

SNOWLINE SCHOOL DISTRICT DUNCAN ROAD SOLAR PV PROJECT

GENERAL BIOLOGICAL RESOURCES ASSESSMENT

PHELAN AREA OF UNINCORPORATED SAN BERNARDINO COUNTY, CALIFORNIA USGS 7.5' PHELAN, CA QUADRANGLE TOWNSHIP 5 NORTH, RANGE 7 WEST, WEST ½ OF SOUTHEAST ¼ OF SECTION 36 APN 3098-311-11

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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 in Phelan (a censusdesignated place or CDP), San Bernardino County, California. No special status species were observed, but Joshua trees (Yucca brevifolia), golden cholla (Cylindropuntia echinocarpa), and creosote (Larrea tridentata) rings, which are protected by county ordinance, are present. Habitat for several special status species is present. 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. AMEC recommends preservation and/or relocation of the Joshua Trees, cacti, and creosote rings 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 Environment and Infrastructure, Inc. 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 in the City of Phelan, 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 25.89-acre (gross acreage) property is bordered by Greystone Road (dirt) and residential development on the southwest and west, Duncan Road on the south, residential development and Monte Vista Road (dirt) on the east, and a Southern Pacific Railroad line on the north (see Figure 1, Appendix A). The site is in the City of Phelan. The property is located on the 7.5-minute Phelan, CA United States Geological Survey (USGS) quadrangle in Township 5 North, Range 7 West, western ½ of the southeast ¼ of Section 36 (see Figure 2). The Project site gently slopes from an elevation of approximately 3,643 feet above mean sea level (AMSL) on the southern edge of the site adjacent to Duncan Road, down to approximately 3,602 feet AMSL on the northern edge of the site adjacent to the Southern Pacific Railroad line.

Vegetation on the Project site is an intergrade of Creosote Bush Scrub and Joshua Tree Woodland (see Figure 3 and photos in Appendix B), dominated by creosote bush, white bur-sage (*Ambrosia dumosa*), Joshua tree, peach thorn (*Lycium cooperi*), and cheesebush (*Ambrosia salsola*). The habitat shows signs of anthropogenic disturbance, such as mechanical disturbance of soil, vegetation removal, deposition of old sod and some soil piles (see Photo in Appendix B), off road vehicle tracks, domestic dog "diggings" (dug out burrows), and trash.



Only one specific soil type is mapped on the Project site (USDA 2013): Cajon Sand, 2 to 9 percent slopes. 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.

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, paved and 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 specialstatus 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 (CNDDB) for a five mile radius of the Project site including records from the following California USGS 7.5-minute topographic quadrangles: Phelan, Baldy Mesa, Adelanto, Shadow Mountains SE, and Mescal Creek (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 subconsultant Ted Rado on April 9, 10, and 15, 2013. AMEC subconsultant Phillip Clevinger also assisted on desert tortoise "zone of influence" transect surveys on April 15, 2013. Mr. Moorhatch revisited the site on 17 April 2013 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 on the following page.



Date/Survey Type	Observer(s)	Time	Temp. (°F) Wind (mph)	Sensitive species observed?
9 April 2013	Moorhatch & Rado	0610-1405	40-70°F 0-5 mph	No
10 April 2013	Moorhatch & Rado	0620-0900	55-61°F 0-3 mph	No
15 April 2013	Moorhatch, Rado & Clevinger	0806-1020	55-58°F 0-5mph	No
17 April 2013	Moorhatch	1005-1244	55-65°F 3-10mph	No

Table 1. Biological Survey Data for the Duncan Road Surveys

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. 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. Psorothamnus spinosus (smoketree).
 - b. All species of the genus *Prosopis* (mesquites).
- 2. All species of the family Agavaceae (century plants, nolinas, 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, <u>or local government entity</u>, 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 specialstatus biological resources with the potential to occur in the vicinity of the proposed Project.

Table 2. S	pecial-Status Bi	ological R	esource	s with the	Potential to Occur in the Vicinit	ty of the Proposed Project
Scientific	Common		Status ¹		Habitat (for plants includes	_
Name	Name	Federal	State	CNPS (plants)	elevational range in meters & blooming period)	Occurrence Probability ²
Plants						
Astragalus lentiginosus var. antonius	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
Astragalus leucolobus	Big Bear Valley woollypod	None	S2	1B.2	Lower and Upper Montane Coniferous Forest, Pebble Plain, Pinyon and Juniper Woodland. Gravelly knolls among sagebrush, stony lake shores in the pine belt, dry pine woods. 1,670-2,515m., May-July	Absent Habitat not present on site, site is below elevational range of species
Canbya candida	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
Linanthus concinnus	San Gabriel linanthuss	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.
Loeflingia squarrosa var. artemisiarum	Sagebrush loeflingia	None	S2.2	2.2	Great Basin and Sonoran Desert Scrubs, Desert Dunes. Sandy flats and dunes, sandy areas around clay slicks with Sarcobatus, Atriplex, and Tetradymia. 700 -1,200m., April- May	Absent Habitat unsuitable onsite.



Table 2. S	pecial-Status Bi	ological R		s with the	Potential to Occur in the Vicinit	ty of the Proposed Project
Scientific	Common		Status ¹		Habitat (for plants includes	
Name	Name	Federal	State	CNPS (plants)	elevational range in meters & blooming period)	Occurrence Probability ²
Malacothamnus davidsonii	Davidson's bush-mallow	None	S1.1	1B.2	Coastal Scrub, Riparian Woodland, Chaparral (sandy washes). 180-855m. June- January	Absent Habitat not present onsite, site is above known elevational range of species
Muhlenbergia californica	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
Nemacladus secundiflorus var. robbinsii	Robbins' nemacladus	None	S2S3	1B.2	Chaparral, Valley and Foothill Grassland. Dry, sandy or gravelly slopes. 350 -1,700m., April-June	Absent Habitat not present onsite
Opuntia basilaris var. brachyclada	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
Viola pinetorum ssp. grisea	Grey-leaved violet	None	S2	1B.3	Subalpine and Upper Montane Coniferous Forests. Dry mountain peaks and slopes, meadows and seeps. 1,800- 2,600m., April-July	Absent Habitat not present on site, site is below elevational range of species
Yucca brevifolia	Joshua Tree	Deve 88.01.0	ernardino elopment (60 Deseri nt Protect	Code t Native	Various desert habitats	Occurs
Invertebrates						
Plebejus saepiolus aureolus	San Gabriel Mountains Blue Butterfly	None	S1		Type locality is a wet meadow seep in Yellow Pine Forest. Foodplant is <i>Trifolium</i> <i>wormskioldii.</i>	Absent No habitat onsite
Reptiles						
Gopherus agassizii	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
Phrynosoma blainvillii Birds	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.	Low CNDDB record from ~1 mi. NE of site. Site has significant disturbance, close proximity to domestic cats and dogs



Table 2. S	pecial-Status B	iological F		s with the	Potential to Occur in the Vicinit	ty of the Proposed Project	
Scientific	Common		Status ¹		Habitat (for plants includes	D	
Name	Name	Federal	State	CNPS (plants)	elevational range in meters & blooming period)	Occurrence Probability ²	
Athene cunicularia	Burrowing Owl	BCC	SC, S2	(plants)	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 initiated on site	
Dendroica petechia brewsteri	Yellow Warbler	BCC	SC, S2		Riparian plant associations: prefers willows, cottonwoods, aspens, sycamores and alders for foraging and nesting	Absent Habitat not present onsite	
Lanius Iudovicianus	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.	Moderate Foraging habitat present, not observed during surveys	
Toxostoma lecontei	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 California Thrasher observed onsite	
Mammals				1	13		
Ammospermopl nelsoni	hilus Nelson's antelope squirrel	None	ST , S2		Western San Joaquin Valley from 200 – 1,200 feet elevation, on dry, sparsely vegetated loam soils in broken terrain with gullies and washes	Absent Site is outside range of species, too high in elevation	
Chaetodipus fal pallidus	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 Three CNDDB records are from 1951, none from the Phelan (project site) Quad	
Eumops perotis californicus	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)	
Microtus californicus stephensi	South Coast Marsh Vole	None	SC, S1S2		Tidal marshes in Los Angeles, Orange, and southern Ventura Counties.	Absent No habitat onsite	
Myotis ciliolabru	Western Small- footed Myotis	None	S2S3		Wide range of habitats: mostly arid wooded and brushy uplands near water, seeks cover in caves, buildings, mines, and crevices.	Absent (roosting) Absent (foraging)	



Table 2. Spe	ecial-Status Bi	ological R	lesources	s with the	Potential to Occur in the Vicinit	ty of the Proposed Project
Scientific Name	Common Name	Federal	Status ¹ State	CNPS (plants)	Habitat (for plants includes elevational range in meters & blooming period)	Occurrence Probability ²
Taxidea taxus	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
Xerospermophilus mohavensis	s 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.
Habitats						
Joshua Tree Woodland		None	S3.2		An open woodland dominated by Joshua Tree (can also include shrubby Juniper), with numerous shrub species and little or no herbaceous understory for much of the year. Intergrades with Mojave Creosote Bush Scrub.	"Occurs" Ecotonal with Creosote Bush Scrub, does not meet CDFW criteria for "High Priority Vegetation Type": has invasive exotics, disturbance, adjacent infrastructure.

¹ Status Codes:		
<u>Federal</u>		CNPS
FP = Fully Protected		1A = Presumed Extinct in California
FE = Federal Endangered		1B = Rare, Threatened, or Endangered in California and
FT = Federal Threatened	S2 = Imperiled. 6-20 EOs	elsewhere
FC = Federal Candidate	OR 1,000-3,000 individuals	2 = Rare, Threatened, or Endangered in California but more
BCC = Bird of Conservation	OR 2,000-10,000 acres	common elsewhere
Concern	S2.1 = very threatened	3 = More information needed (Review List)
	S2.2 = threatened	4 = Limited distribution (Watch List)
State	S2.3 = no current threats	0.1 = Seriously Threatened in California
SE = State Endangered	known	0.2 = Fairly Threatened in California
ST = State Threatened		0.3 = Not very Threatened in California
SR = State Rare	S3 = Vulnerable. 21-80 EOs	,
SC = State Species of Concern	OR 3,000-10,000 individuals	
INV = Communities that are	OR 10,000-50,000 acres	
known or believed to be of high	S3.1 = very threatened	
priority for inventory in CNDDB	S3.2 = threatened	
	S3.3 = no current threats	
CDFW state rankings are a	known	
reflection of the overall condition	S4 = Apparently secure	
of an element throughout its	within California; this rank is	
California range. The number	clearly lower than S3 but	
after the decimal point	factors exist to cause some	
represents a <u>threat</u> designation		
attached to the rank:	concern; e.g. there is some	
S1 =Critically Imperiled. Less	threat, or somewhat narrow habitat. No threat	
than 6 Element Occurrences		
(EOs) OR less than 1,000	designation.	
individuals OR less than 2,000	S5 = Demonstrably secure to	
acres	ineradicable in California. No	
S1.1 = very threatened	threat designation.	
S1.1 – Very infeatened S1.2 = threatened	SH: All known California	
S1.2 = no current threats known	sites are historical, not extant	
31.3 – no current threats known		



² Occurrence Probability	
Occurs:	Observed on the site by AMEC personnel, or recorded there by other qualified biologists.
High:	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.
Moderate:	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.
Low:	Site is within the known range of the species but habitat on the site is rarely used by the species.
Absent:	A focused study failed to detect the species, or no suitable habitat is present.
Unknown:	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 of Creosote Bush Scrub and Joshua Tree Woodland, dominated by creosote bush, white bur-sage, Joshua tree, peach thorn, and cheesebush (see Appendix B for photos). Wildlife and plant species observed are included in Appendix C. Annual plant numbers and diversity was low, and two nonnative, weedy species: redstem filaree (*Erodium cicutarium*) and Mediterranean schismus (*Schismus barbatus*) (see Photo) were the dominant annuals that had germinated on the site at the time of the surveys. Additional annual plants were identified from dried remains. 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). Three bird nests were also observed on the site, usually in golden cholla (*Cylindropuntia echinocarpa*) (see Figure 4, Appendix A). There were areas of relatively recent ground disturbance and vehicle tracks present (see Photos).

Several Joshua Trees and creosote rings protected by county code are present onsite, however the School District qualifies as exempt from this measure per County Code 88.01.030 [b].

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 desertdwelling animals. Therefore, the species observed does not necessarily reflect the total number of animals that potentially occupy the Project site.

5.0 IMPACTS AND RECOMMENDATIONS

5.1 Plants and Vegetation Communities

No rare plants were observed during the field visits or during a focused survey performed specifically for rare plants. 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 ten rare plants listed in Table 2, only one species: white pygmy-poppy (*Canbya candida*) is considered to have any probability (low) 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 Phelan 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 white pygmy-poppy occurring on the project site at this time, although we believe there is very little chance that this species occurs onsite, and on a site this small and disturbed no population of significance would be expected to occur. This plant is not state or federally listed as threatened or endangered. Therefore, no significant impacts to rare plants are anticipated.



The creosote rings, golden chollas, and 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 and cacti 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 gualifies as exempt from this measure per County Code 88.01.030 [b]. Joshua Tree Woodland has a State sensitivity ranking of S3.2, and as such is considered a "Special Concern" community under the California Environmental Quality Act (CEQA). However, on this Project site this community is an intergrade (ectone) with Mojave Creosote Bush Scrub, and has been subjected to a variety of disturbances and impacts (as discussed in 2.1). The expression of this plant community on the site does not meet the standard as presented by the CDFW for classifying this habitat as a "High Priority" vegetation type because it does not "exemplify high guality, sustainable, old growth characteristics" (CDFW 2013). Therefore, modification or loss of a small amount of this quality of habitat would not be expected to constitute a significant impact under CEQA.

5.2 Unlisted Invertebrates, Reptiles, and Mammals

There is a low possibility that four unlisted sensitive species could occur onsite: burrowing owl, loggerhead shrike (nesting), coast horned lizard, and pallid San Diego pocket mouse. Marginal habitat for the coast horned lizard and pallid San Diego pocket mouse exists onsite, but even if present, impacts to any populations on this small, disturbed lot would be insignificant. No loggerhead shrikes were present onsite at the time of the field visits, but there is a moderate possibility that this species could occasionally forage on the Project site, this species has a low potential to nest onsite. Burrowing owls will be discussed in more detail in Section 5.4 of this report. Apart from the burrowing owl, specific mitigation is not usually required for these unlisted species, although the loggerhead shrike is protected by the Migratory Bird Treaty Act (MBTA) when nesting (as are all native bird species – please see Section 5.6).

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.

Although there is no desert tortoise critical habitat present on or near the Project site, the vegetation community occurring on the Project site (*e.g.* Creosote Bush Scrub and Joshua Trees) is a type of habitat typically utilized by desert tortoises. 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 paved roads, residential development, and the Southern Pacific Railroad line on the northern boundary of the site, 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 fallow 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, at least four California ground squirrel (*Spermophilus beecheyi*) burrows are present in the 500 foot buffer area (area established by the CDFG 2012 survey protocol – see Figure 3 Appendix A). Although it is unlikely that a burrowing owl would occupy this site near a rural residence with associated "edge effects" (presence of dogs and cats, children, noise), it cannot be ruled out. AMEC has already completed the first 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 three bird nests on the project site (mostly located in golden chollas) and two additional nests on the perimeter of the project site (see Figure 4 in Appendix A).

5.7 Jurisdictional Waters

An ephemeral drainage enters on the western edge of the southern portion of the site, and travels slightly northeast to where it exits on the north central portion of the parcel (see Figure 6 in Appendix A). This drainage is largely unvegetated, and does not have any associated riparian vegetation. This feature qualifies as both CDFW jurisdictional and as a "Waters of the State" per the Regional Water Quality Control Board. AMEC is preparing a separate Jurisdictional Delineation Report that will discuss this topic in more detail.



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7.0 CERTIFICATION

CERTIFICATION: "I hereby certify that the statements furbished 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: 26 April 2013

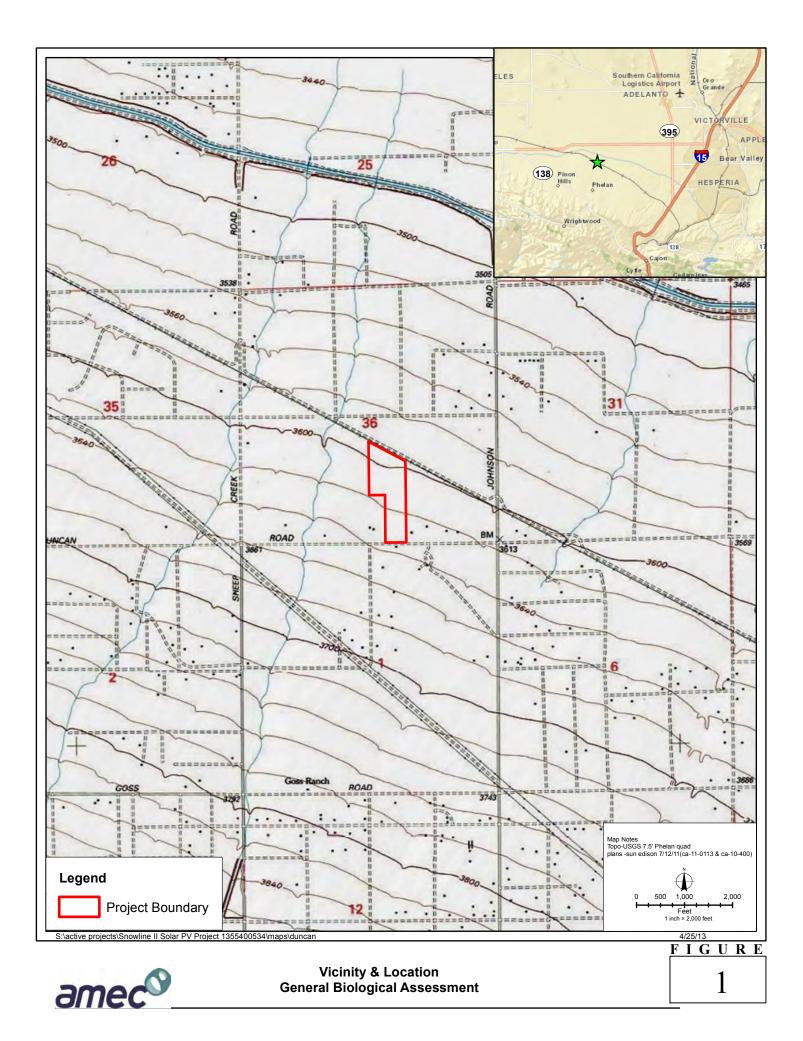
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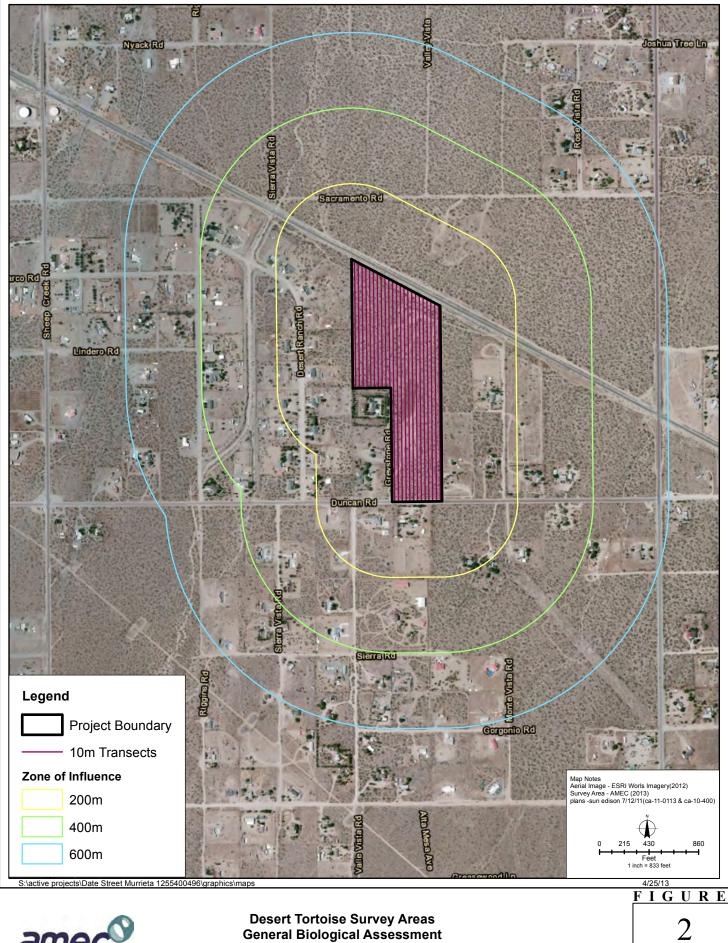
Nathan Moorater

1) Fieldwork Performed By: Nathan T. Moorhatch



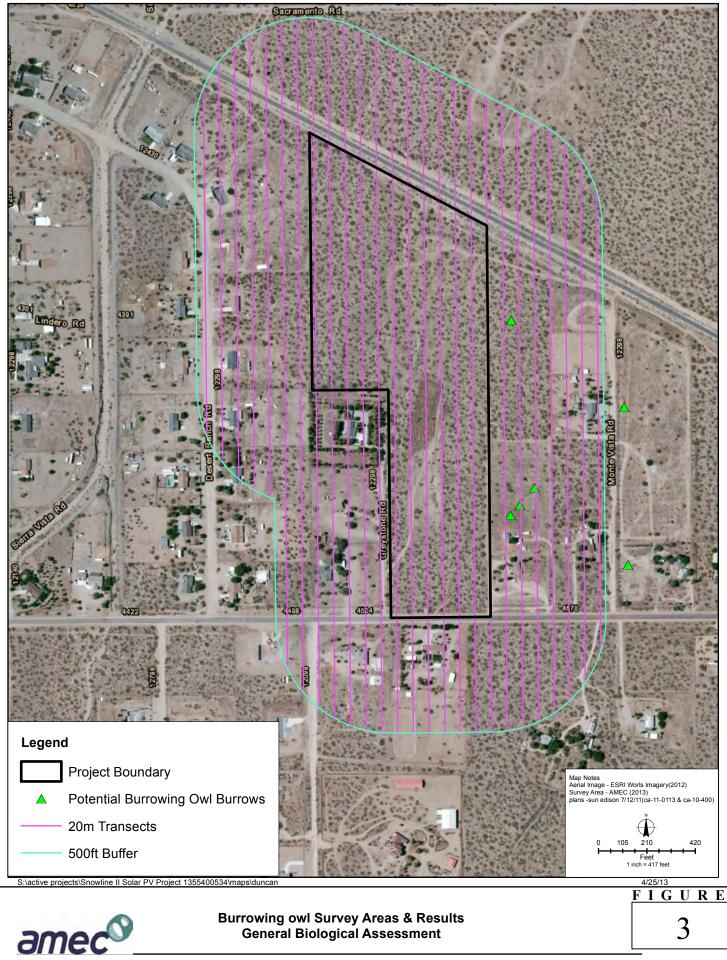
Appendix A Project Map Figures

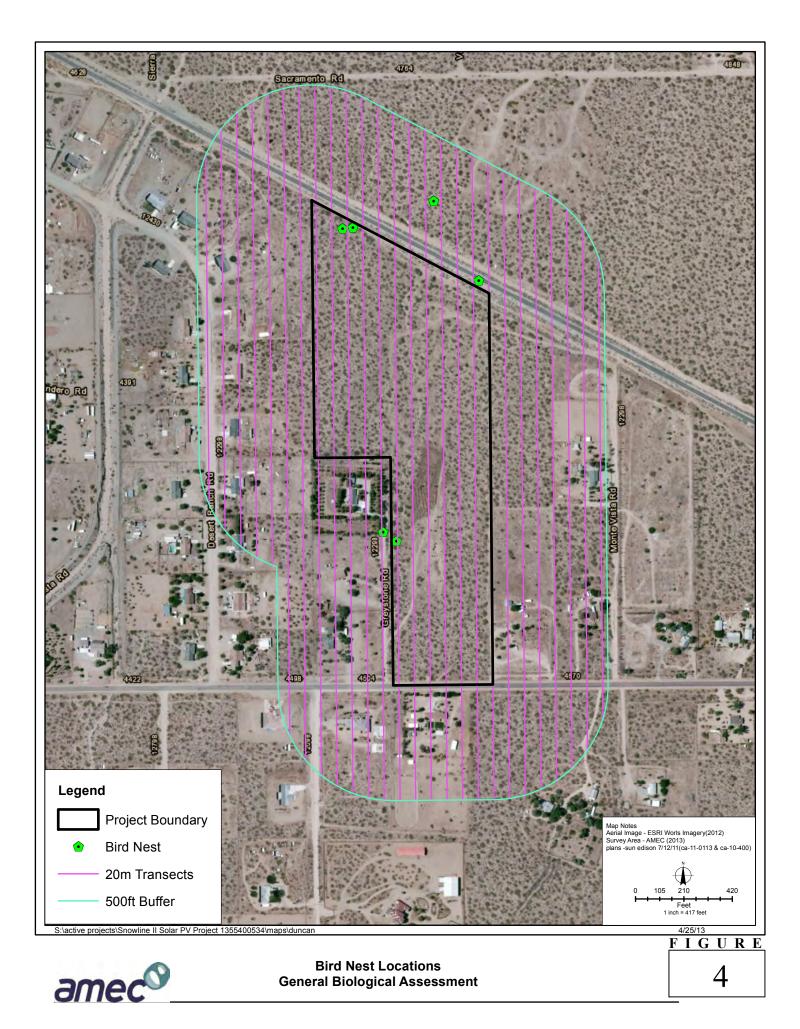


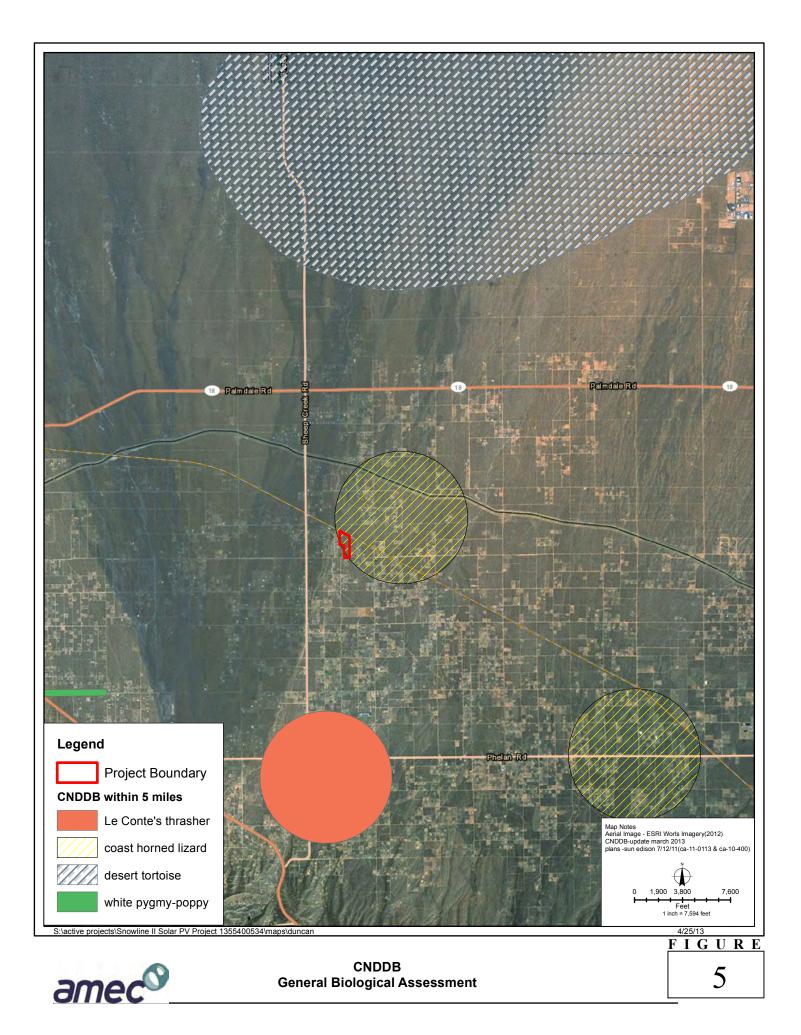


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Desert Tortoise Survey Areas General Biological Assessment









Proposed General Retail Store Project Biological Resources Assessment Report Dynamic Development, LLC February 2013



Appendix B Site Photographs





Photograph 1. Representative view of Creosote Bush Scrub/Joshua Tree Woodland intergrade habitat on the Duncan Road project site.



Photograph 2. Trash deposition on buffer area north of project site.



Photograph 3. Cleared ground and sod/soil piles on the central portion of the site.



Photograph 4. Closer view of the sod piles on the project site.





Photograph 5. Tire tracks from cross country driving on Duncan site.



Photograph 6. Stunted annuals (due to lack of rainfall) on Duncan site, dominated by nonnative redstem filaree and Mediterranean schismus.





Photograph 7. Bird nest in golden cholla on the Duncan project site.



Photograph 8. View of one of the California Ground Squirrels present on the buffer just east of the project perimeter. Potential for burrowing owl use.

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Appendix C Species Lists



Plant Species Observed on the Project Site

GNETAE (GNETOPHYTA) Ephedraceae *Ephedra nevadensis*

DICOTS

Asteraceae Ambrosia acanthicarpa Ambrosia dumosa Ambrosia salsola Encelia actoni Ericameria nauseosa Eriophyllum wallacei Gutierrezia microcephala Lessingia glandulifera var. glandulifera Malacothrix glabrata

Boraginaceae Amsinckia tessellata Pectocarya penicillata

Brassicaceae * Sisymbrium altissimum

Cactaceae Cylindropuntia echinocarpa

Chenopodiaceae

Atriplex canescens Grayia spinosa Krascheninnikovia lanata *Salsola tragus

Geraniaceae *Erodium cicutarium

Lamiaceae Scutellaria mexicana

Nyctaginaceae Mirabilis laevis

Polygonaceae Eriogonum fasciculatum

Solanaceae Lycium andersonii Lycium cooperi **Ephedra Family** Nevada ephedra

Sunflower Family

annual bur-sage white bur-sage (Burrobrush) cheesebush Acton encelia rubber rabbitbrush Wallace's woolly daisy sticky snakeweed vinegar weed desert dandelion

Borage Family checker fiddleneck northern pectocarya

Mustard Family tumble mustard

Cactus Family golden/silver cholla

Goosefoot Family

four-wing saltbush spiny hopsage winter fat Russian thistle

Geranium Family redstem filaree

Mint Family bladder-sage

Four O'Clock Family desert wishbone-bush

Buckwheat Family California buckwheat

Nightshade Family Anderson's desert-thorn peach thorn



Zygophyllaceae

Larrea tridentata

Caltrop Family creosote bush

MONOCOTS Liliaceae

*** Yucca brevifolia

Poaceae

*Bromus madritensis ssp. rubens *Bromus tectorum *Hordeum murinum *Schismus barbatus Stipa speciosa

Lily Family Joshua tree

Grass Family

red brome cheat grass mouse barley Mediterranean schismus desert needle grass



Vertebrate Species Observed on the Project Site and Buffer Transects

REPTILIA

Phrynosomatidae Uta stansburiana

Teiidae Aspidoscelis tigris tigris

AVES

Odontophoridae Callipepla californica

Columbidae Columba livia Streptopelia decaocto Zenaida macroura

Trochilidae Calypte costae

Picidae *Picoides scalaris*

Tyrannidae *Myiarchus cinerascens*

Corvidae *Corvus corax*

Remizidae Auriparus flaviceps

Troglodytidae *Campylorhynchus brunneicapillus*

Mimidae Mimus polyglottos Toxostoma redivivum

Sturnidae Sturnus vulgaris

Parulidae Setophaga nigrescens

Emberizidae Spizella breweri REPTILES

Spiny and Horned Lizards Side-blotched Lizard

Whiptails and Relatives Great Basin Whiptail

BIRDS

New World Quail California Quail

Pigeons and Doves Rock Pigeon Eurasian Collared-dove Mourning Dove

Hummingbirds Costa's Hummingbird

Woodpeckers and Allies Ladder-backed Woodpecker

Tyrant Flycatchers Ash-throated flycatcher

Crows, Jays Common Raven

Penduline Tits and Verdins Verdin

Wrens Cactus Wren

Mockingbirds and Thrashers Northern Mockingbird California Thrasher

Starlings European Starling

Wood-Warblers Black-throated Gray Warbler

Emberizids Brewer's Sparrow

Amphispiza bilineata Zonotrichia leucophrys

Icteridae Sturnella neglecta

Fringillidae Haemorhous mexicanus

Passeridae Passer domesticus

MAMMALIA

Leporidae Sylvilagus audubonii

Sciuridae Spermophilus beecheyi Ammospermophilus leucurus

Geomyidae Thomomys bottae

Canidae Canis latrans

Black-throated Sparrow White-crowned Sparrow

Blackbirds Western Meadowlark

Fringilline and Cardueline Finches, Allies House Finch

Old World Sparrows House Sparrow

MAMMALS

Rabbits, Hares Desert cottontail

Squirrels and Chipmunks California Ground Squirrel

White-tailed Antelope Squirrel

Pocket Gophers Botta's Pocket Gopher (mounds)

Wolves, Foxes, Coyote Coyote (scat, tracks)

<u>KEY</u>

- * = 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.





Appendix D USFWS Desert Tortoise Survey Data Sheets

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 co	mpletion

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Please submit a completed copy to the action agency and local USFWS office within 30-days of survey comple	etion
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Date of survey: <u>15/4/13</u> Survey biologist(s): <u>N. Moorhatch</u> (day, month, year) Site description: <u>Disturbed Mojare CBS w/ JT low density residentia</u> (project name and/size; general location) County: <u>San Bndo</u> Circle one: <u>100% coverage of Sampling</u> Area size to be surveyed: <u>Com</u> Transect H: <u>com</u> Transect length: <u>Zer</u> (UTM coveringe of Sampling) Area size to be surveyed: <u>Ser</u> (DATM modeling) CPS Start-point: <u>UV(1903)</u> 2014299 <u>2014299</u> <u>2014499</u> Start impo: <u>0938</u> am/am									
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	Site description:										
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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

GPS	Start-point:	inth, year) Subote / Joshim Hree Subote / Joshim Hree Subote / Joshim Hree Quad: Subote Area size NA Subote Area size NA	e to be surveyed.		tion: <u>/ke/a</u> D (UTM coordinates Transect #:30 Start time: End time:	6:1º	m)pm
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Detection number	GPS Ic Easting	ocation Northing	Time	(in burrow: all of	ise location tortoise beneath plane of ing, or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present
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		Tortoise	Sign (burrows,	scats, care	casses, etc)		
Detection number		ocation	Type of (burrows, scats, c	sign carcass, etc)	Desc	ription and comm	nents
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8 Mourning Love house fruch Cality grow WP188 3 Lob Ca) tetradagie steadys Sterling 45P 184 Brown Fachee inventie Cap CS Quail mestic Capher Europia collect dove WP 185 WP1893 hole (C) start 137 3 hole CGJ WP190 Thehe MA capter WP191 That 656 -J burns (cogete sel) 187 2 lole Page: _____of__/ WP186 2-hole CGS barrow Transect number: Burrowing ow 1 (port ourl) 665 Samo R. Dar Surus

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

Date	e of survey:	<u>4/9/13</u> av. month. vear)	Survey biologist(s):		nail, and phone number)		
Site			han tree scrub w/ si	<u>cutter a faint hou</u> d size; general location)			
Cou	nty: <u>Sans Ber</u>	alla	_Quad:		Phelan - Dunces		an datum)
Circl	le one: 100% cove	rage or Sampling	Area size to be survey	ed: Trans	sect #: <u>/</u> Tran	•	· · ·
GPS	Start-point:	113 644.84	38/3814922		Start time:	6:10 (a	m∕pm
GPS	S End-point:	(easting, northing, e o 44843 (easting, northing, e	/ 38/44/3		End time:	\sim	n)pm
Star	t Temp: <u>4</u> 0	_ F	End Temp: <u></u>	of Ade wind	speal 5.5 MP	H 3626	H Eku.
			Live 1	Fortoises) V
Detection number		PS location ing Northing	Time	Tortoise loc (in burrow: all of tortoise t burrow opening, or no	eneath plane of	pprox MCL •160-mm? (Yes, No or Unknown)	Existing tag # and color, if present
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Detection number		ocation Northing	V Type of sign (burrows, scats, carcass, etc)	Description and comments
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ŀ	Please submit a comp	pleted copy to the ac	tion agency and l	local USFWS office within 30-da	nys of survey com	pletion
Da	ate of survey:	/9/13 Survey	v biologist(s):	Tes Roso (name, email, and phone num scattered asjacent howes e; general location) Location: <u>Idelas</u> Du (UTM coordinates		
Sit	e description:	resole / Jashan H	ree scrub w/s	scattered adjacent howes		
Cd	ounty: San Record	من Ouad:	(project name and size	e; general location)	wan R)	
0				(UTM coordinates	s, lat-long, and/or TRS; ma	p datum)
	CIE ONE: (100% coverage	e or Sampling Area SIZ	e to be surveyed:	ransect #:	I ransect length:	0.72
GI	PS Start-point:	oyyyyy 73877 Isting, northing, elevation in ma			10:40 (a)	ŋypm
GI	PS Start-point: PS End-point:(ea	0448 428 /381 isting, northing, elevation in mi	4413 eters)	End time:	10:55 (an	Dom
	art Temp:				. A	
			Live Tor	toises		5.27
Detectior number		ocation Northing	Time	Tortoise location (<i>in burrow</i> : all of tortoise beneath plane of burrow opening, or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, No.or Unknown)	Existing tag # and color, if present
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Detection number	GPS lo Easting	ocation Northing	Type of sign (burrows, scats, carcass, etc)	Description and comments
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Page: <u>/ of /</u> Transect number: <u>~</u>

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

Date Site Cou	e of survey: <u>4/</u> (day, mo description: <u>6</u> nty: Saw Berwow	9/13Surver <u>sonth, year)</u> <u>sonthe /John H</u> <u>No</u> Quad:	y biologist(s): reg. Sc(سط س/ Sc (project name and siz	Ten Rado (name, email, and phone nur cafforal adjaced howed re; general location) Location: <u>Rhelan</u> - Da (UTM coordinate	nber)	ap datum)
GPS	Start-point:	ting, northing, elevation in m	e to be surveyed. ?4 eters)	Start time:		<u>0.42</u> mppm mppm
Star	t Temp: <u> </u>	End Te	emp: <u> 4o </u> ⁰ € ́		a,[
			Live Tor	toises		<u></u>
Detection number	and the second	ocation Northing	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
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Detection number	GPS I Easting	ocation Northing	Type of sign (burrows, scats, carcass, etc)	Description and comments
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WP 16 - cactus wren west in golden chelle woodpecker house find deset cottoutail

Page: <u>/ of</u> / Transect number: <u></u>*3*

Please submit a c	completed copy t	to the action agency	and local US	FWS offic	e within 30-c	ays of survey	y completion
Date of survey:	4/9/13	_Survey biologist(s):	Ted Ra) 。			
() Site description:	day, month, year)	John tree scru	6 w/sc	(name, e	mail, and phone no		
County:_ Saw Bow		(project name a Quad:	and almas damaged in	anting)	Phala -	Davia Rd	
Circle one	verage or Sampling A	Area size to be surve	yed:	Trar		es, lat-long, and/or Transect ler	
GPS Start-point:	easting, northing, ele					e: 6:40	(am)/pm
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Start Temp: <u>41</u>	E	End Temp: <u>49</u>	_° F				
<u> </u>		Live	Tortoises				

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

1 Nini 2 3 4	Detection number	GPS lo Easting	ocation Northing	Type of sign (burrows, scats, carcass, etc)	Description and comments
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Please submit a completed copy to the action agency and local USFWS office within 30-days of survey completion

Date of survey: J13 Survey biologist(s): Ten Rade	6
(day, month, year) Site description: cress k, I Joshue tree such w/ Scutter adjacen	(name email and phone number)
(project name and size; general location))
County: <u>San Benardiza</u> Quad: Loca	stion:
Circle one: 100% coverage or Sampling Area size to be surveyed:	_ Transect #: <u>6</u> Transect length: <u>0.36</u>
GPS Start-point: 0448-388 /3814411	Start time: <u>//://</u> am/pm
(easting, northing, elevation in meters) GPS End-point: 0448389/38/4952 (easting, northing, elevation in meters)	End time:am/pm
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Detection number	GPS location Easting Northing		lime (in human all aftertains har atheles of		Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present
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Detection number	GPS lo Easting	ocation Northing	Type of sign (burrows, scats, carcass, etc)	Description and comments
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	USFV	VS 2010 DESER	T TORTOISE PR	RE-PROJECT	SURVEY DATA	A SHEET	
		leted copy to the ac				, ,	•
Date	of survey: 4/1/13	nth, year) easork / Joshum H Jim Quad:_	v biologist(s):	Ten Re	ame, email, and phone nu	umber)	
Site	description:	cosote / Joshun to	ree soul w/s	cattered adjo	ment houses	·	
Cour	nty: Jaw Bernor	Ji Quad:_	(project name and siz	Locat	ion: <u>Phelan</u> -	Den car D es. lat-long, and/or TRS; m	ap datum)
Circl	e one <u>100% coverage</u>	or Sampling Area size	e to be surveyed:		Transect #: 1	Transect length:	0.70
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GPS	End-point:	163 79/38/1495 ting, northing, elevation in me 9378/38/14965 ting, northing, elevation in me	eters)		End time	7:10	m)pm
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Detection number	GPS Id Easting	ocation Northing	Time	(in burrow: all of t	Se location ortoise beneath plane of ng, or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present
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		Tortoise	Sign (burrows,	scats, card	asses, etc)		
Detection number		ocation Northing	Type of (burrows, scats, c		Des	cription and comr	nents

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

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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:	9/13 Survey	v biologist(s):	Ter Malo					
Site	Date of survey: <u>4/9/13</u> Survey biologist(s): <u>Tex Malo</u> (day, month, year) Site description: <u>ccssk / John tree such W/scatter affaces hows</u> County: <u>Sas Berser ho</u> Quad: <u>Location: <u>Meders</u> (UTM coordinates, lat-long, and/or TRS; map datum) (UTM coordinates, lat-long, and/or TRS; map datum)</u>								
(project name and size; general location)									
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			Live Tor	toises		1997			
Detection number		ocation Northing	Time	Tortoise location (<i>in burrow</i> : all of tortoise beneath plane of burrow opening, or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present			
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	Tortoise Sign (burrows, scats, carcasses, etc)								

Detection GPS location Type of sign (burrows, scats, carcass, etc) E al Description and comments number Easting Northing 1 Now 202/3 2 3 4 5 6 7 8

Page: _____of____ Transect number: _____

		VS 2010 DESER					
Ple	ase submit a comp	leted copy to the ac	tion agency and	Iocal USFWS	office within 30-da	ays of survey com	pletion
Date	of survey:(day, mo description:O nty: Borwar Jin	nth, year)	v biologist(s):	7 - 1 K- C	ame, email, and phone nur	nber)	
Site	description:	reasone / Jashun	free Soul w	Scatterel and	areat howed		
Cour	nty: San Borwar JT	Quad:		Locat	ion: <u>Phelas - 1</u>	Jusian D	ao datum)
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GPS	Start-point:	148359/3914976	eters)		End time:	7:25 (ar	njpm
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Detection number	GPS Ic Easting	ocation Northing	Time	(in burrow: all of	se location tortoise beneath plane of ing, or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present
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Page: ______of____ Transect number: _____

Ple	USFV ease submit a comp				T SURVEY DATA		nletion
				The Date		lys of survey con	preuon
Date	(day, mo	nth, year)	y diologist(s):	n the hash	name, email, and phone nun	nber)	
Cou	e of survey:(day, mo (description: nty: Bernd 1)	Duad	(project name and siz	ze; general location)	ition Cheler - De	war RJ	
Circl	e one: 100% coverage	or Sampling Area siz	e to be surveved	2000	(UTM coordinates	, lat-long, and/or TRS; m Transect length	ap datum) 6.41
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GPS	End-point: <u> </u>	1936 / 371441 °			End time:	7:4 /ar	m/pm
	t Temp: <u>%</u> •€					. J ²⁵	
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Detection number	GPS Ic Easting		Time	(in burrow: all of	bise location f tortoise beneath plane of ning, or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present
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•		Tortoise	Sign (burrows	, scats, car	casses, etc)		
Detection number	GPS lo Easting	Northing	Type of (burrows, scats,		Desc	ription and comr	nents
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Page: _____of____

Transect number: //

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Date	e of survey: <u>4</u> (day, mo description: <u>Cre</u> nty: <u>Saw Benar</u>	19/13 SURVEY	(biologist(s))	Ter Rando		-,,,,	1
Site	(day, mo	nth, year)	a. sub inte	attend adia	name, email, and phone nur	nber)	
Cou	nty: Saw Benar	ho Quad:	(project name and siz	e; general location) LOCa	tion: Phelaw - De	wcan R)	
UIC	IC ORE 100% coverage	or Sampling Area SIZE	e to be surveyed.		(UTM coordinates	s, lat-long, and/or TRS; m Transect length:	o.39 mi
GPS	S Start-point:	448328/ 38144	14	······	Start time:	11:52 a	m/pm
GPS	S Start-point:(eas 6 End-point:	ting, northing, elevation in me 14833 0/3814994	eters)		End time:	11:52_a 12:67a	n/pm
	^{(eas} t Temp: <u>68</u> °C	ting, northing, elevation in me	^{eters)} emp: <u>68</u> °C			. "f	
	<u> </u>		Live Tor				
Detection number	GPS lo Easting	ocation Northing	Time	(in burrow: all of	ise location tortoise beneath plane of ning, or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present
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·		Tortoise	Sign (burrows,	scats, car	casses, etc)		
Detection number		ocation Northing	Type of (burrows, scats, c		Desc	cription and comn	nents
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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:	y/13Survey	/ biologist(s):	TEJ That	nheri				
Site	description:	Occord / Joshun 7	tree soub w/se	attered adjacent howes					
Cou	Date of survey: <u>4/9/13</u> (day, month, year) Site description: <u>Occuset / Jushun tree Socie W/Scatter adjacent howes</u> (project name and size: general location) County: <u>Sai Benerallo</u> Quad: Location: <u>Current adjacent howes</u> (UTM coordinates, lat-long, and/or TRS; map datum)								
000		Quad		UTM coordinate	s, lat-long, and/or TRS; ma	ip datum)			
Circl	e one: 00% coverage	or Sampling Area size	e to be surveyed:	Transect #: 13	Transect length:	0.YZ			
GPS	Start-point:	44831813814412		Start time	7:45 a	m) pm			
GPS	End-point:	sting, horthing, elevation in mining (1993/7/39/5-00)	eters)	Transect #: 13Start time	7:57 (ar	a/pm			
	t Temp: <u>47</u> °É	End Te	emp: <u>47_</u> ⁰€			-			
			Live Tor	toises					
Detection number		ocation Northing	Time	Tortoise location (in burrow: all of tortoise beneath plane of burrow opening, or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present			
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Detection number	GPS Io Easting	ocation Northing	(burrows,	De of sign scats, carcass, etc)	Description and comments
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Page: _____of____ Transect number: ____3___

Ple	ase submit a comp	leted copy to the ac	tion agency and	local USFWS	office within 30-da	avs of survey com	pletion
Date	of survey:	2/53 Survey sonth, year) sook / Joshun Ar to Quad:	/ biologist(s):	Ter Mado	name email and phone pur		
Site	description:	work / Joshun tr	ce such w/	scattered and	jacent howes		
Cour	nty: Sow Burner	Quad:_	(project name and siz	e; general location) Local	tion: <u>Phelon - D</u> a	scen Rd	
Circl	e one: 100% coverage	or Sampling Area size	e to be surveved:		(UTM coordinates	s, lat-long, and/or TRS; mi Transect length:	ap datum) 6.31
GPS	Start-point of	4829/ 3815009	}	<u> </u>		7:59 a	
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<u></u>			Live Tor	toises			
Detection number	GPS lo Easting	ocation Northing	Time	(in burrow: all of	ise location tortoise beneath plane of ing, or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present
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		Tortoise S	Sign (burrows,	scats, care	casses, etc)		
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USEWS 2010 DESERT TORTOISE PRE-PROJECT SURVEY DATA SHEET

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:	13 Survey	biologist(s):	Tc (nam	he, email, and phone num	ber)			
Site	description: Cree	Joke / John Tle	c Journa w/ Joa	e deneral location)	FAINE	·····			
Cour	nty: San Beward	Quad:		Locatio	n: <u>Relan</u>	lat-loog and/or TRS:	man datum)		
Date of survey: <u>4/9/13</u> Survey biologist(s): <u>Two Aabs</u> (name, email, and phone number) (name, email, and phone number) Site description: <u>Ocessek / Johune Hee, Soub w/ Scatter asjacet huse</u> (project name and size; general location) (UTM coordinates, lat-long, and/or TRS; map datum) County: Job & Bewarding Quad: Location: (UTM coordinates, lat-long, and/or TRS; map datum) Circle one 100% coverage or Sampling Area size to be surveyed: Transect #									
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	. Temp: <u>68</u> °C		emp: <u>68</u> °C			Å			
			Live Tor	toises		7 Q			
Detection number	GPS Ic Easting	ocation Northing	Time	(in burrow: all of tor	e location toise beneath plane of , or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, bo or Unknown)	Existing tag # and color, if present		
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· · ·		Tortoise	Sign (burrows,	scats, carca	sses, etc)				
Detection number		ocation	Type of (burrows, scats, c		Desc	ription and con	nments		
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Page: ______of____ Transect number: ____6___

Ple	ease submit a comp	leted copy to the ac	ction agency and	local USFWS	S office within 30-d	ays of survey con	npletion
Date	e of survey:	alua Survey	v biologist(s):	Ter Rado			
Site	(day, mo	onth, year)	. troo seal	as seatter	name, email, and phone nu	mber)	
Cau	accomption.		(project name and siz	e; general location)	But Plat -	D ()	
Cou	nty			Loca	UTM coordinate	s, lat-long, and/or TRS; m	ap datum)
Circ	le one: <u>100% coverage</u> S Start-point: <u>04</u>	or Sampling Area SIZ	e to be surveyed:			I ransect length:	U. La phi
GPS	Start-point: <u>07</u> (eas S End-point: <u>07</u>	ting, northing, elevation in m	eters)				ım/pm
GPS	S End-point:	sting, northing, elevation in m	eters)		End time:	<u>\$216</u> ar	m/pm
Star	t Temp: <u>49</u> °C	End Te	emp: <u>48</u> °C				
			Live Tor	toises	- · · · · · · · · · · · · · · · · · · ·		J.
Detection number		ocation Northing	Time	(in burrow; all of	ise location tortoise beneath plane of hing, or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, No.or Unknown)	Existing tag # and color, if present
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6				S.	·····		
7			· 7:	Jan .			
8		P.					
		Tortoise S	Sign (burrows,	scats, car	casses, etc)		
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Page: ______of____ Transect number: <u>17</u>

Pl	USF	WS 2010 DESER	TTORTOISE P	RE-PROJECT SL	IRVEY DATA	SHEET			
Date	e of survey: <u>11</u>	2/13 Surve onth, year) casole / Joshue H Jho Quad:	y biologist(s):	Ter Rado	e within 30-a	ays of survey con	npletion		
Site	description:	onth.year) cosole / Joshua H	ree scal w/sa	(name, a	email, and phone nu روحادی	mber)			
Cou	nty: <u>Sew Berry</u>	Quad:	(project name and si	ize; general location) Location;_	Phelon - !	Duou Ri			
	1007000701000	or bampling ruba siz			ISECT #: 11	I ransect length:	0.22		
GPS	S Start-point:	sting, northing, elevation in m	03D		Start time:	3:20	ım/pm		
GPS	End-point:	3448257/3815 sting, northing, elevation in m 448257/38/477 sting, northing, elevation in m	19 leters)		End time:		m/pm		
Star	t Temp: <u>49</u> ° F	End Te	emp: <u>50</u> F	•					
	Live Tortoises								
Detection number		Ocation Northing	Time	Tortoise lo (in burrow: all of tortoise burrow opening, or ,	beneath plane of	Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present		
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8		and the second	A						
	Tortoise Sign (burrows, scats, carcasses, etc)								

Detection number	GPS I Easting	ocation	Type of sign (burrows, scats, carcass, etc)	Description and comments
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3		J		
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Page: _____of____ Transect number: 19

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

Date of survey: <u>4/9/13</u> Survey biologist(s): <u>Ted Rado</u> (day, month, year) (name, email, and phone number) Site description: <u>Crewske / Jakue free Scub w/ Suffered adjacet howes</u> (project name and size; general focation)										
Site	description:	ste / John tree	. Scrub w/south	tel adjacent howes						
County: <u>Sw Berrar Jins</u> Quad: <u>Current and size; general focation</u> <u>Inclas</u> (UTM coordinates, lat-long, and/or TRS; map datum)										
Circl	Circle one: <u>00% coverage or Sampling</u> Area size to be surveyed: Transect #: <u>20</u> Transect length: <u>0.27</u> GPS Start-point: <u>0'418747/381471/8</u> Start time: <u>/2:22</u> am/pm									
GPS	Start-point: 044	8247/381471	8	Start tim	e: 12:22	am/pm				
GPS	End-point:(eas	sting, northing, elevation in m 8247/3715638 sting, northing, elevation in m	neters)			m/pm				
Star	t Temp: <u>70 °</u> C	End Te	emp: _7o _∘C	2						
			Live To	rtoises						
Detection number	GPS Ic Easting	ocation Northing	Time	Tortoise location (<i>in burrow</i> : all of tortoise beneath plane of burrow opening, or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present				
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4				A						
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7			» <i>C</i> ì							
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Detection number	GPS lo Easting	ocation Northing	Type of sign (burrows, scats, carcass, etc)	Description and comments
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WP174 - invative west to chella (and carto una)

Page: <u>/ of</u> / Transect number: <u>2</u>•

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

Date of survey:	Date	e of survey:	la Sun	vey biologist(s):	Ter Rab							
Urde one: 1004 contace of samples of both Surveyed:	Site	description:	rth, year)	Thus tree Soul	w/Scatters	ame, email, and phone num	iber)					
Under one: 100% constance of analysis of the surveyed:	Cou	nty: Sew Bernard	no Qua	(project name and siz d:	e; general location) Locati	ion: Phela -D	us centre)					
GPS End-point Image: Start Temp. Image: Start T	LICLE OBE: 100% coverage or Sampling AIRA SIZE to be SUD/EVED: I ransect #: 21 I ransect length: 22 CM											
Start Temp: Port End Temp: Port Average Average <t< td=""><td>GPS</td><td colspan="11">GPS Start-point:</td></t<>	GPS	GPS Start-point:										
Start Temp: Port End Temp: Port Average Average <t< td=""><td>GPS</td><td>S End-point:</td><td>18238/3815049</td><td></td><td></td><td>End time:</td><td>\$:3</td><td>m/pm</td></t<>	GPS	S End-point:	18238/3815049			End time:	\$:3	m/pm				
Live Tortoises Detection number GPS location Easting Northing Time Tortoise location and color, if Existing tag # and color, if 1 Area							J.					
Detection number Grading Easting Northing Time Time Initial data data data data data data data da		· · · · · · · · · · · · · · · · · · ·	<u></u>	Live Tor	toises							
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7 1 Tortoise Sign (burrows, scats, carcasses, etc) Detection number GPS location Easting Northing Type of sign (burrows, scats, carcass, etc) 1 Northing Image: Carcasses in the second scats in th	5				A.	4						
8 Tortoise Sign (burrows, scats, carcasses, etc) Detection number GPS location Easting Northing Type of sign (burrows, scats, carcass, etc) Description and comments 1 Nove	6											
Tortoise Sign (burrows, scats, carcasses, etc) Detection number GPS location Easting Northing Type of sign (burrows, scats, carcass, etc) Description and comments 1 Nore- 1 2 1 1 3 1 1 4 1 1 5 1 1 6 1 1	7				>							
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number Easting Northing (burrows, scats, carcass, etc) Description and comments 1 Northing (burrows, scats, carcass, etc) Description and comments 2 Northing Image: Comments Image: Comments 3 Image: Comments Image: Comments Image: Comments 3 Image: Comments Image: Comments Image: Comments 4 Image: Comments Image: Comments Image: Comments 5 Image: Comments Image: Comments Image: Comments 6 Image: Comments Image: Comments Image: Comments 7 Image: Comments Image: Comments Image: Comments	·		Tortois	e Sign (burrows,	scats, carc	asses, etc)	2					
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WP164 Possily actors centers wan rest in Jolly near Neul,

Page: ______of____/

Transect number: 21

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

Dat	e of survey: <u>4/9/</u> (day, mo description:	Survey	/ biologist(s):	Tes Rado	•		
Site	(day, mo e description:	nth, year) Oreasek / J	ishan tree sca	bw/scaffer	name, email, and phone nur ladjout how	nber)	
Соц	unty: San Buzarsh	•Quad:	(project name and siz	e; general location)	tion: Phela		
Circ	cle one 100% coverage	or Sampling Area size	e to be surveyed:		(UTM coordinate Transect #: 23	s, lat-long, and/or TRS; m Transect length:	ap datum) 0.24
GP	S Start-point:	ting nothing elevation in m	ators)		Start time:	8:40 (a	mpm
GP	S End-point:(eas	148217 / 381505	0 / 0 148217	13814712	End time:	<u>8:49</u> (ar	pm
	rt Temp: 50 00					jita n	
			Live Tor	toises		je se	
Detection number	GPS to Easting	ocation Northing	Time	(in burrow: all of	ise location tortoise beneath plane of ning, or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present
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	•	Tortoise	Sign (burrows,	scats, car	casses, etc)		
Detection number	GPS lo Easting	ocation	Type of (burrows, scats, c		Desc	cription and comn	nents
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Note: 20 m buster west of 23 (0448197) - wo oust sign (howing to west)

			a denon agency a	nu iocai USI	JECT SURVEY DA	days of	
	Date of survey:	4/9/13 Si	urvey biologist(s):	Nate M	(name, email, and phone is (name, email, and phone is) (name, email, and phone	uays of survey c	ompletion
	Site description:	Ceosek/Joshue	Tree soul w/s	cather adi	(name, email, and phone i	€∕⊙ number)	¢†
	County: E Bornan	As Qu	(project namé and ad:	i size; general loca	ition)		
	Circle one: <u>100% cove</u>	rage or Sampling Area	size to be surveye	d R. C.	ition) Deation: <u>200 // Dy</u> (UTM coordina	tes, lat-long, and/or TRS;	map datum)
(GPS Start-point:	(easting, northing, elevation	8 Via motore)	Juit	Docation: <u>200</u> <u>M</u> Dy (UTM coordina Transect #: <u>200</u> DT B Start time	Transect length	2.70 Mi
C	GPS End-point:	(easting, northing, elevation	in motors)		End time	1145	
S	Start Temp:68		Temp: 68 °C			a	am/pm
				ortoises			
Detectio number		S location		1	toise location	Approx MCL	
1	Eastin	ng Northing	Time	(IN DUITOW: all	of tortoise beneath plane of ening, or not in burrow)	>160-mm? (Yes, No or Unknown)	Existing tag # and color, if present
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7				<u></u>			
~ 8				·			
		Tortoise	Sign (burrows, s	coto en			
Detection number		Deation	Type of si	an			
1	Easting	Northing	(burrows, scats, card	ass, etc)	Descrip	tion and commer	nts
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	Lop 17	sobrot wp 173 Antelegue in P 177	growt squind ? (200 m basts ourl sign	Malestel Dtrip) Coel Atrig	ik febicte kk Conservens two wijster hylle willow p Trans	age:of	1 no M TH Raff.

AND IN ANT

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

Date	Date of survey: <u>9/04/13</u> Survey biologist(s): <u>N, Moortuber</u> (day, month, year) (name, email, and phone number)										
Site description:(project name and size; general location)											
Cou	County: 5 - Bnde Quad: Location										
	(project name and size; general location) County: <u>5<,</u> Binds Quad: Location: (UTM coordinates, lat-long, and/or TRS; map datum)										
Circl	Circle one: <u>100% coverage or Sampling</u> Area size to be surveyed: Transect #: <u>4</u> Transect length: <u>1,36 m</u> i GPS Start-point: <u>0448408/3814412</u> Start time: <u>11.12</u> (an)/pm (casting, northing, elevation in meters)										
GPS	Start-point:(9-1-18-108/3	8/L/4/2	Start time:	<u> :12 (</u> a	iŋi/pm					
GPS	End-point:	0448408 /	38/4948 neters)	End time:	<u>_/1:23</u> (ar	m/pm					
Star	t Temp: <u>56</u> %	End Te	emp: <u>56</u> %	P							
	Live Tortoises										
Detection number	and the second s	ocation Northing	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					
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Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS Id Easting	ocation Northing	Type of sign (burrows, scats, carcass, etc)	Description and comments
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6				
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Page: ____of____

Transect number:

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

Date	e of survey:(day, mo	Survey	y biologist(s):	IV. Moorhath (name, email, and phone nu	nber)			
Site	description:							
Cou	nty:5 4 ^ B	née. Quad:	(project name and siz	Location: Phelen	- Duncan A	26.		
	County: <u>560</u> Bode, Quad: <u>County: Jenne and size</u> , general location; <u>Phelon</u> - Duncom Rd. (UTM coordinates, lat-long, and/or TRS; map datum) Circle one: <u>100% coverage or Sampling</u> Area size to be surveyed: <u>Transect #: 5</u> Transect length: <u>0-38 mi</u>							
				*	<u>_1/:30</u>			
GPS	End-point:	sting, northing, elevation in m 0 4 4 & 3 9 % sting, northing, elevation in m	eters) 3814410 eters)	End time:	<u>11:42</u>			
	t Temp: <u>56</u> °C				. P			
			Live Tor	toises		y S		
Detection number	GPS lo Easting	ocation Northing	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		
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Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS lo Easting	ocation Northing	Type of sign (burrows, scats, carcass, etc)	Description and comments
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Ambrosia

Vineger weed (Lessingia)

HOSP

Page: ____of____

Transect number:

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

Date	ate of survey: <u>9/∂-(//3</u> Survey biologist(s): <u>M</u> , <u>M</u> , <u>M</u> , <u>Sor</u> 6 ~ <i>F</i> 4. (day, month, year) (name, email, and phone number)								
Cou	(project name and size; general location) County: <u>510</u> <u>Bodo</u> , Quad: <u>Location:</u> <u>Domaina</u> (UTM coordinates, lat-long, and/or TRS; map datum)								
COU	ity	<u> </u>		UTM coordinate	s, lat-long, and/or TRS; m	ap datum)			
Circl	e one: Anno/ coverson	Sampling Area size	a to ha surveyed	Transact # 10					
GPS	Start-point:	HH&3 H& ting, porthing, elevation in m	<u>3814411</u>	Start time:	. <u>11:52</u> a	m/pm			
GPS	Start-point:	UU83US ting, northing, elevation in m	381498 eters)	2 End time:	<u>12:04</u> ar	m/pm			
Start	: Temp: <u>68</u> ¢	P End Te	emp: <u>68</u> °C						
			Live Tor	toises		y S			
Detection number	GPS Ic Easting	ocation Northing	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			
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Detection number	GPS I Easting	ocation Northing	N.	Type of sign (burrows, scats, carcass, etc)	Description and comments
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7					
8					

Grayin spinosa Amsinckia tesselata Salazariamer. HOFI (1907-5450) & Schismus Sp. Lycium cooperi Ambrosia acanthicarpa COHU & Bromus tectorum Salsola tragus Ambrosis salsola Page: ____of____ Transect number:

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

	e of survey:(day, m description:			N. Moarhabel (name, email, and phone nu	mber)			
One	description.	······································	(project name and siz	e: general location)				
Cou	nty: <u>5an Bu</u>	nda, Quad:	(Location: PLeta (UTM coordinate	- Duncan	Ré.		
Circ	le one: <u>(100% coverag</u> e	<u>e or Sampling</u> Area siz	e to be surveyed:	Transect #: <u>/ 4</u>	Transect length:	0.21 mi.		
GPS	S Start-point:	14 4307	3815005	Start time	: <u>12:09</u> a	m/pm		
GPS	End-point:	44306 sting, northing, elevation in n	<u>3814696</u> neters)	End time:	<u>/2:16</u> ar	m/pm		
	t Temp: <u>68</u> °C							
	Live Tortoises							
Detection number	second with a second	ocation Northing	Time	Tortoise location (in burrow: all of tortoise beneath plane of burrow opening, or <i>not in burrow</i>)	Approx MCL >160-mm? (Yes, No or Unknown)	Existing tag # and color, if present		
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Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS I Easting	ocation Northing	N.	Type of sign (burrows, scats, carcass, etc)	Description and comments
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Transect number: _____

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

Date	Date of survey: <u>9/04/13</u> Survey biologist(s): <u>N</u> , <u>Moorhabch</u> (day, month, year) (name, email, and phone number)								
Site	Site description:								
Cou	ntv: Sc. Bn	da. Quad	(project name and sz	Location: P_{f}	-Dunce R	1			
000	nty	Quad		Location: 1 ² helan (UTM coordinate	es, lat-long, and/or TRS; m	ap datum)			
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Star	t Temp: <u>70</u> ⁰C	End Te	emp: <u>70</u> ℃						
			Live Tor	toises		N.			
Detection number	and the second sec	ocation Northing	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			
1									
2				. 036	*				
3				NORE					
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8						· · · · · · · · · · · · · · · · · · ·			

Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS lo Easting	ocation Northing	Type of sign (burrows, scats, carcass, etc)	Description and comments
1	à.			
2				· / ·
3		J.	\sim	ONE
4				
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6	•			
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NOMO

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Transect number: _____

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

	Date of survey: <u>9/04/13</u> Survey biologist(s): <u>N. Moorhafes</u> (day, month, year) (name, email, and phone number)								
Site	Site description:								
Соц	ntv: So Bro	da Quad	(project name and siz	Location: <u>Phelen</u> (UTM coordinate	- Dunco R	d -			
				: Transect #: <u>22</u>	Transect length:	0.25 mi,			
GPS	Start-point:	4482	27 <u>3815</u>	043 Start time	: <u>1234</u> a	im/@			
GPS	End-point:	4482 sting, northing, elevation in m 4452 sting, northing, elevation in m	$\frac{27}{381}$	$\frac{4715}{100000000000000000000000000000000000$	<u>1240</u> ai	m/pm			
	t Temp: <u> </u>		emp: <u>→0</u> •C						
	Live Tortoises								
Detection number	and the second	ocation Northing	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			
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Tortoise Sign (burrows, scats, carcasses, etc)

Detection number	GPS Io Easting	ocation Northing	Y	Type of sign (burrows, scats, carcass, etc)	Description and comments
1				-	
2					
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Transect number: