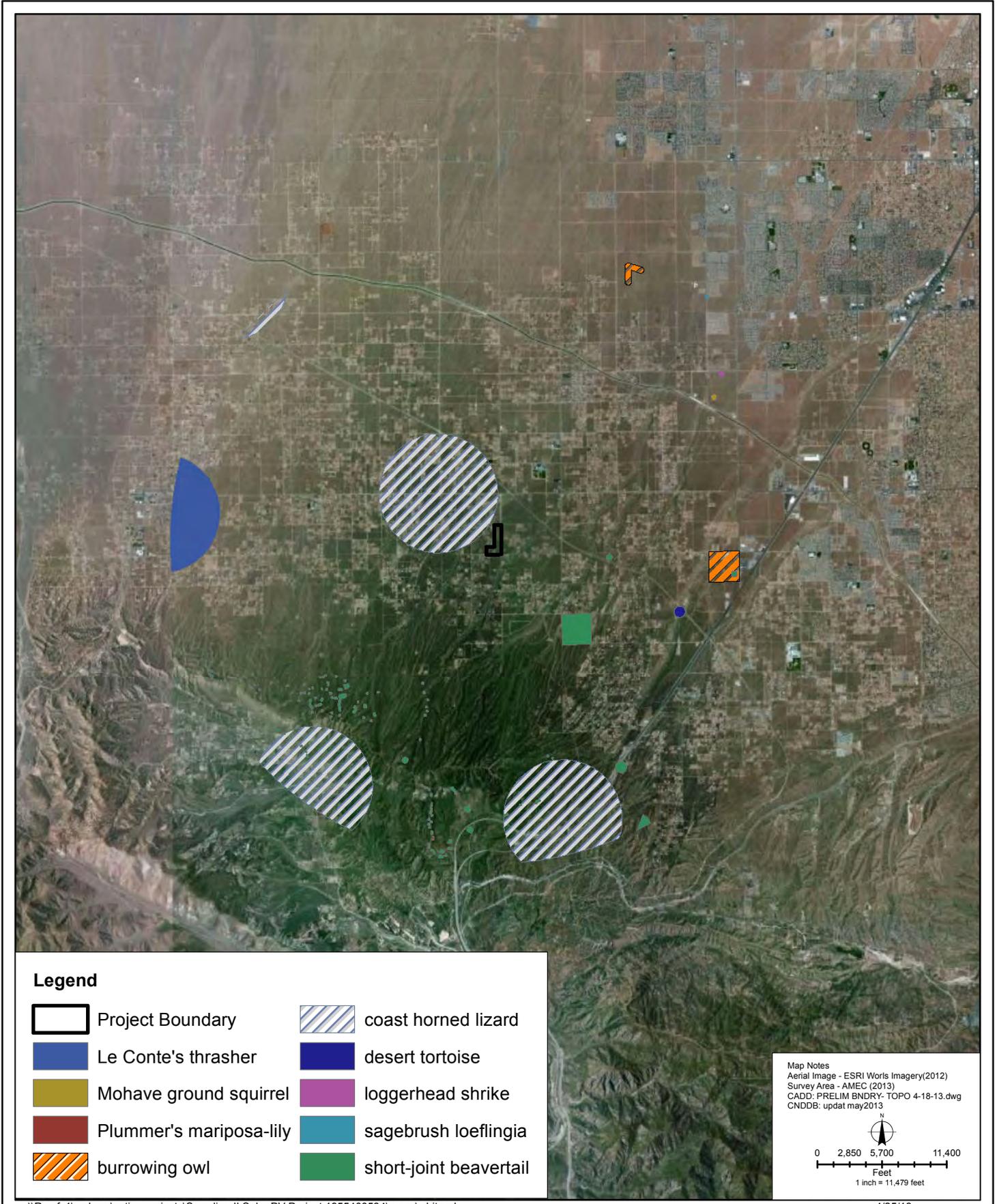
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FIGURE
5



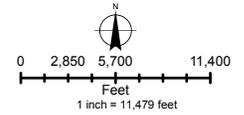
**Bird Nest Locations & Other Findings
 General Biological Assessment**



Legend

- | | |
|---|--|
|  Project Boundary |  coast horned lizard |
|  Le Conte's thrasher |  desert tortoise |
|  Mohave ground squirrel |  loggerhead shrike |
|  Plummer's mariposa-lily |  sagebrush loeflingia |
|  burrowing owl |  short-joint beavertail |

Map Notes
 Aerial Image - ESRI World Imagery(2012)
 Survey Area - AMEC (2013)
 CADD: PRELIM BNDRY- TOPO 4-18-13.dwg
 CNDDB: updat may2013



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**CNDDB
 General Biological Assessment**

**FIGURE
 6**

Appendix B Site Photographs



Photograph 1. Representative view of disturbed habitat present on the central and northern portions of the White Road Project site.



Photograph 2. Another view of the same area.



Photograph 3. Habitat near the southern portion of the parcel.



Photograph 4. Juniper dominated habitat, southern portion of site, showing downed Joshua tree limbs and California ground squirrel burrows.



Photograph 5. Tucker oaks on southwest portion of parcel.



Photograph 6. View of oak area with California junipers, showing open ground and lack of annuals.



Photograph 7. Coast horned lizard found on southwest portion of site on April 11, 2013.



Photograph 8. Possible short-joint beavertail, believed to have been planted on southwest portion of Project site near abandoned residence.

Appendix C Species Lists

Plant Species Observed on the Project Site

CUPRESSALES

Cupressaceae

Juniperus californica

Cypress Family

California juniper

EPHEDRALES

Ephedraceae

Ephedra nevadensis

Ephedra Family

Nevada ephedra

DICOTS

Adoxaceae

Sambucus nigra ssp. *caerulea*

Muskroot Family

blue elderberry

Asteraceae

Ambrosia acanthicarpa

Ambrosia salsola

Artemisia tridentata

Ericameria cooperi var. *cooperi*

Ericameria linearifolia

Ericameria nauseosa

Gutierrezia microcephala

Lessingia glandulifera var. *glandulifera*

Senecio flaccidus

Tetradymia axillaris

Tetradymia stenolepis

Sunflower Family

annual bur-sage

cheesebush

Great Basin sagebrush

Cooper's goldenbush

Interior goldenbush

rubber rabbitbrush

sticky snakeweed

vinegar weed

threadleaf ragwort

longspine horsebrush

cottonthorn

Boraginaceae

Amsinckia tessellata

Pectocarya penicillata

Borage Family

checker fiddleneck

northern pectocarya

Brassicaceae

**Sisymbrium altissimum*

Mustard Family

tumble mustard

Cactaceae

Cylindropuntia echinocarpa

Cactus Family

golden/silver cholla

Chenopodiaceae

Chenopodium californicum

**Salsola tragus*

Goosefoot Family

California goosefoot

Russian thistle

Fagaceae

Quercus john-tuckeri

Oak Family

Tucker's oak

Geraniaceae

**Erodium cicutarium*

Geranium Family

redstem filaree

Lamiaceae

Salvia dorrii

Mint Family

blue sage

Scutellaria mexicana

bladder-sage

Loasaceae

Mentzelia albicaulis

Loasa Family

whitestem blazingstar

Nyctaginaceae

Mirabilis laevis

Four O'Clock Family

desert wishbone-bush

Polemoniaceae

Eriastrum sapphirinum ssp. *sapphirinum*

Phlox Family

sapphire woollystar

Polygonaceae

Eriogonum baileyi

Eriogonum fasciculatum

Buckwheat Family

Bailey's buckwheat

California buckwheat

Solanaceae

Lycium cooperi

Solanum xanti

Nightshade Family

peach thorn

chaparral nightshade

Viscaceae

Phoradendron bolleanum

Phoradendron serotinum ssp. *tomentosum*

Mistletoe Family

Bollean mistletoe

Pacific mistletoe

MONOCOTS

Liliaceae

*** *Yucca brevifolia*

Lily Family

Joshua tree

Poaceae

* *Bromus madritensis* ssp. *rubens*

* *Bromus tectorum*

* *Schismus barbatus*

Stipa speciosa

Grass Family

red brome

cheat grass

Mediterranean schismus

desert needle grass

**Vertebrate Species Observed on the Project Site and Buffer
Transects**

REPTILIA

Phrynosomatidae

***Phrynosoma blainvillii*
Sceloporus occidentalis longipes
Uta stansburiana

Xantusiidae

Xantusia vigilis vigilis

Teiidae

Aspiloscelis tigris tigris

Anguidae

Elgaria multicarinata webbia

Colubridae

Coluber flagellum piceus
Pituophis catenifer annectens

AVES

Odontophoridae

Callipepla californica

Cathartidae

Cathartes aura

Columbidae

Streptopelia decaocto
Zenaida macroura

Picidae

Picoides scalaris
Colaptes auratus

Falconidae

Falco sparverius
***Falco mexicanus*

Tyrannidae

Sayornis saya
Tyrannus verticalis

Corvidae

Aphelocoma californica

REPTILES

Spiny and Horned Lizards

Coast horned lizard
Great Basin fence lizard
side-blotched Lizard

Night Lizards

yucca night lizard

Whiptails and Relatives

Great Basin Whiptail

Alligator Lizards and relatives

San Diego alligator lizard

Harmless Egg-laying Snakes

red racer
San Diego gopher snake

BIRDS

New World Quail

California quail

New World Vultures

turkey vulture

Pigeons and Doves

Eurasian collared-dove
mourning dove

Woodpeckers and Allies

ladder-backed woodpecker
northern flicker

Caracaras and Falcons

American kestrel
Prairie falcon

Tyrant Flycatchers

Say's phoebe
western kingbird

Crows, Jays

western scrub-jay

Corvus corax

common raven

Paridae

Baeolophus inornatus

Chickadees and Titmice

oak titmouse

Remizidae

Auriparus flaviceps

Penduline Tits and Verdins

verdin

Aegithalidae

Psaltriparus minimus

Long-tailed Tits and Bushtits

bushtit

Troglodytidae

Thryomanes bewickii

Campylorhynchus brunneicapillus

Wrens

Bewick's wren

cactus wren

Poliophtilidae

Poliophtila caerulea

Gnatcatchers and Gnatwrens

blue-gray gnatcatcher

Turdidae

Sialia mexicana

Thrushes

western bluebird

Mimidae

Mimus polyglottos

Toxostoma redivivum

Mockingbirds and Thrashers

northern mockingbird

California thrasher

Sturnidae

Sturnus vulgaris

Starlings

European starling

Ptilonotidae

Phainopepla nitens

Silky-flycatchers

phainopepla

Emberizidae

Melospiza crissalis

Spizella breweri

Artemisiospiza belli

Zonotrichia leucophrys

Junco hyemalis

Emberizids

California towhee

Brewer's sparrow

sage sparrow

white-crowned sparrow

dark-eyed junco

Fringillidae

Haemorhous mexicanus

Fringilline and Cardueline Finches, Allies

house finch

Passeridae

Passer domesticus

Old World Sparrows

house sparrow

MAMMALIA

Leporidae

Lepus californicus

Sylvilagus audubonii

MAMMALS

Rabbits, Hares

black-tailed jackrabbit

Desert cottontail

Sciuridae

Spermophilus beecheyi
Ammospermophilus leucurus

Geomyidae

Thomomys bottae

Canidae

Canis latrans

Squirrels and Chipmunks

California ground squirrel (burrow)
white-tailed antelope squirrel

Pocket Gophers

Botta's pocket gopher (mounds)

Wolves, Foxes, Coyote

coyote (scat, burrow)

KEY

- * = non-native species
- ** = special-status species
- *** = locally-protected species
- cf. = compares favorably with
- sp. = plant identified to genus only

This list reports only plants and animals observed on the site by this study. Other species may have been overlooked or undetectable due to their growing season (plants) or their activity patterns and/or subterranean habitats (animals). Plants were identified from keys, descriptions and drawings in Jepson Flora Project (2013). Some specimens were identified or confirmed by Andrew C. Sanders (University of California Riverside Herbarium). Unless noted otherwise, plant nomenclature and systematics follows Jepson Flora Project (2013) and/or Calflora (2013). Nomenclature and taxonomy for fauna generally follows the American Ornithologists' Union Checklist (2013) for avifauna and CDFG (2008) for herpetofauna and mammals.

owl

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 9/10/13 Survey biologist(s): TeJ Rado
(day, month, year) (name, email, and phone number)

Site description: Tahoe tree / Juniper crotch
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 50 Transect length: 0.40

GPS Start-point: 0456892 / 3808738 Start time: 9:00 am / pm
(easting, northing, elevation in meters)

GPS End-point: 0456891 / 3808134 End time: 9:14 am / pm
(easting, northing, elevation in meters)

Start Temp: 67 °F End Temp: 67 °C Ave wind 14 mph Elev. 3865ft

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

sub joy
tooth
in Quil
Artemisia tridentata

and

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

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Date of survey: 4/11/13 Survey biologist(s): Tej Rado
(day, month, year) (name, email, and phone number)

Site description: Joshua tree / Juniper ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: white Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 17N Transect length: 0.44 mi

GPS Start-point: 0456767 / 3808733 Start time: 9:38 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0456767 / 3808135 End time: 9:56 am/pm
(easting, northing, elevation in meters)

Start Temp: 68 °F End Temp: 68 °F

Live Tortoises

Detection number	GPS location Easting Northing	Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
1	<u>new</u>				
2					
3					
4					
5					
6					
7					
8					

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing	Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1	<u>new</u>		
2			
3			
4			
5			
6			
7			
8			

Eriocaulon linearifolium Schinus molle
Eriocaulon cooperi antelope grand squirrel
 WP 210 cactus were not in shell
 WP 211 cactus were not in shell

out

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4/11/13 Survey biologist(s): Ted Kado
(day, month, year) (name, email, and phone number)

Site description: Johann tree / Juniper ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Road
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 19N Transect length: 0.43

GPS Start-point: 0456747/3808141 Start time: 10:02 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0456757/3808734 End time: 10:23 am/pm
(easting, northing, elevation in meters)

Start Temp: 68 °F End Temp: 68 °F

Live Tortoises

Detection number	GPS location Easting Northing	Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
1	<u>None</u>				
2					
3					
4					
5					
6					
7					
8					

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing	Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1	<u>None</u>		
2			
3			
4			
5			
6			
7			
8			

Dark-eyed junco WP 212 old camp nest in both *Scaevola*
house sparrow WP 213 old camp nest in both
S. calycarpus occidentalis *Amaranthus sp.*
Basilix wren

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4/11/13 Survey biologist(s): Ted Aho
(day, month, year) (name, email, and phone number)

Site description: Tahoe tree / Juniper ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 6N Transect length: 0.39

GPS Start-point: 0756878 / 3808736 Start time: 10:57 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0756875 / 3808132 End time: 11:07 am/pm
(easting, northing, elevation in meters)

Start Temp: 70 °F End Temp: 70 °F 3835 ft

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>None</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>None</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

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Date of survey: 4/11/13 Survey biologist(s): Tom Mark
(day, month, year) (name, email, and phone number)

Site description: Joshua tree / Juniper Ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Mt
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one 100% coverage for Sampling Area size to be surveyed: _____ Transect #: 12N Transect length: 0.41

GPS Start-point: 0456819 / 3808134 Start time: 11:12 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0456823 / 3808732 End time: 11:28 am/pm
(easting, northing, elevation in meters)

Start Temp: 70 °F End Temp: 70 °F 3880ft

Live Tortoises

Detection number	GPS location Easting Northing	Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1	<u>None</u>				
2					
3					
4					
5					
6					
7					
8					

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing	Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1	<u>None</u>		
2			
3			
4			
5			
6			
7			
8			

*Mockingbird
West Whiptail*

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

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Date of survey: 9/11/13 Survey biologist(s): Ted Kardo
(day, month, year) (name, email, and phone number)

Site description: Sage tree / juniper ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White N
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 18N Transect length: 0.41

GPS Start-point: 0456756 13808731 Start time: 11:32 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0456761 13808135 End time: 11:48 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °F End Temp: 76 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>None</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1		<u>None</u>		
2				
3				
4				
5				
6				
7				
8				

plain spots

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4/12/13 Survey biologist(s): Ted/Leo
(day, month, year) (name, email, and phone number)

Site description: Tahoe tree / Juniper ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White R
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 35 Transect length: 0.13

GPS Start-point: 0456909 / 3808134 Start time: 12:34 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0456907 / 3807944 End time: 12:37 am/pm
(easting, northing, elevation in meters)

Start Temp: 77 °C End Temp: 77 °C 38924

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >150-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>None</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>None</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4/11/13 Survey biologist(s): Ted Kade
(day, month, year) (name, email, and phone number)

Site description: Jakna tree / Juniper ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 65 Transect length: 0.12

GPS Start-point: 8456878/3807746 Start time: 12:41 am/pm
(easting, northing, elevation in meters)

GPS End-point: 8456875/3808133 End time: 12:44 am/pm
(easting, northing, elevation in meters)

Start Temp: 77 °F End Temp: 76 °C 3886

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>None</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>None</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4/11/83 Survey biologist(s): Ted Rado
(day, month, year) (name, email, and phone number)

Site description: Joshua tree / juniper ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 95 Transect length: 0.12

GPS Start-point: 0456844/380133 Start time: 12:48 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0456846/380143 End time: 12:52 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °C End Temp: 76 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>None</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>None</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4/11/13 Survey biologist(s): Ted Rado
(day, month, year) (name, email, and phone number)

Site description: Joshua tree / Juniper ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: white Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage Sampling Area size to be surveyed: _____ Transect #: 125 Transect length: 0.12

GPS Start-point: 0456814/3807995 Start time: 12:55 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0456818/3808128 End time: 1:00 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °F End Temp: 76 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL > 160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4/11/13 Survey biologist(s): T. L. Rado
(day, month, year) (name, email, and phone number)

Site description: Tahua tree / Juniper ecotone
(project name and size; general location)

County: Saa Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage for Sampling Area size to be surveyed: _____ Transect #: 153 Transect length: 0.13

GPS Start-point: 0456786 / 3808134 Start time: 1:04 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0456789 / 3807946 End time: 1:08 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °F End Temp: 76 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL > 160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>None</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>None</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4/12/13 Survey biologist(s): Ted Rade
(day, month, year) (name, email, and phone number)

Site description: Joshua tree / Juniper ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 185 Transect length: 0.12

GPS Start-point: 0456754/3807949 Start time: 1:10 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0456758/3808137 End time: 1:14 am/pm
(easting, northing, elevation in meters)

Start Temp: 72 °F End Temp: 76 °F

Live Tortoises

Detection number	GPS location Easting Northing	Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1	<u>None</u>				
2					
3					
4					
5					
6					
7					
8					

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing	Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1	<u>None</u>		
2			
3			
4			
5			
6			
7			
8			

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4/11/13 Survey biologist(s): Ted Rado
(day, month, year) (name, email, and phone number)

Site description: Joshua tree / Juniper ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 215 Transect length: 0.12

GPS Start-point: 6456726 / 3809136 Start time: 1:17 am/pm
(easting, northing, elevation in meters)

GPS End-point: 6456726 / 3809448 End time: 1:22 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °F End Temp: 76 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160 mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>None</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>None</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4/4/13 Survey biologist(s): TRJ Rado
(day, month, year) (name, email, and phone number)

Site description: Jakua tree / Juniper cove
(project name and size; general location)

County: San Benito Quad: _____ Location: Whit R
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 245 Transect length: 0.14mi

GPS Start-point: 0456695/3807949 Start time: 1:27 am/pm pm
(easting, northing, elevation in meters)

GPS End-point: 0456698/3808137 End time: 1:33 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °F End Temp: 76 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL > 160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>None</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>None</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4/11/13 Survey biologist(s): TCW Kado
(day, month, year) (name, email, and phone number)

Site description: Juniper / Joshua tree ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 275 Transect length: 0.13

GPS Start-point: 045 6667 / 3808 136 Start time: 1:37 am/pm
(easting, northing, elevation in meters)

GPS End-point: 045 6665 / ~~3808~~ 3807 945 End time: 1:42 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °F End Temp: 75 °F

Live Tortoises

Detection number	GPS location Easting Northing		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1	<u>None</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1	<u>None</u>			
2				
3				
4				
5				
6				
7				
8				

*Vinger-weed
1K+ fat burrows*

OWL

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): Philip Clevinger
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 3 Transect length: .40

GPS Start-point: 456908E 3808736N 1147m Start time: 9:00 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456907E 3808133N 1151m End time: 9:15 am/pm
(easting, northing, elevation in meters)

Start Temp: 67 °F End Temp: 67 °F 13 mph Wind

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	none			
2				
3				
4				
5				
6				
7				
8				

CAWR
CGS
CAQU
JackRabbit

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Owl

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 (day, month, year) Survey biologist(s): Philip Clevinger (name, email, and phone number)

Site description: _____ (project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd. (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 9N Transect length: .40

GPS Start-point: 0456857N 3808138E el. 3863A Start time: 9:20 am/pm (easting, northing, elevation in meters)

GPS End-point: 456850N 3808736E el. 1136m End time: 9:31 am/pm (easting, northing, elevation in meters)

Start Temp: 67 °C End Temp: 67 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <i>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</i>	Approx MCL >160-mm? <i>(Yes, No or Unknown)</i>	Existing tag # and color, if present
	Easting	Northing				
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <i>(burrows, scats, carcass, etc)</i>	Description and comments
	Easting	Northing		
1	none			
2				
3				
4				
5				
6				
7				
8				

CAQU

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

OWL

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): Philip Clevinger
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 15N Transect length: .44

GPS Start-point: 456790N 3808735E 21142m Start time: 9:37 @am/pm
(easting, northing, elevation in meters)

GPS End-point: 466787N 3808134E 21152m End time: 9:56 @am/pm
(easting, northing, elevation in meters)

Start Temp: 68 °F End Temp: 68 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL > 160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	none			
2				
3				
4				
5				
6				
7				
8				

CORA
WEST
CAWR

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): Philip Clevinger
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect # 4N Transect length: .39

GPS Start-point: 456899N 3808739E 383218 Start time: 10:58 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456893N 3808136E 1154(m) End time: 11:07 am/pm
(easting, northing, elevation in meters)

Start Temp: 70 °F End Temp: 70 °C °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	none			
2				
3				
4				
5				
6				
7				
8				

Blacktail Jackrabbit

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 (day, month, year) Survey biologist(s): Philip Cleveaer (name, email, and phone number)

Site description: _____ (project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd. (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 100 Transect length: .41

GPS Start-point: 456841N 3808137E 3879ft Start time: 11:12 am/pm (easting, northing, elevation in meters)

GPS End-point: 456840N 3808730E 1142m End time: 11:26 am/pm (easting, northing, elevation in meters)

Start Temp: 70 °F End Temp: 71 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<i>none</i>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<i>none</i>			
2				
3				
4				
5				
6				
7				
8				

Xantusia vigilis vigilis
CORA

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): Philip Clevinger
(day, month, year) (name, email, and phone number)

Site description: _____

County: San Bernardino Quad: _____ Location: White Rd.
(project name and size; general location) (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 16N Transect length: .41

GPS Start-point: 456779N 3808731E @1142m Start time: 11:30 @am/pm
(easting, northing, elevation in meters)

GPS End-point: 456796N 3808142E @1152m End time: 11:48 @am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °C/F End Temp: 76 °C/F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

WEST
Western Whiptail
Uta.

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): Philip Cleavinger
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 25 Transect length: .13 mi

GPS Start-point: 456915N 3808134E 3868 Start time: 12:34 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456919 3807950E End time: 12:37 am/pm
(easting, northing, elevation in meters)

Start Temp: 77 °F End Temp: 78 °F

Live Tortoises

Detection number	GPS location Easting Northing		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1	none					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1	none			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): Philip Clevinger
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size, general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect # 55 Transect length: 1.12 mi

GPS Start-point: 456886N 3807946E e13886 Start time: 12:41 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456881N 3808131E e11148 End time: 12:44 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °F End Temp: 76 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): Philip Clevinger
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 85 Transect length: 12

GPS Start-point: 456855 3808135 e13864^{ft} Start time: 12:48 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456859 3807944 e1154^m End time: 12:52 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °F End Temp: 76 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

CAQU

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 (day, month, year) Survey biologist(s): Philip Clevinger (name, email, and phone number)

Site description: _____ (project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 115 Transect length: .12

GPS Start-point: 456828N 3807945E 1150^m Start time: 12:55 am/pm

GPS End-point: 456826N 3808133E 1146^m End time: 12:59 am/pm

Start Temp: 76 °F End Temp: 76 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <i>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</i>	Approx MCL >160-mm? <i>(Yes, No, or Unknown)</i>	Existing tag # and color, if present
	Easting	Northing				
1	<u>None</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <i>(burrows, scats, carcass, etc)</i>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): Philip Clevinger
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage of Sampling Area size to be surveyed: _____ Transect #: 145 Transect length: 13

GPS Start-point: 456796 3808133 3869A Start time: 1:04 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456796 3807946 1152m End time: 1:07 am/pm
(easting, northing, elevation in meters)

Start Temp: 77 °F End Temp: 77 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<i>none</i>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<i>none</i>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): Philip Clevinger
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 175 Transect length: .12

GPS Start-point: 456765 3807948 3893ft Start time: 1:11 am/pm am
(easting, northing, elevation in meters)

GPS End-point: 456768 3808135 1147m End time: 1:14 am/pm am
(easting, northing, elevation in meters)

Start Temp: 77 °F End Temp: 77 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 (day, month, year) Survey biologist(s): Philip Clevinger (name, email, and phone number)

Site description: _____ (project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 205 Transect length: .12

GPS Start-point: 456737N 3808136E 3878^{ft} Start time: 1:18 am/pm

GPS End-point: 456736N 3807946E 1153^m End time: 1:23 am/pm

Start Temp: 76 °F End Temp: 76 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <i>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</i>	Approx MCL >160-mm? <i>(Yes, No, or Unknown)</i>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <i>(burrows, scats, carcass, etc)</i>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

WEST
Fence Liz

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 (day, month, year) Survey biologist(s): Philip Clever (name, email, and phone number)

Site description: _____ (project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 235 Transect length: .14

GPS Start-point: 456907 3807948 3890 Start time: 1:27 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456706 3808133 1150 End time: 1:33 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °F End Temp: 76 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): Philip Clevinger
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 265 Transect length: 113

GPS Start-point: 456677 3808135 3877 Start time: 1:37 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456677 3807947 3895 End time: 1:43 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °C End Temp: 76 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL > 160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 (day, month, year) Survey biologist(s): Philip Clovinger (name, email, and phone number)

Site description: _____ (project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 295 Transect length: 13

GPS Start-point: 456646N 3807961E 3893 Start time: 1:48 am/pm

GPS End-point: 456647N 3808135E 3886 End time: 1:55 am/pm

Start Temp: 76 °C End Temp: 76 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <i>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</i>	Approx MCL > 160-mm? <i>(Yes, No, or Unknown)</i>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <i>(burrows, scats, carcass, etc)</i>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

Buow
also

13mph wind avg.

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): N. Moorhakes
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Berdo Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 1N Transect length: 0.40 mi

GPS Start-point: 456928 3808736 1145m Start time: 0900 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456928 3808136 1148m End time: 0914 am/pm
(easting, northing, elevation in meters)

Start Temp: 67 °C End Temp: _____ °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location (in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)	Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign (burrows, scats, carcass, etc)	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

Ephedra nev.
Eriog. fasc.

BENR CACW
BGGN
Uta stans
CAQU
CALT

Ericameria sp. *Lycium cooperi* *Amsinckia tess.*
Mirabilis bige. *Chrysotham. naus.* *Yucca brevif.*
Juniperus cal.
Artemisia tridentata

Page: _____ of _____
Transect number: _____

Buon
also

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): N. Moorhous
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size, general location)

County: San Bnde Quad: _____ Location: White R6
(UTM coordinates, lat-long, and/or TRS, map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 7N Transect length: 0.38 mi.

GPS Start-point: 456870 3808135 1149m Start time: 0920 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456468 3804735 1139m End time: 0931 am/pm
(easting, northing, elevation in meters)

Start Temp: 67 °C End Temp: 67 °C

Live Tortoises

Detection number	GPS location Easting Northing		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1				
2				
3				
4				
5				
6				
7				
8				

Tetradymia stenolepis
 * *Bromus tectorum*

WESC

Buow
 (potential burrow
 ↓
 CAGS)
 no owl sign

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): N. Moonhates
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size, general location)

County: San Budo Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 13N Transect length: 0.44 mi.

GPS Start-point: 456811 3808736 1137 m Start time: 0937 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456810 3808133 1155 m End time: 0956 am/pm
(easting, northing, elevation in meters)

Start Temp: 64 °C End Temp: 68 °C

Live Tortoises

Detection number	GPS location Easting Northing		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1				
2				
3				NONE
4				
5				
6				
7				
8				

CAGS = multiple burrows GPS'd w/ Juno
 LBWO
 CORA
 BUSH

Salazaria mex.
 Quercus (Scrub)

Page: _____ of _____
 Transect number: _____

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

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Date of survey: 11/4/13 Survey biologist(s): N. Moorhead
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bndo. Quad: _____ Location: White R.I.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 2N Transect length: 0.39 mi.

GPS Start-point: 456919 3808736 Start time: 10:56 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456918 3808134 1154m End time: 11:07 am/pm
(easting, northing, elevation in meters)

Start Temp: 70 °C End Temp: 70 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

Sylvilagus aud.

Lepus cal.

Page: _____ of _____

Transect number: _____

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

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Date of survey: 11/4/13 Survey biologist(s): N. Moorhous
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: _____ Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage of Sampling Area size to be surveyed: _____ Transect #: 8N Transect length: 0

GPS Start-point: 456959 3808133 1152m Start time: 11:12 ampm
(easting, northing, elevation in meters)

GPS End-point: 456860 3808730 1139m End time: 11:23 ampm
(easting, northing, elevation in meters)

Start Temp: 70 °C End Temp: 71 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1				
2				NONE
3				
4				
5				
6				
7				
8				

Achnatherum speciosum
Mistletoe (on juniper)

* *Erodium cicutarium*

VERD

Page: _____ of _____

Transect number: _____

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

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Date of survey: 11/4/13 Survey biologist(s): N. Moorhutch
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bando Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 14N Transect length: 0.4 mi.

GPS Start-point: 456798 3808229 1142 m Start time: 11:30 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456797 3808133 1152 m End time: 11:48 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °F End Temp: 76 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL > 160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

Coyote (scat)

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

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Date of survey: 11/4/13 Survey biologist(s): N. Moorhous
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bern Co. Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or-TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 15 Transect length: 0.13

GPS Start-point: 456929 3808130 1150m Start time: 12:32 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456926 3808949 1147m End time: 12:36 am/pm
(easting, northing, elevation in meters)

Start Temp: 72 °F End Temp: 77 °C

Live Tortoises

Detection number	GPS location Easting Northing		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1				
2				
3				
4				
5				
6				
7				
8				

WCSP

TUM

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): N. Moorhous
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: Sun Bnd Quad: _____ Location: White Rf
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 45 Transect length: 0.12 mi.

GPS Start-point: 456888 3407943 1145m Start time: 12:40 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456888 3808132 1149m End time: 12:44 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °C End Temp: 76 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): N. MacArthur
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Budo Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage of Sampling Area size to be surveyed: _____ Transect #: 75 Transect length: 0.12 mi

GPS Start-point: 456467 3808127 1153m Start time: 12:47 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456868 3807945 1155m End time: 12:52 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °C End Temp: 76 °C

Live Tortoises

Detection number	GPS location Easting Northing		Time	Tortoise location <i>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</i>	Approx MCL >160-mm? <i>(Yes, No, or Unknown)</i>	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing		Type of sign <i>(burrows, scats, carcass, etc)</i>	Description and comments
1				
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): N. Moorhead
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bdo Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 105 Transect length: 0.12 mi.

GPS Start-point: 456986 3907944 1150 m Start time: 12:55 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456937 3908133 1145 m End time: 1259 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °C End Temp: 76 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL > 160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/04/13 Survey biologist(s): N. Moorhead
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bndo. Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 135 Transect length: 0.13 mi.

GPS Start-point: 456811 3808133 Start time: 1304 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456811 3807946 1146m End time: 1307 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °C End Temp: 76 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

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Date of survey: 11/4/13 Survey biologist(s): N. Moorhead
(day/month/year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bada. Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 165 Transect length: 0.12 mi.

GPS Start-point: 456776 3807945 1152m Start time: 1311 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456778 3808135 1147m End time: 1315 am/pm
(easting, northing, elevation in meters)

Start Temp: 77 °C End Temp: 77 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): N. Moorhatch
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size, general location)

County: San Bdo. Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 195 Transect length: 0.12 mi.

GPS Start-point: 456747 3908134 1150m Start time: 13:18 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456746 3907943 1156m End time: 13:22 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °C End Temp: 76 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): N. Moorhous
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size, general location)

County: San Bndo. Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 225 Transect length: 0.14 mi.

GPS Start-point: 456714 3807944 1153m Start time: 13:26 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456715 3808135 1149m End time: 13:33 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °C End Temp: 76 °C

Live Tortoises

Detection number	GPS location Easting Northing		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1				
2				
3				
4				
5				
6				
7				
8				

ECDO

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): N. Moorhous
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 255 Transect length: 0.13 mi.

GPS Start-point: 456688 3808135 1152m Start time: 1336 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456689 3807945 End time: 1343 am/pm
(easting, northing, elevation in meters)

Start Temp: 76 °C End Temp: 76 °C

Live Tortoises

Detection number	GPS location Easting Northing		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1				
2				
3				
4				
5				
6				
7				
8				

Salvia dorii

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 11/4/13 Survey biologist(s): N. Moorhous
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bndo. Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect # 285 Transect length: 0.13 mi.

GPS Start-point: 456657 3807943 1154m Start time: 1348 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456655 3808135 1152m End time: 1355 am/pm
(easting, northing, elevation in meters)

Start Temp: 75 °C End Temp: 75 °C

Live Tortoises

Detection number	GPS location Easting Northing		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1				
2				
3				
4				
5				
6				
7				
8				

Coast Horned Lizard

(Photos & GPS'd)

Page: _____ of _____

Transect number: _____

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 12-4-2013 Survey biologist(s): S. Chandler
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size, general location)

County: SBD Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 215 Transect length: 0.14 mile

GPS Start-point: 456628 3807938 3882 ft Start time: 6:48 am/pm
(easting, northing, elevation in meters)

GPS End-point: 45425 3708137 1154m End time: 6:48 am/pm
(easting, northing, elevation in meters)

Start Temp: 54 °F End Temp: _____ °C

Live Tortoises

Detection number	GPS location Easting Northing		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1				
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 12-4-2013 (day, month, year) Survey biologist(s): S. Chandler (name, email, and phone number)

Site description: _____ (project name and size, general location)

County: SRP Quad: _____ Location: White Rd (UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 359 Transect length: 0.4

GPS Start-point: 456582 3808141 (easting, northing, elevation in meters) Start time: 655 am/pm

GPS End-point: 456583 3807938 (easting, northing, elevation in meters) End time: 700 am/pm

Start Temp: 54 °C End Temp: 56 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <i>(In burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</i>	Approx MCL > 160-mm? <i>(Yes, No, or Unknown)</i>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <i>(burrows, scats, carcass, etc)</i>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

BWW

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 12-4-2017 Survey biologist(s): White Rd
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size, general location)

County: SBP Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 395 Transect length: 0.14 m

GPS Start-point: 456543 3207937 Start time: 706 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456547 3208138 End time: 710 am/pm
(easting, northing, elevation in meters)

Start Temp: 56 °C End Temp: 56 °C

Live Tortoises

Detection number	GPS location Easting Northing		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1				
2				
3				
4				
5				
6				
7				
8				

2010 Field Season

None

Brown
also

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 12/4/13 Survey biologist(s): N. Moorhatch
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bndo. Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 305 Transect length: 0.14 mi.

GPS Start-point: 456636 3807939 1158m Start time: 0644 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456636 3808134 1153m End time: 0648 am/pm
(easting, northing, elevation in meters)

Start Temp: 54 °F End Temp: 54 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL > 160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1				
2				
3				NONE
4				
5				
6				
7				
8				

Mentzelia albicaulis

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 12/4/13 Survey biologist(s): N. Moorhous
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size, general location)

County: San Bndo. Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 345 Transect length: 0.14 mi

GPS Start-point: 456597 3808139 1154m Start time: 0654 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456595 3807941 1158m End time: 0700 am/pm
(easting, northing, elevation in meters)

Start Temp: 54 °F End Temp: 55 °C

Live Tortoises

Detection number	GPS location Easting Northing		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1				
2				NONE
3				
4				
5				
6				
7				
8				

VERD *Elgaria multicarinata* ! } DOA
Masticophis flagellum }

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 12/4/13 Survey biologist(s): N. Moorhous
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bdo. Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 385 Transect length: 0.14 mi.

GPS Start-point: 456555 3807938 1155m Start time: 0706 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456555 3808135 1153m End time: 0710 am/pm
(easting, northing, elevation in meters)

Start Temp: 56 °F End Temp: 56 °F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL > 160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

BUOW 500 FT.
Buffer Survey

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 12/04/13 Survey biologist(s): N. Moorhake, P. Clevinger, T. Rado, S. Chandler
(day/month, year) (name, email, and phone number)
 Site description: Desert / Montane ecotone Yucca brevifolia scrub oak! Ericameria linearifolia
(project name and size, general location) (Juniperus cal. Chrysothamnus nauseosus Tetradymia steno)
 County: _____ Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)
 Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: _____ Transect length: _____
 GPS Start-point: _____ Start time: 0724 am/pm
(easting, northing, elevation in meters)
 GPS End-point: _____ End time: 0926 am/pm
(easting, northing, elevation in meters)
 Start Temp: 56 °F End Temp: 75 °F start 0-4 mph wind 0% clouds
 end 3-4 mph wind 0% clouds

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1				
2				
3				
4				
5				
6				
7				
8				

Thomomys bottae (mounds) CATH WESC BRSP Sambucus mex.
Xantusia vigilis SAPH WCSP CACW Senecio flaccidus
Pituophis catenifer annectens CALT HOSP SAGS PRFA Page: _____ of _____
Sylvilagus aud. LBWO EUST WEKI Transect number: _____
 MODD VERD

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 12/4/13 Survey biologist(s): Philip Clevinger
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 325 Transect length: .14

GPS Start-point: 456617 3807937 3882 Start time: 6:44 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456618 3808137 3871 End time: 6:50 am/pm
(easting, northing, elevation in meters)

Start Temp: 54 °C End Temp: 54 °C

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

Cottontail

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 12/4/13 Survey biologist(s): Philip Clevinger
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 365 Transect length: .14

GPS Start-point: 456578N 3808142E 3874el Start time: 6:55 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456574 3807939 1160m End time: 7:00 am/pm
(easting, northing, elevation in meters)

Start Temp: 54 °C F End Temp: 54 °C F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL > 160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<i>none</i>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<i>none</i>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 12/4/13 Survey biologist(s): Philip Clevinger
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 405 Transect length: .14 → Boundary

GPS Start-point: 456539 3809937E 389009 Start time: 7:05 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456541 3808136 387664 End time: 7:10 am/pm
(easting, northing, elevation in meters)

Start Temp: 56 °C F End Temp: 56 °C F

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL > 160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>None</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>None</u>			
2				
3				
4				
5				
6				
7				
8				

out

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4 12 13 Survey biologist(s): Ted Rado
(day, month, year) (name, email, and phone number)

Site description: Joshua tree / oak / Juniper ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 335 Transect length: 0.14

GPS Start-point: 0456607.3807939 Start time: 6:44 am/pm
(easting, northing, elevation in meters)

GPS End-point: 0456609.1384137 End time: 6:50 am/pm
(easting, northing, elevation in meters)

Start Temp: 54 °F End Temp: 54 °F 38774

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL > 160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4/12/13 Survey biologist(s): Tad Rado
(day, month, year) (name, email, and phone number)

Site description: Joshua tree / oak / Juniper ecotone
(project name and size; general location)

County: San Bernardino Quad: _____ Location: white rd
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage for Sampling Area size to be surveyed: _____ Transect #: 375 Transect length: 0.14

GPS Start-point: 6456568 / 380738 Start time: 6:55 am/pm
(easting, northing, elevation in meters)

GPS End-point: 6456565 / 380739 End time: 7:01 am/pm
(easting, northing, elevation in meters)

Start Temp: 57 °F End Temp: 56 °F 38744

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 15/4/13 Survey biologist(s): N. Moorhatch
(day, month, year) (name, email, and phone number)

Site description: Ecotone w/ Great Basin Sage/Ericameria w/ some JT & Juniper
(project name and size, general location)

County: San Bndo Quad: _____ Location: White Rd.
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage of Sampling Area size to be surveyed: _____ Transect #: 201 Transect length: _____
(UTM coordinates, lat-long, and/or TRS; map datum)

GPS Start-point: 457538 3808739 1120m Start time: 10:50 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456934 3809329 1122m End time: 11:08 am/pm
(easting, northing, elevation in meters)

Start Temp: 53 °F End Temp: 53 °F

Live Tortoises

Detection number	GPS location Easting Northing		Time	Tortoise location <small>(in burrow, all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
1						
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1				
2				
3				
4				
5				
6				
7				
8				

Tetradymia steno.
 * *Erodium cicutarium*
Gutierrezia sp.

CACW
 AMKE
 HOFI
 BRSP
 WCSP
 HOSP

Lepus cal.

Page: _____ of _____

Transect number: _____

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 15/4/13 Survey biologist(s): Philip Clevinger
(day, month, year) (name, email, and phone number)

Site description: _____
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd (NE)
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage or Sampling Area size to be surveyed: _____ Transect #: 200 NE Transect length: _____

GPS Start-point: 457138 3808736 3807 Start time: 10:48 am/pm
(easting, northing, elevation in meters)

GPS End-point: 456742 3809024 3818 End time: 11:05 am/pm
(easting, northing, elevation in meters)

Start Temp: 53 °C End Temp: 53 °C 46 % windchill

Live Tortoises

Detection number	GPS location		Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL > 160-mm? <small>(Yes, No, or Unknown)</small>	Existing tag # and color, if present
	Easting	Northing				
1	<u>none</u>					
2						
3						
4						
5						
6						
7						
8						

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location		Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
	Easting	Northing		
1	<u>none</u>			
2				
3				
4				
5				
6				
7				
8				

USFWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: 4/15/13 Survey biologist(s): Teodoro
(day, month, year) (name, email, and phone number)

Site description: Juniper/Oak/
(project name and size; general location)

County: San Bernardino Quad: _____ Location: White Rd NE
(UTM coordinates, lat-long, and/or TRS; map datum)

Circle one: 100% coverage of Sampling Area size to be surveyed: _____ Transect #: 460m Transect length: _____

GPS Start-point: Neiken Rd WP219 Start time: 7:52 10:30 am pm
(easting, northing, elevation in meters)

GPS End-point: 110 456742.25E / 3869116.77N End time: 11:04 am pm
(easting, northing, elevation in meters)

Start Temp: 53 °F (4 °F windchill) End Temp: 53 °F

Live Tortoises

Detection number	GPS location Easting Northing	Time	Tortoise location <small>(in burrow: all of tortoise beneath plane of burrow opening, or not in burrow)</small>	Approx MCL >160-mm? <small>(Yes, No or Unknown)</small>	Existing tag # and color, if present
1	<u>None</u>				
2					
3					
4					
5					
6					
7					
8					

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS location Easting Northing	Type of sign <small>(burrows, scats, carcass, etc)</small>	Description and comments
1	<u>None</u>		
2			
3			
4			
5			
6			
7			
8			

ENJ
110 456742.25E
3869116.77N