Appendix Y
Biological Resources Technical Report

BIOLOGICAL RESOURCES TECHNICAL REPORT
FOR THE SOLAR TWO PROJECT SITE
IMPERIAL COUNTY, CALIFORNIA

PREPARED FOR:

BUREAU OF LAND MANAGEMENT AND
CALIFORNIA ENERGY COMMISSION

URS PROJECT NO. 27657102

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BIOLOGICAL RESOURCES TECHNICAL REPORT
FOR THE SOLAR TWO PROJECT SITE
IMPERIAL COUNTY, CALIFORNIA

Prepared for
Bureau of Land Management and
California Energy Commission

URS Project No. 27657102

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Acronyms

ACOE	Army Corps of Engineers
AFC	Application for Certification
Applicant	SES Solar Two, LLC
BLM	Bureau of Land Management
BMP	Best Management Practice
CDCA	California Desert Conservation Area
CDFG	California Department of Fish and Game
CNDDB	California Natural Diversity Database
I-8	Interstate 8
IID	Imperial Irrigation District
MW	megawatt
NEPA	National Environmental Policy Act of 1969
OHWM	ordinary high water mark
ORV	off-road vehicle
ROW	right-of-way
SDG&E	San Diego Gas & Electric
Solar Two	SES Solar Two, LLC
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resource Control Board
URS	URS Corporation
USFWS	United States Fish and Wildlife Service

EXECUTIVE SUMMARY

With a growing population, California's demand for electricity is growing and is expected to be strained for the foreseeable future. Wind energy and other renewable energy sources can play a leading role in alleviating these problems. New requirements for utility companies to provide renewable energy sources are leading the way to promote solar and wind development. SES Solar Two, LLC (Solar Two or Applicant), a renewable energy technology company, has developed equipment for utility-scale renewable energy and distributed electric generating systems. This unique technology, a proprietary solar energy conversion system (SunCatcher), combines a mirrored concentrator with a high-efficiency Stirling Engine specifically designed to convert sunlight to rotary power to drive an electrical generator. The Solar Two Project and its ancillary features (Project) will result in a solar-powered electric generating facility designed to be constructed in phases with a final build-out of 750 megawatts (MW) of power. The Solar Two Project is located in Imperial County in southern California on approximately 6,500 acres of land. A 10.3-mile long transmission line and 7.17-mile long water pipeline are also proposed as part of the Project.

In compliance with National Environmental Policy Act of 1969 (NEPA), a biological resources assessment of the Project area was conducted by URS Corporation (URS). The biological resources assessment included a database review of the California Natural Diversity Database (CNDDB) and U.S. Fish and Wildlife Service (USFWS) regional database to identify previous biological resource locations in the Project vicinity. Based on the results of the database review, URS biologists conducted vegetation mapping, rare plant surveys, and protocol surveys for the special status species identified within the vicinity of the Project Site.

The Project Site is a relatively undisturbed, low-elevation desert area comprised of Sonoran Desert creosote bush scrub vegetation. The Project Site is in a location that has a history of mining operations and claim filings dating to 1908. This activity has resulted in the area being disturbed in various areas in some cases several times. In addition, the site is frequently used by off-road vehicles (ORV) and several ORV trails transverse the area. Extensive biological field surveys resulted in the direct observance of the following special status species: flat-tailed horned lizard (*Phrynosoma mccalli*), burrowing owl (*Athene cunicularia*), Le Conte's thrasher (*Toxostoma lecontei*), California horned lark (*Eremophila alpestris actia*), and loggerhead shrike (*Lanius ludovicianus*). No rare plants were detected on-site.

Several sandy washes occur on the Project Site and along the proposed transmission line. Because these drainages do not connect to any Army Corps of Engineers (ACOE) defined navigable waters, they would not fall under federal jurisdiction. Several of the washes do, however, display well-defined bed and banks and therefore would potentially be considered Waters of the State as defined by Section 1600 of the Fish and Game Code.

1.0 INTRODUCTION

This Biological Resources Technical Report has been prepared as a component of an Application for Certification (AFC) for preliminary biological studies associated with the proposed development of a solar-powered electric generating facility. The purpose of this biological resource technical study is to inventory and assess the possible significance of biological resources that the Project could affect. This report details the results of special status species protocol and general wildlife surveys, focused sensitive species surveys, rare plant surveys, and vegetation mapping conducted on the approximately 6,500-acre Project Site, a 1 mile-buffer around the Project Site, the 10.3-mile transmission line, and a 3.4-mile water pipeline.

1.1 PROJECT DESCRIPTION

The Project would develop a solar-powered electric generating facility situated approximately 14 miles west of El Centro in Imperial County in southern California. The Project area is located on approximately 6,140 acres of land managed by the Bureau of Land Management (BLM) and approximately 360 acres of private land that may be purchased or leased by Solar Two (Figure 1, General Vicinity Map). A total of approximately 6,500 acres would be included within the fenced site. The Project Site boundaries are the Union Pacific Railroad to the north, located just south of the Evan Hewes Highway, Interstate-8 (I-8) to the south, to the east the easterly section line of Section 14 in Township 16 South, Range 11 East located 0.25 mile to the east of Dunaway Road, and to the west the westerly section line of Section 22 in Township 16 South, Range 10 East. North of the Project Site is the USG Corporation (Plaster City) mining site. The main access to the site will be from Dunaway Road with a second north access from Evan Hewes Highway just east of the San Diego Gas & Electric (SDG&E) transmission line. This transmission line traverses the site from the northwest to the southeast.

The first phase of the Project will consist of up to 12,000 SunCatchers configured in 125 1.5-MW solar groups with 60 SunCatchers per group. Other than the Solar Two interconnection transmission line to be constructed by Solar Two to the Imperial Valley Substation, no new transmission lines or off-site substations will be required for Phase I of the Project. Eventually, the Project will be expanded to include up to approximately 30,000 SunCatchers configured in 500 1.5-MW solar groups (Phase II). Phase II of the Project will require the construction of an additional 500-kV transmission line from the SDG&E Imperial Valley Substation to SDG&E's service territory. In accordance with the plan of development for Solar Two, the Project will be connected to the SDG&E Imperial Valley Substation via 10.3-mile double-circuit 230-kV transmission line. A 6-inch diameter water supply pipeline will be constructed a distance of approximately 7.17 miles from the Imperial Irrigation

District (IID) Westside Main Canal to the Project Site. The water supply pipeline will be routed within or adjacent to the Union Pacific Railroad right of way (ROW), on federal and private lands, in the northeast portion of the site (Figure 1, General Vicinity Map).

2.0 ENVIRONMENTAL SETTING

2.1 PROJECT SETTING

The Project area is located in the Colorado Desert in gently rolling open terrain dominated by desert scrub vegetation. The Colorado Desert is the western portion of the larger Sonoran Desert that extends across the southwest United States and into Mexico. The climate is very hot and dry in the summer months, and cool and moist in the winter. Perennial and intermittent rivers and streams are rare, and most water flow occurs as flood flows within defined washes and less defined flood-flow paths during rare major winter rain events. Habitats in this region of the Colorado Desert vary with the landscape and precipitation levels. The area to the east of the Project Site supports irrigated agricultural lands; to the south is I-8 and undeveloped Sonoran creosote bush scrub within the Yuha Desert Management Area; to the west of the Project is undeveloped Sonoran creosote bush scrub; and north is the BLM Plaster City ORV Area. With the exception of the Plaster City plant in the north-central portion of the site, a maintained dirt access road along the transmission line, and several ORV trails, the Project Site is relatively undisturbed (Figure 2, Biological Resources).

A search of the CNDDB revealed several previously documented special status species occurring within the Project vicinity, including plants such as brown turbans (*Malperia tenuis*), Harwood's milk-vetch (*Astragalus insularis var. harwoodii*), and flat-seeded spurge (*Chamaesyce platysperma*); and wildlife such as flat-tailed horned lizard, burrowing owl, Le Conte's thrasher, and American badger (*Taxidea taxus*). A search of the CNDDB revealed several previously documented special status species occurring within the Project vicinity. Figure 3, Special Status Species Locations, illustrates the results of the CNDDB search within a 10-mile radius of the Project boundary.

2.1 REGIONAL MANAGEMENT PLANS

Currently, there are two habitat management plans approved and being implemented by the BLM that have jurisdiction over the Project vicinity. These include the California Desert Conservation Area (CDCA) Plan (BLM 1980, as amended), and the Flat-tailed Horned Lizard Rangewide Management Strategy (1997). The Project Site is adjacent to the Yuha Desert Management Area, which is located south of I-8.

3.0 FIELD SURVEY METHODS AND RESULTS

3.1 FIELD SURVEY METHODOLOGY

In March 2007, URS biologists conducted a habitat assessment to characterize the vegetation at the Project Site, including off-site transmission and waterlines and associated buffer areas, to determine the suitability of the habitat for the flat-tailed horned lizard and burrowing owl. At that time, it was determined that California Department of Fish and Game (CDFG) protocol surveys for the flat-tailed horned lizard would be necessary throughout the Project Site and proposed transmission and waterlines. This determination was based on the occurrence of harvester ants (*Pogonomyrmex* spp.), an important forage species for horned lizards, present throughout the property, and the suitability of the soil and vegetation to support the species.

Beginning on 1 May 2007 and ending on 7 May 2008, URS biologists conducted CDFG and BLM protocol surveys for flat-tailed horned lizard. During the protocol surveys, 26-acre plots were evenly distributed throughout the entire site. Within these plots, 4 hectare survey plots were surveyed for the duration of 1 hour (Figure 4, Flat Tailed Horned Lizard Survey Plots). In this manner, the entire Project Site was sample-surveyed at 38 percent rate of coverage. For the 2008 flat-tailed horned lizard surveys, BLM requested that the transect survey protocol be applied to the two off-site linear Project features (waterline and transmission line). During transect survey protocol surveys, four transects were surveyed on each side of the linear Project feature center-line. All horned lizard sign, including live and dead flat-tailed and desert horned lizards (*Phrynosoma platyrhinos*), scat, and tracks were mapped and recorded with handheld GPS units. Photographs of horned lizards were taken, and survey forms were completed for each horned lizard sighting.

Special status plant surveys were conducted in 2007 and 2008 during the months of March and May to maximize the probability of detection of blooming annuals. Special status plant surveys were conducted either concurrently with vegetation habitat surveys, or as focused species surveys during appropriate blooming periods throughout the Project Site and along the off-site transmission line and waterline.

Incidental observations of all plant and wildlife species detected were recorded during all site visits. During all of the URS biological surveys, the property was surveyed on foot, and all areas were visible from the survey routes. Animals were identified using scat, tracks, burrows, vocalizations, or direct observations with the aid of binoculars. Biological resources were mapped in the field with the aid of handheld GPS units (5 meter accuracy) and plotted on a 1 inch = 200 feet rectified 2005 aerial photograph. Survey dates and personnel for Project surveys can be found in Table 1, Survey Dates and Personnel for the Solar Two Project. Photos of the site and detected resources were taken.

Table 1
Survey Dates and Personnel for the Solar Two Project

Date	Field Personnel	Survey Type
15 March 2007 and 16 March 2007	Cheryl Rustin, Ellen Howard, Shanti Abichandani, Theresa Miller	General survey, site assessment
19 March 2007 through 23 March 2007	Cheryl Rustin, Ellen Howard, Darren Burton, Theresa Miller, Rick Bailey, Dallas Pugh, Greg Hoisington, Ken McDonald	General survey, site assessment, rare plant survey
26 March 2007 through 28 March 2007	Cheryl Rustin, Shanti Abichandani, Greg Hoisington	General survey, site assessment
1 May 2007	Cheryl Rustin, Greg Hoisington, Shanti Abichandani, Theresa Miller, Ken McDonald	Focused flat-tailed horned lizard surveys, rare plant survey
2 May 2007	Cheryl Rustin, Shanti Abichandani, Theresa Miller, Dallas Pugh, Greg Hoisington, Ken McDonald	Focused flat-tailed horned lizard surveys, rare plant survey
3 May 2007	Cheryl Rustin, Dallas Pugh, Greg Hoisington, Ken McDonald	Focused flat-tailed horned lizard surveys, rare plant survey
4 May 2007	Cheryl Rustin, Dallas Pugh	Focused flat-tailed horned lizard surveys
7 May 2007 through 9 May 2007	Cheryl Rustin, Dallas Pugh	Focused flat-tailed horned lizard surveys
4 June 2007	Cheryl Rustin, Matt Wartian, Rick Bailey, Glen Kinoshita	Focused flat-tailed horned lizard surveys
5 June 2007	Cheryl Rustin, Matt Wartian, Rick Bailey, Glen Kinoshita, Ellen Howard	Focused flat-tailed horned lizard surveys
6 June 2007 and 7 June 2007	Cheryl Rustin, Matt Wartian, Rick Bailey, Glen Kinoshita, Ellen Howard, Theresa Miller, Shanti Abichandani, Ken McDonald	Focused flat-tailed horned lizard surveys
8 June 2007	Matt Wartian, Rick Bailey, Theresa Miller, Shanti Abichandani, Ken McDonald	Focused flat-tailed horned lizard surveys
12 June 2007	Matt Wartian, Rick Bailey, Cheryl Rustin, Ken McDonald	Focused flat-tailed horned lizard surveys
13 June 2007 and 14 June 2007	Matt Wartian, Rick Bailey, Cheryl Rustin, Ken McDonald, Glen Kinoshita	Focused flat-tailed horned lizard surveys
15 June 2007	Rick Bailey, Ken McDonald, Glen Kinoshita	Focused flat-tailed horned lizard surveys
9 July 2007 through 11 July 2007	Cheryl Rustin, Ellen Howard	Focused flat-tailed horned lizard surveys
13 February 2008	Glen Kinoshita, Seth Hopkins	Preliminary rare plant assessment for 2008 surveys.
11 March 2008 through 14 March 2008	Ken McDonald, Dallas Pugh, Ling He, Jessie Golding, Gilda Barboza, Shelly Vogel, Lech Naumovich, Michelle Balk	Rare plant survey
17 March 2008 through 21 March 2008	Ken McDonald, Dallas Pugh, Ling He, Jessie Golding, Gilda Barboza, Lech Naumovich, Sundeep Amin, Michelle Balk	Rare plant survey

Table 1
Survey Dates and Personnel for the Solar Two Project

Date	Field Personnel	Survey Type
5 May 2008 through 7 May 2008	Ken McDonald, Dallas Pugh, Greg Hoisington, Theresa Miller, Rick Bailey, Sundeep Amin, Brittany Benson, Erika Alfaro	Focused flat-tailed horned lizard surveys, rare plant survey
8 May 2008	Ken McDonald, Rick Bailey, Sundeep Amin, Erika Alfaro	Rare plant survey

Source: URS Corporation, 2008.

3.2 FIELD SURVEY RESULTS

3.2.1 Vegetation

The approximately 6,500-acre Project Site is located in gently rolling, open desert scrub with several sandy washes passing through the site. Vegetation is comprised of a single vegetation community, Sonoran creosote bush scrub as mapped according to the Holland Code (1986). Disturbed areas are mostly limited to dirt roads and ORV trails that traverse the Project Site. The creosote bush scrub is in a disturbed condition along the northern Project boundary mostly within the 1-mile buffer areas assessed.

Sonoran creosote bush scrub (Holland Code 33100) is a low-growing desert habitat dominated by creosote bush (*Larrea tridentata*), bursage (*Ambrosia dumosa*), brittlebrush (*Encelia farinosa*), and several species of cactus. Creosote bush is a drought-tolerant deciduous shrub frequently found on desert bajadas, alluvial fans, and on well-drained desert soils. This vegetation type is common throughout the southern California desert areas and is the basic creosote scrub of the Colorado Desert (Holland 1986). Other plant species observed within this habitat on-site include: tamarisk (*Tamarix* sp.), ocotillo (*Fouquieria splendens*), silver cholla (*Opuntia echinocarpa*), and mesquite (*Prosopis* sp.). Shrub density ranged from moderate to low density (shrub spacing from several feet to tens of feet). Substrates on which this vegetation type was observed on-site include desert pavement, coarse sand, and sandy wash. Sparse stands of tamarisk and mesquite mixed with creosote scrub are primarily concentrated within several dry washes that transect the property. No other distinct vegetation communities occur along the off-site transmission or waterlines. A complete list of plant species observed on-site can be found in Attachment B, Plant Species List.

3.2.2 Wildlife

The Project Site supports a diversity of common desert wildlife. Reptiles observed included common side-blotched lizard (*Uta stansburiana*), Colorado Desert sidewinder (*Crotalus cerastes*), zebra-tailed lizard (*Callisaurus draconoides*), desert iguana (*Dipsosaurus dorsalis*), Great Basin whiptail (*Cnemidophorus tigris tigris*), and desert horned lizard.

Bird species detected during surveys included common raven (*Corvus corax*), California horned lark (*Eremophila alpestris actia*; California Species of Special Concern [SSC]), black-tailed gnatcatcher (*Polioptila melanura*), and three raptor species: turkey vulture (*Cathartes aura*), American kestrel (*Falco sparverius*), and red-tailed hawk (*Buteo jamaicenis*). Burrowing owls were detected along the transmission line route and potential burrows were also detected on the Project Site.

Mammals observed or indirectly detected from scat, tracks, or burrows included black-tailed jackrabbit (*Lepus californicus*), kit fox (*Vulpes macrotis arsipus*), coyote (*Canis latrans*), and California ground squirrel (*Spermophilus beecheyi*); rodent tracks and burrows were commonly observed throughout the site. A complete list of wildlife species observed on-site can be found in Attachment C, Wildlife Species List.

3.2.3 Special Status Species

No sensitive plant species were observed during 2007 or 2008 general and focused surveys. Due to the sparse vegetation and moderate level of disturbance displayed on the Project Site and along the off-site transmission and waterlines, there is only a low to moderate potential for special status plant species to occur on-site. No federal or state listed plant species were detected in the Project area or vicinity in 2007 or 2008. A complete list of sensitive plant species with their potential to occur can be found in Attachment C, Wildlife Species List.

A total of five special status wildlife species were identified during biological surveys, including flat-tailed horned lizard, burrowing owl, loggerhead shrike, Le Conte's thrasher, and California horned lark. The following species accounts are provided for the five sensitive wildlife species detected during the 2007 and 2008 general and focused surveys.

The flat-tailed horned lizard had been proposed for listing in 1993 as threatened by the USFWS under the Endangered Species Act of 1973, as amended. The proposal for listing was withdrawn by USFWS in June 2006 (USFWS 2006). The flat-tailed horned lizard and burrowing owl are considered sensitive by the BLM. In addition, all five sensitive wildlife species observed on-site have been identified as Species of Special Concern by the CDFG. A complete list of sensitive wildlife species with their potential to occur can be found in Attachment C, Wildlife Species List.

3.2.3.1 Special Status Species Accounts

Flat-tailed horned lizard (*Phrynosoma mcallii*)
USFWS: None; BLM: Sensitive; CDFG: Species of Special Concern

The flat-tailed horned lizard inhabits areas of fine sand in desert washes and flats in the desert areas of San Diego, Imperial, and Riverside counties in California, southwestern Arizona, and northern Baja California and Sonora in Mexico. This lizard typically occurs in flat sparse desert scrub habitats dominated by creosote bush and bursage on fine, sandy, alkaline soils. Turner and Medica (1982) found that over 97 percent of total food intake was composed of ants in specimens studied. Harvester ants (*Veromessor pergandei, Polonomyrex californicus, and P, magnacantha*) composed 75 percent, and *Conomyrma insana* composed 16 percent of the lizards' diet. Flat-tailed horned lizards are suffering habitat loss from development and off-road vehicle use. It is estimated that up to 90 percent of the lizards' original geographic range is subject to, or potentially subject to, some form of human disturbance (Turner and Medica 1982). Two flat-tailed horned lizards were detected along the eastern boundary and four desert horned lizards were detected in the Project area during 2007 surveys. Two deceased flat-tailed horned lizards were also observed along the off-site transmission line in 2007. During 2008 focused surveys, two desert horned lizards were detected in the Project area (Figure 2, Biological Resources). Based on the Project area, the percent area surveyed (38 percent), and a presumed detection rate of a 25 percent for protocol surveys, it is estimated that between 20 to 30 flat-tailed horned lizards may occupy the Project area where suitable habitat is present. Active harvester ant mounds and horned lizard scat were observed throughout the site. Because the desert horned lizard also inhabits the area, it is impossible to determine which species of horned lizard produced the scat. The flat-tailed horned lizard has the potential to occur throughout the site and along the off-site transmission and waterlines where suitable habitat and food resources are present.

Burrowing owl (*Athene cunicularia*)
USFWS: Bird of Conservation Concern; BLM: Sensitive; CDFG: Species of Special Concern

The western burrowing owl is a small, ground dwelling bird that inhabits grasslands, agricultural fields, and disturbed areas in the western half of the United States down into Baja California and central Mexico (Johnsgard 1988). Burrowing owls use rodent burrows throughout the year for shelter from weather and predators and for nesting during the breeding season which typically occurs from early March through late September, with most nesting occurring between late March and June in the Imperial Valley (Patten et al. 2003). In Southern California, the most commonly used rodent burrow is that of the California ground squirrel *(Spermophilus beecheyi)*, and nesting distribution is strongly correlated to local burrow distribution (Collins 1979). Burrowing owls form short-term pair bonds with male

territoriality peaking during pair formation and declining after egg laying. Not all individuals capable of breeding do so every year. Burrowing owls have declined through much of their range because of habitat loss due to urbanization, agricultural conversion, and destruction of ground squirrel colonies (Remsen 1978). The incidental poisoning of burrowing owls and the destruction of their burrows during eradication programs aimed at rodent colonies has also been a large factor in their decrease (Collins 1979; Remsen 1978; Zarn 1974). Burrowing owls are relatively tolerant of lower levels of human activity, but have been negatively impacted by high levels of human related disturbances such as shooting and the introduction of non-native predators (Zarn 1974). This species often nests and perches near roads where they are vulnerable to roadside shooting, being hit by cars, road maintenance operations, and general harassment (Remsen 1978).

The Imperial Valley is regarded as a population stronghold for the burrowing owl, and currently has the largest and most stable population of burrowing owls in the state of California. It is estimated that 70 to 80 percent of burrowing owls found in California reside in Imperial County (CDFG 2007). Recent studies in the Imperial Valley estimated owl density of 8.3 pairs per square kilometer, with a majority of owls nesting in burrows along irrigation canals (Rosenberg and Haley 2004). The agricultural areas of the Imperial Valley provide important foraging areas for burrowing owl food sources including invertebrates from the orders Orthoptera, Araneida, Isopoda, Lepidoptera, Solpugida, as well as several species of small rodents (York et al. 2002). Owl burrows with sign were documented in three on-site locations, one location along the transmission line, one location near the off-site waterline, and four at adjacent off-site locations. Two owls were detected on lands adjacent to the Project Site, and two burrowing owls were detected at one location along the off-site transmission line (Figure 2, Biological Resources).

Loggerhead shrike (*Lanius ludovicianus*)
USFWS: Bird of Conservation Concern; BLM: None; CDFG: Species of Special Concern

The loggerhead shrike is a fairly common breeding resident of the Imperial Valley. During the breeding season (March through August), this species is frequently observed in desert scrub where it nests in thorny shrubs (Patten et al. 2003). It is known as the “butcher bird” for its habit of preying on large arthropods or small invertebrates, then skewering them on small twigs or barbed wire before consuming them (Unitt 2004). Populations of the loggerhead shrike have been in decline since the 1980s, partially due to increase urbanization and human disturbance in its habitat. Surveys for the San Diego Bird Atlas project detected high numbers of nesting loggerhead shrike near the Project area in the Anza-Borrego Desert State Park (Unitt 2004). One loggerhead shrike was observed on the Project Site during 2007 surveys. During 2008 surveys, an individual loggerhead shrike and a pair of loggerhead shrikes were detected on the Project Site (Figure 2, Biological Resources).

Le Conte's thrasher (*Toxostoma lecontei*)
USFWS: Bird of Conservation Concern; BLM: Sensitive; CDFG: Species of Special Concern

Le Conte's thrasher was once a nesting resident of the Imperial Valley, but was presumably driven out of the area by large-scale urbanization and cultivation. This species is currently considered an uncommon post-breeding season (mid-March to mid-November) visitor of the Imperial Valley where it is observed in open creosote scrub, usually near sand dunes or sandy washes (Patten et al. 2003). This species is especially wary of humans and is susceptible to human disturbance (Remsen 1978). Breeding season for this species in most of its range extends from late January to June. One Le Conte's thrasher was detected in 2007 just west of the Project boundary within the 1-mile buffer area (Figure 2, Biological Resources).

California horned lark (*Eremophila alpestris actia*)
USFWS: None; BLM: None; CDFG: Species of Special Concern

The California horned lark is a common breeding resident of the Imperial Valley where it can often be found in fallow agricultural areas, open desert, and alkaline flats with sparse, low-growing vegetation. This species can frequently be observed in the area where there is open soil including roadsides, plowed fields, and open desert. Horned larks are known to colonize areas graded for development, disappearing when construction begins. Nests are placed on the ground, and nesting generally occurs late January or February with fledging young observed as early as March (Patten et al. 2003). California horned larks were observed throughout the Project Site during 2007 and 2008 surveys.

3.2.4 Potential Jurisdictional Waters of the United States/State

Non-wetland Waters of the U.S. that would be under the jurisdiction of the ACOE are delineated based on the presence of an ordinary high water mark (OHWM) as defined at 33 CFR 328.3(e). The OHWM is defined therein as:

The term "ordinary high water mark" means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

California Fish & Game Code Section 1601(a) describes areas subject to State jurisdiction within the following text:

> *Except as provided in this section, general plans sufficient to indicate the nature of a project for construction by, or on behalf of, any state or local governmental agency or any public utility shall be submitted to the department if the project will (1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit, (2) use material from the streambeds designated by the department, or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake designated by the department. …*

Section 1601(a) is based on Title 14 CCR 720, which designates waters of the State to be:

> *For the purpose of implementing Sections 1601 and 1603 of the Fish and Game Code which requires submission to the department of general plans sufficient to indicate the nature of a project for construction by or on behalf of any person, governmental agency, state or local, and any public utility, of any project which will divert, obstruct or change the natural flow or bed of any river, stream or lake designated by the department, or will use material from the streambeds designated by the department, all rivers, streams, lakes, and streambeds in the State of California, including all rivers, streams and streambeds which may have intermittent flows of water, are hereby designated for such purpose.*

URS understands that these State regulations define the jurisdiction of CDFG, for the purpose of administering Section 1600 of the Fish and Game Code, as within the bed, bank, and channel of a stream, including intermittent streams, which are equivalent to the areas within the OHWM of a stream. URS also understands that the CDFG routinely asserts jurisdiction on areas demonstrating a minimum of one of three parameters: (1) a dominance of hydrophytic vegetation, (2) hydric soils, or (3) wetland hydrology.

A number of well-defined washes cross the Project Site and off-site transmission line. Several of these washes were created by runoff from off-site flows that are directed by culverts under I-8. Other smaller washes convey on-site runoff and eventually connect to the larger washes. Several areas of the site, including much of the northeast corner, exhibit sheet flow conditions in areas where well-defined natural channels do not occur. The majority of the runoff crossing the site flows from south and west, eventually reaching the railroad tracks

along the northern boundary of the site. Washes that reach the railroad tracks then flow under existing trestles or follow along the railroad berm towards the east. The majority of the larger washes on-site have been degraded by extensive ORV usage.

None of the washes that occur on-site or along the off-site transmission line connect to ACOE defined navigable waters. Therefore, none of the washes associated with the Project would be considered under federal jurisdiction. Several washes do, however, display defined bed and banks and may be considered Waters of the State under Section 1600 of the California Fish and Game Code. Because the land on which the Project Site occurs is owned by the BLM, it is at the discretion of BLM as to whether or not a 1602 agreement would be required for this Project. Any State jurisdictional washes that occur within the privately owned parcels on-site would require a 1602 agreement prior to any disturbance. A map illustrating the potential Waters of the State within the Project boundary and along the off-site transmission line can be found in Figure 5, Potential Waters of the State.

4.0 IMPACTS

4.1 IMPACTS

The Project will be designed to minimize ground disturbances and resulting environmental impacts wherever practicable. The number of roadways will be kept to a minimum, paved roadways will be specifically located to provide main routes for quick access to the site for construction, maintenance, and operations. In addition, access from the main paved roads to the individual SunCatchers will be on unpaved solar field access routes between alternate rows of SunCatchers. Culverts will be installed in a limited number of locations, as necessary, for crossing of natural washes. Site layout for the Project will be based on avoiding major washes and minimizing surface disturbing activities. Additionally, sensitive habitat areas will be avoided wherever possible.

Brush trimming will occur along roads and around each group of SunCatchers. This will consist of manually trimming the existing brush to 3 feet in height along the center of a 150-foot area between every other row of SunCatchers. After brush has been trimmed, blading for roadways and foundations will be utilized between alternating rows to provide access to individual SunCatchers. Blading will occur to remove localized hills or depressions to provide for proper alignment and operation of the individual SunCatchers.

The Project Site layout will maintain pre-development drainage patterns. The paved roadways will have a low flow unpaved swale or roadway dip, as needed, to convey runoff to existing washes. Both paved and unpaved roads will utilize low flow culverts where necessary. Localized channel grading will occur on a limited basis to improve channel function, and to control flow direction away from proposed buildings and roadways. In addition, a channel will be constructed along the northeastern portion of the site to direct potential 100-year flooding away from the Main Services Complex building site. It is unknown at this time how many culverts will be necessary or where they will be utilized. This information will be provided by Solar Two at a later date.

Project construction will occur in two phases beginning in the northeast corner of the site and moving south and west. Phase I development includes portions of land located west of the SDG&E transmission corridor, the construction of the site access road to Dunaway Road, the construction of the 7.17-mile waterline, and the construction of the 10.3-mile transmission line. A Project construction staging area is also planned to be constructed east of Dunaway Road across from the site access roadway entrance to the Main Services Complex. Phase II includes the expansion of the Project to portions of land located both west and east of the SDG&E transmission corridor, and installation of a second circuit onto the off-site transmission line constructed in Phase I. Construction for both phases will occur in steps

with the construction of groups of approximately 720 to 960 SunCatchers, including associated site preparation, per step. It is expected that site construction will require between approximately 40 months for full build-out.

Approximately 6,032.8 acres of creosote bush scrub and 0.2 acre of disturbed creosote bush scrub will be impacted by the construction of the Solar Two Project (Figure 6, Biological Impacts). Impacts to 30.1 acres of disturbed habitat are also anticipated. Although the vegetation within the immediate vicinity of the SunCatcher will be regularly trimmed and much of the vegetation between rows of SunCatchers will be allowed to regenerate naturally, these narrow (approximately 74 feet wide) strips of habitat are expected to have minimal residual biological value associated with them. Only common species with small area requirements (e.g., house finch, lizards and snakes) are expected to continue to utilize these strips of vegetation. An illustration of proposed construction disturbance occurring in association with the SunCatchers is provided in Figure 7, 1.5-MW Solar Group Construction Disturbance Plan. In this figure the white strips between the groups of SunCatchers represent the approximately 74-foot wide strips of retained vegetation.

Off-site Transmission Line

An approximately 10.3-mile long transmission line will be constructed from the Project Site to the SDG&E Imperial Valley Substation. The new line will parallel the existing SDG&E transmission corridor. Approximately 50 feet on either side of the proposed transmission line will be impacted by construction, including the installation of 60 to 75 new transmission towers and associated access roads. Construction of the transmission line will occur during Phase I and will require approximately three months to complete. Transmission line construction will occur concurrently with construction activities at the Project Site.

Access to the off-site transmission line and support structures will be available from the existing utility maintenance roadways. Short roadways will be established from the existing easement corridor to the new structures adjacent to the existing transmission line. These roadways will be of similar design and construction to the existing short access roadways established for access to the existing transmission structures.

Approximately 92.7 acres of Sonoran creosote bush scrub and 0.1 acre of disturbed habitat will be impacted by construction of the proposed off-site transmission line.

Off-site Water Pipeline

A 7.17-mile long water pipeline is proposed to deliver water from the IID Westside Main Canal to the Project Site. Water will be conveyed to the site via a new pump station and pipeline from the canal along the Union Pacific Railroad Road right-of-way. Much of the area where the water pipeline is proposed has been disturbed by extensive ORV usage. The water pipeline will be installed prior to Phase I of Project construction. Approximately 12 feet on either side of the 6-inch diameter water pipeline will be impacted by construction activities, including an access road.

Approximately 4.2 acres of Sonoran creosote bush scrub, 0.2 acre of disturbed creosote bush scrub, 0.1 acre of disturbed habitat, and 5.8 acres of developed land will be impacted off-site by construction of the waterline.

4.1.1 Flat-tailed Horned Lizard

Potential impacts to the flat-tail horned lizard and its habitat will occur as a result of the Project. Flat-tailed horned lizards have been detected at two locations within the Project area and two locations along the off-site transmission line. Mortality due to roadkill, site grading, and loss of suitable forage habitat are the most likely impacts to flat-tailed horned lizard. Clearance surveys will be conducted prior to each phase of construction to minimize mortality of individual horned lizards. Areas not directly used for construction of the SunCatchers will be avoided. In addition, proper Best Management Practices (BMP) measures will be implemented to minimize potential impacts to flat-tailed horned lizard.

Potential impacts to flat-tailed horned lizards caused by construction of the off-site transmission line include: habitat disturbance caused from installation of towers, construction, use of access routes to the tower sites, and maintenance activities. Potential long-term effects include a permanent maintenance road, enhanced vegetation along the road edge and between tower sites, and reduced vegetation cover under the towers (Flat-tailed Horned Lizard Working Group 1997). Because the transmission lines will be placed along the existing maintenance road, impacts to horned lizards will be minimized.

Potential impacts to flat-tailed horned lizards caused by the construction of the proposed off-site water pipeline include: habitat disturbance from trenching, stock piling of fill, refilling the trench, and moving vehicles along the corridor during construction and maintenance (Flat-tailed Horned Lizard Working Group 1997). The off-site water pipeline is proposed to be constructed in an area that has been previously disturbed by ORV use and residential development.

Although neither proposed pipelines nor transmission lines are likely to function as barriers to horned lizard movements, roads constructed to build or maintain these utilities may cause

a proliferation of new access roads into previously undisturbed areas resulting in off-site habitat disturbance (Flat-tailed Horned Lizard Working Group 1997). In addition, the potential for flat-tailed horned lizard mortality from vehicle usage along access roads would also be expected.

4.1.2 Burrowing Owl

Impacts to burrowing owls and their habitat are possible as a result of the Project. Several apparently active owl burrows were observed on-site and two individual owls were observed along the off-site transmission line route. Thirty days prior to the start of initial ground disturbance activities, a preconstruction survey for burrowing owls will be completed. If any owls are encountered, measures will be taken to minimize impacts to them. Initial disturbance of the site will also occur outside the burrowing owl breeding season (1 September through 31 January) to ensure that no breeding birds, eggs, or chicks are harmed by construction activities.

4.1.3 Other Sensitive Species

Disturbance to the Le Conte's thrasher, loggerhead shrike, and California horned lark are possible as a result of the Project. These species were detected throughout the Project area. Project Site clearing activities will be conducted during the non-breeding season (July through January) within limited areas that would constitute only a very small portion of a bird territory or home range. Potential impacts to sensitive bird species would be adverse, but less than significant.

4.1.4 Other Species

Currently, the Project Site supports appropriate breeding habitat for several bird species that were detected on-site. Estimates of carrying capacity for each individual species were made based on the perceived relative abundance on-site and on literature values for home range and breeding territory (Table 2, Estimated Carrying Capacity for Birds Potentially Breeding at the Approximately 6,500-acre Solar Two Site). Bird species that have adapted to living under disturbed conditions and in close proximity to development, such as house finches and mourning dove, may continue to nest on-site within narrow strips of retained vegetation or on built structures. However, species that require more expansive areas of habitat to establish nesting territories are not expected to use the Project area during the breeding season. Bird species, such as red-tailed hawk or American kestrel, that may utilize existing or proposed transmission line structures as nesting sites and portions of the site that may continue to support prey species (e.g., insects, rodents and snakes). Other common species on-site with specific habitat requirements (e.g., California horned lark and lesser nighthawk) may have a substantial reduction in site carrying capacity with implementation of the Project.

Table 2
Estimated Carrying Capacity for Birds Potentially Breeding at the Approximately 6,500-acre Solar Two Site

Common Name	Scientific Name	Relative Abundance On-site	Home Range/ Territory Size (acres)	Carrying Capacity (pairs)
American kestrel	*Falco sparverius*	Common	142.0	5
Black-tailed gnatcatcher	*Polioptila melanura*	Common	22.5	5
Burrowing owl (SSC, BLM-Sensitive)	*Athene cunicularia*	Rare	46.4	5
California horned lark (SSC)	*Eremophila alpestris*	Abundant	4	1,600
House finch	*Carpodacus mexicanus*	Common	4	1,600
Lesser nighthawk	*Chordeiles acutipennis*	Abundant	1.0	500
Loggerhead shrike (SSC)	*Lanius ludovicianus*	Rare	21	5
Mourning dove	*Zenaida macroura*	Common	3.2	2,000
Northern mockingbird	*Mimus polyglottos*	Common	3.1	40
Red-tailed hawk	*Buteo jamaicenis*	Uncommon	575.8	3
Verdin	*Auriparus flaviceps*	Uncommon	19.8	6
Western kingbird	*Tyrannus verticalis*	Common	37.1	3
White-winged dove	*Zenaida asiatica*	Common	80.4	20

Source: Poole, 2005.
Notes:
BLM = Bureau of Land Management
SSC = Species of Special Concern

5.0 MITIGATION AND MONITORING

The following BMPs will be implemented to minimize impacts on habitat for the flat-tailed horned lizard and other sensitive species.

- Where practicable, ground-disturbing activities shall be conducted outside the bird-nesting season (February through July).
- Clearance surveys for flat-tailed horned lizards, burrowing owls, and nesting birds will be conducted prior to each phase of Project construction.
- Any flat-tailed horned lizards observed within the proposed construction area will be relocated to suitable habitat outside the development impact footprint.
- Populations of flat-tailed horned lizards will be monitored post-construction using methods described in the "*Robust Pradel Mark-Recapture Protocol for Monitoring Flat-tailed Horned Lizards on Sentinel Plots*" (USFWS 2006) recommended by the BLM.
- Burrowing owl burrows within 250 feet of the construction area will be surveyed; any resident owls will be passively removed and unoccupied burrows will be collapsed prior to construction activities by following the procedures outlined in the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993).
- After completion of the Project, a seed mix of dominant plant species will be distributed within any extensive temporarily disturbed areas.
- The speed limit of vehicles on dirt roads within the Project Site will be limited to 20 miles per hour.
- A Storm Water Pollution Prevention Plan (SWPPP) will be prepared in conformance with the State Water Resource Control Board (SWRCB) Order Number 99-08-DWQ, General Permit Number CAS000002.
- Erosion and sedimentation control will be implemented during construction to retain sediment on-site and to prevent violations of water quality standards.
- Diversion ditches and/or berms will be constructed as necessary to divert runoff from off-site areas around the construction site.

5.1 COMPENSATORY MITIGATION

Off-site mitigation for the permanent loss of suitable flat-tail horned lizard and burrowing owl habitat will be provided per agreement with the BLM and CEC.

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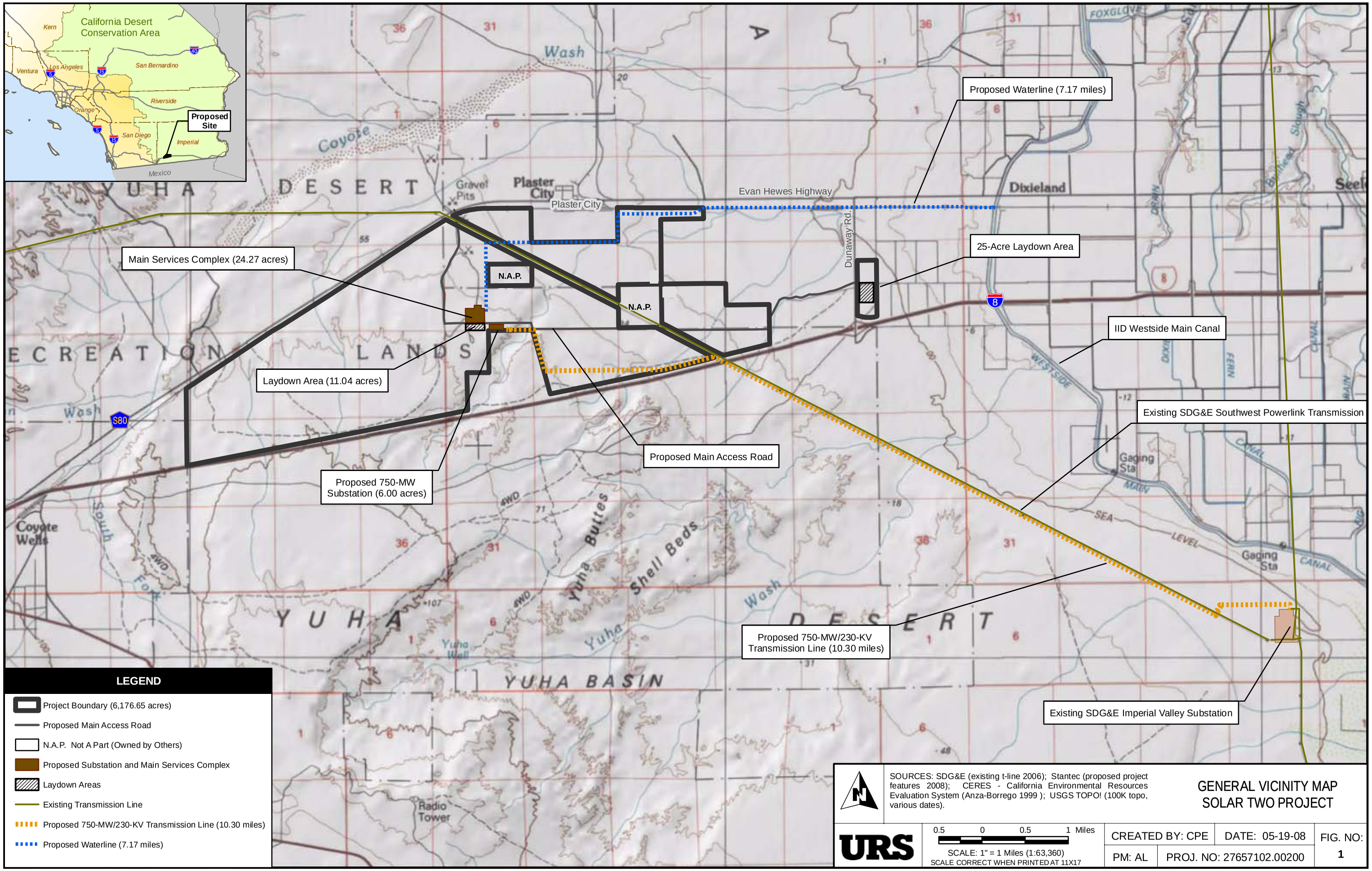

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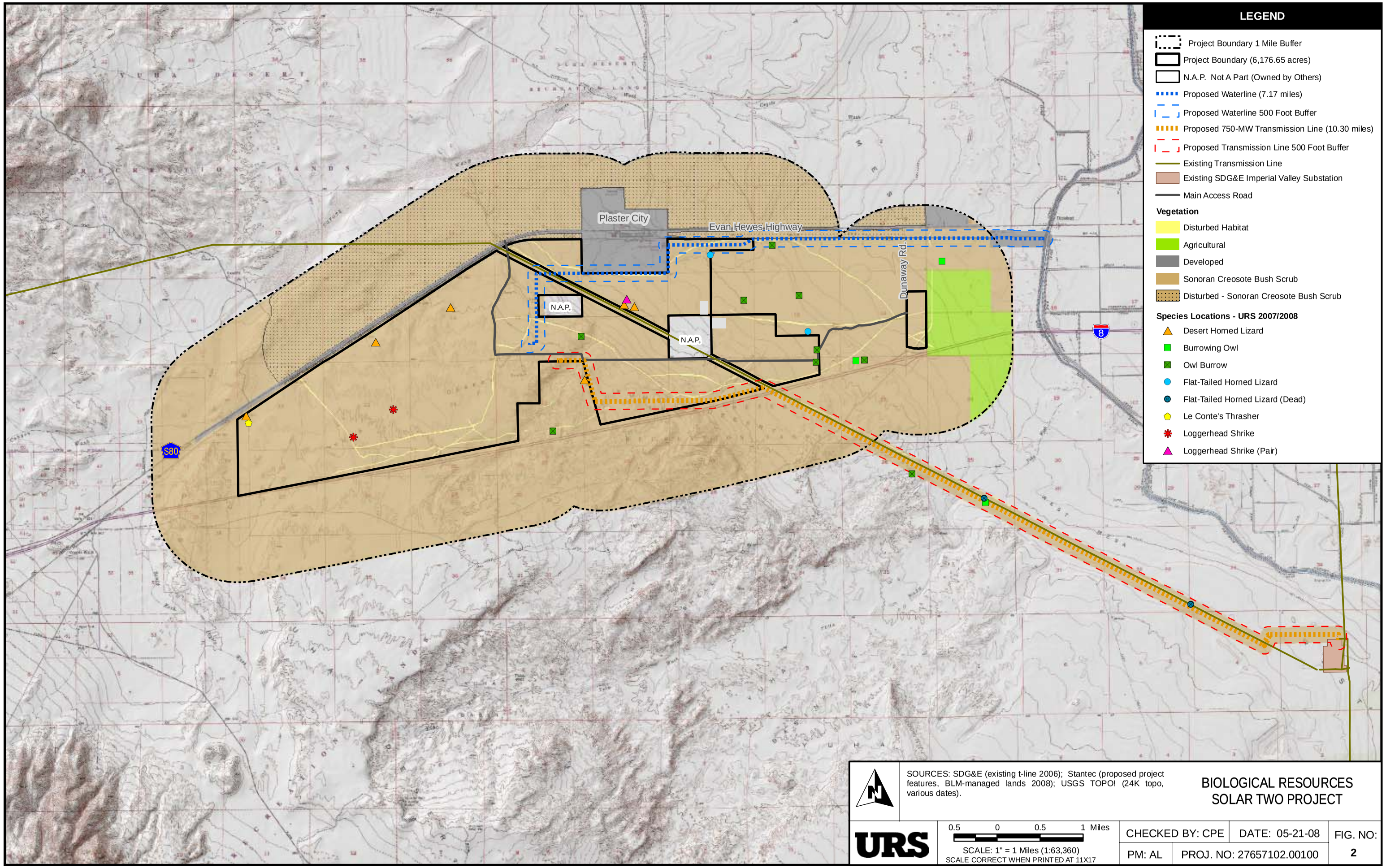

SOURCES: SDG&E (existing t-line 2006); Stantec (proposed project features, BLM-managed lands 2008); USGS TOPO! (24K topo, various dates).

BIOLOGICAL RESOURCES
SOLAR TWO PROJECT

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SCALE: 1" = 1 Miles (1:63,360)
SCALE CORRECT WHEN PRINTED AT 11X17

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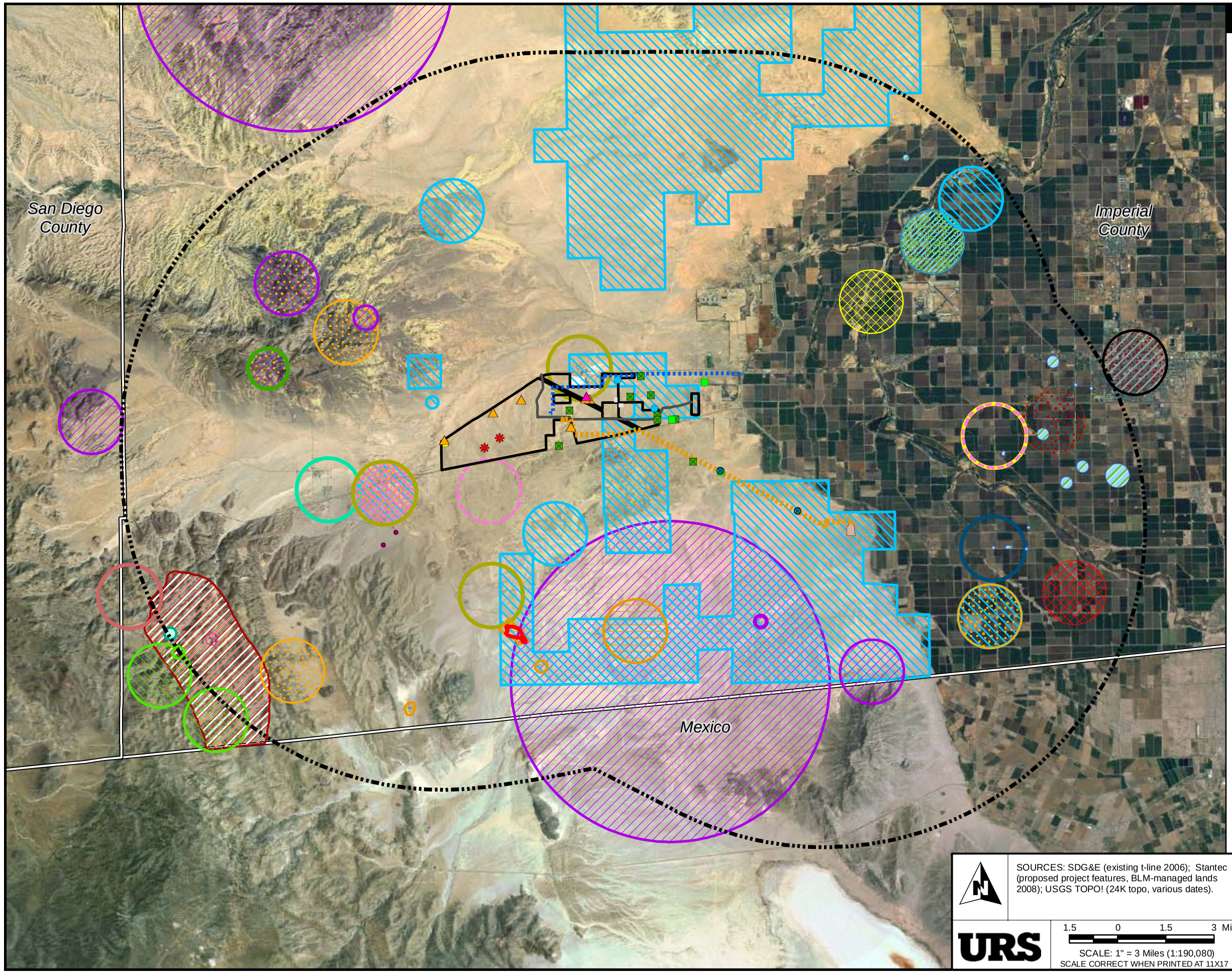

LEGEND

- Project Boundary 10 Mile Buffer
- Project Boundary (6,176.65 acres)
- N.A.P. Not A Part (Owned by Others)
- Proposed Waterline (7.17 miles)
- Proposed 750-MW Transmission Line (10.30 miles)
- Existing SDG&E Imperial Valley Substation
- Main Access Road

Species Locations - URS 2007/2008

- Desert Horned Lizard
- Burrowing Owl
- Owl Burrow
- Flat-Tailed Horned Lizard
- Flat-Tailed Horned Lizard (Dead)
- Le Conte's Thrasher
- Loggerhead Shrike
- Loggerhead Shrike (Pair)

CNDDB Sensitive Species May 2008

- American Badger
- Baja California Ipomopsis
- California Satintail
- Colorado Valley Woodrat
- Crucifixion Thorn Woodland
- Desert Fan Palm Oasis Woodland
- Harwood's Milk-vetch
- Le Conte's Thrasher
- Mexican Hulsea
- Mountain Springs Bush Lupine
- Parish's Desert-thorn
- Yuma Clapper Rail
- Annual Rock-nettle
- Big Free-tailed Bat
- Black-tailed Gnatcatcher
- Brown Turbans
- Burrowing Owl
- Crucifixion Thorn
- Elephant Tree
- Flat-tailed Horned Lizard
- Hairy Stickleaf
- Lowland (=Yavapai, San Sebastian & San Felipe) Leopard Frog
- Peninsular Bighorn Sheep
- Slender Cottonheads
- Vermilion Flycatcher
- Western Yellow Bat

SOURCES: SDG&E (existing t-line 2006); Stantec (proposed project features, BLM-managed lands 2008); USGS TOPO! (24K topo, various dates).

SPECIAL STATUS SPECIES LOCATIONS SOLAR TWO PROJECT

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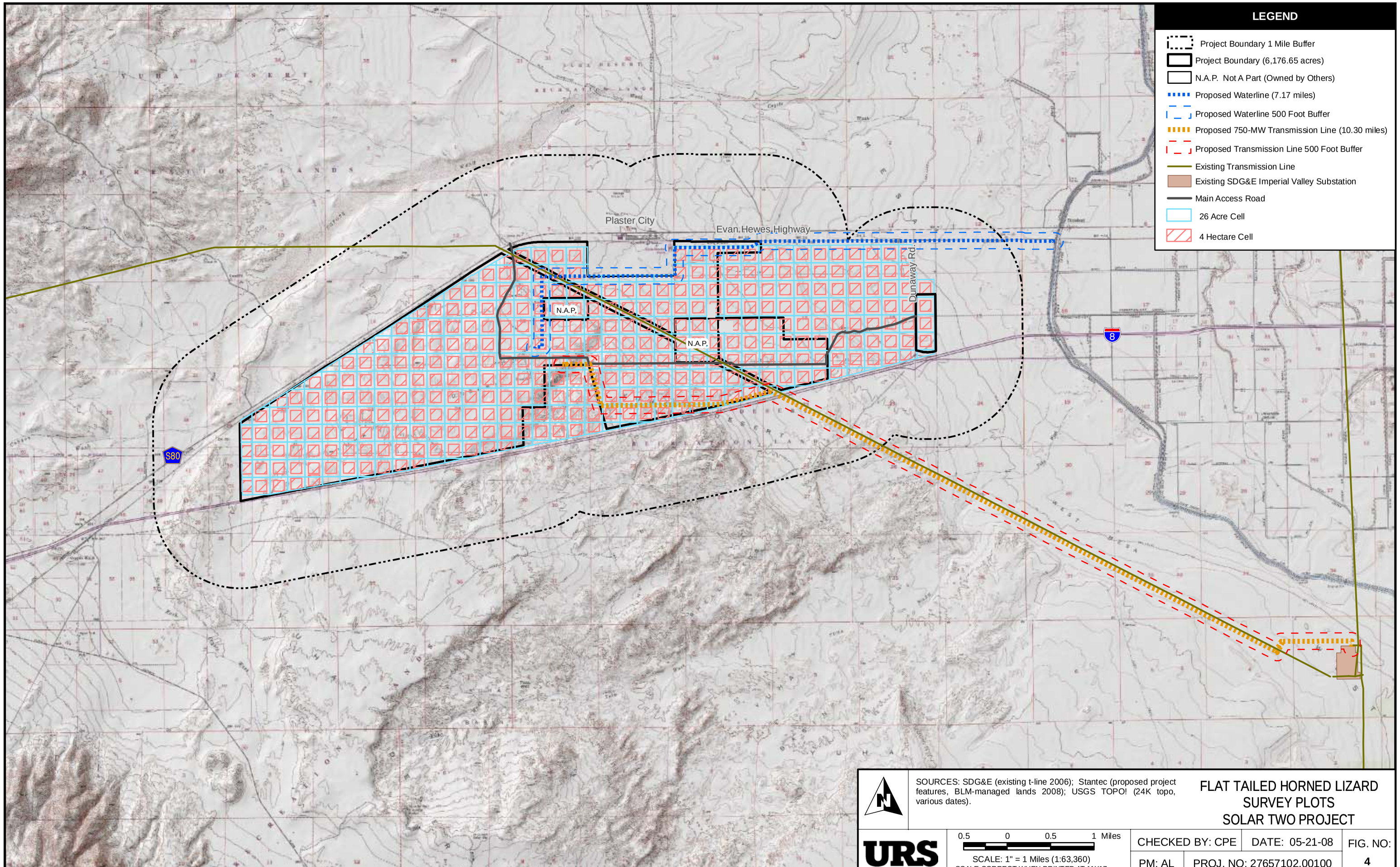

SOURCES: SDG&E (existing t-line 2006); Stantec (proposed project features, BLM-managed lands 2008); USGS TOPO! (24K topo, various dates).

FLAT TAILED HORNED LIZARD
SURVEY PLOTS
SOLAR TWO PROJECT

URS

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SCALE: 1" = 1 Miles (1:63,360)
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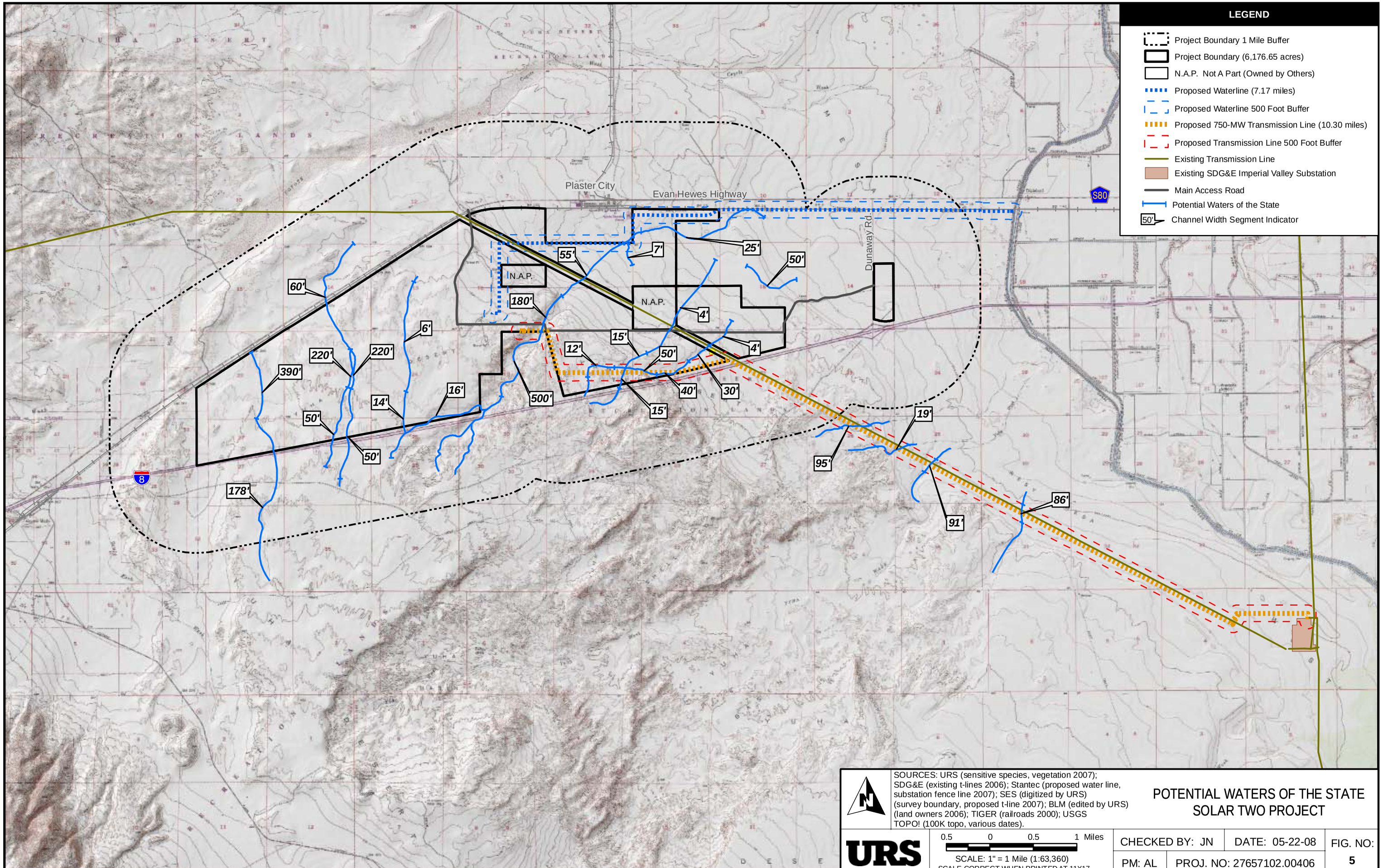

SOURCES: URS (sensitive species, vegetation 2007); SDG&E (existing t-lines 2006); Stantec (proposed water line, substation fence line 2007); SES (digitized by URS) (survey boundary, proposed t-line 2007); BLM (edited by URS) (land owners 2006); TIGER (railroads 2000); USGS TOPO! (100K topo, various dates).

POTENTIAL WATERS OF THE STATE
SOLAR TWO PROJECT

URS

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SCALE: 1" = 1 Mile (1:63,360)
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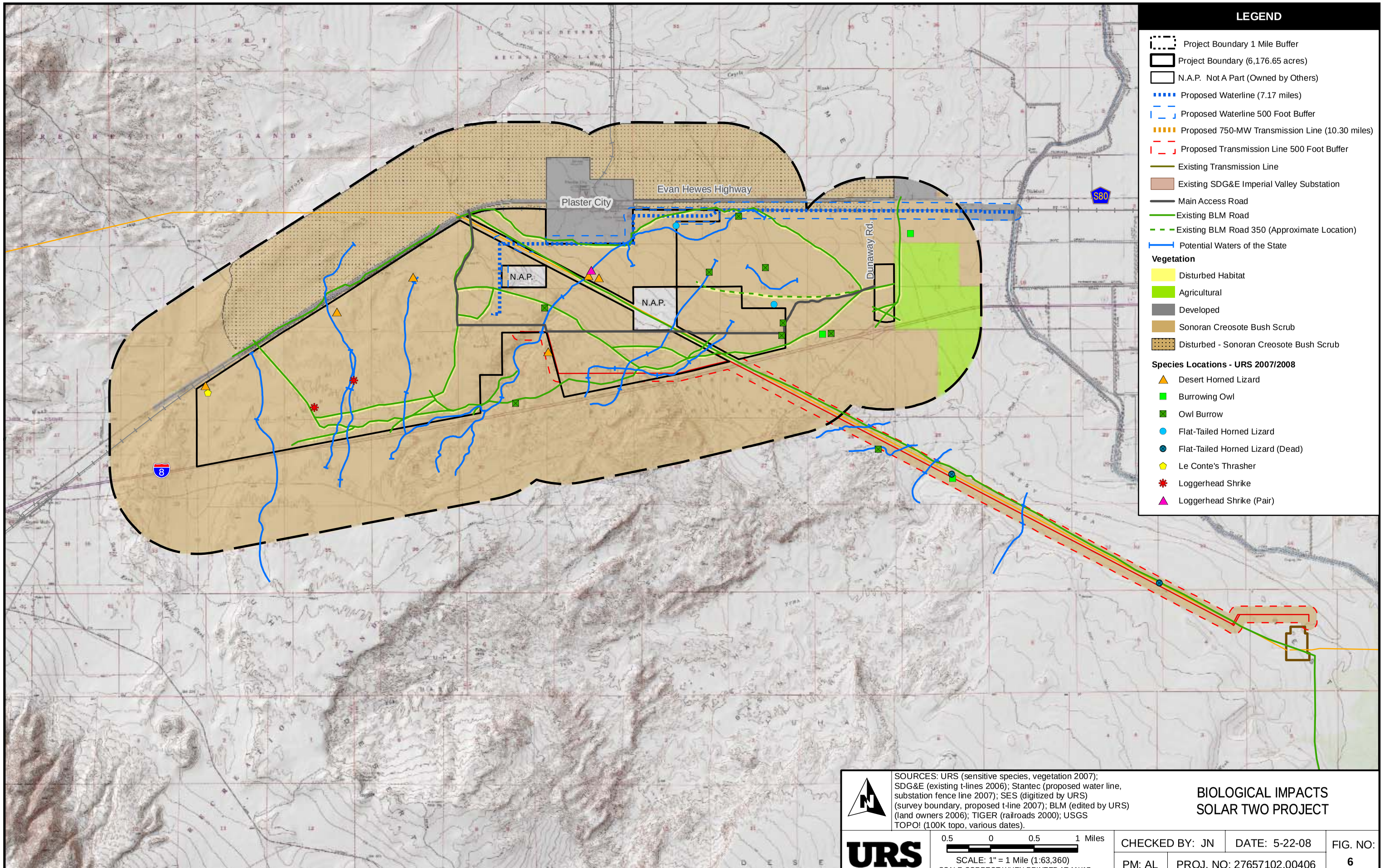

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BIOLOGICAL IMPACTS SOLAR TWO PROJECT

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SCALE: 1" = 1 Mile (1:63,360)

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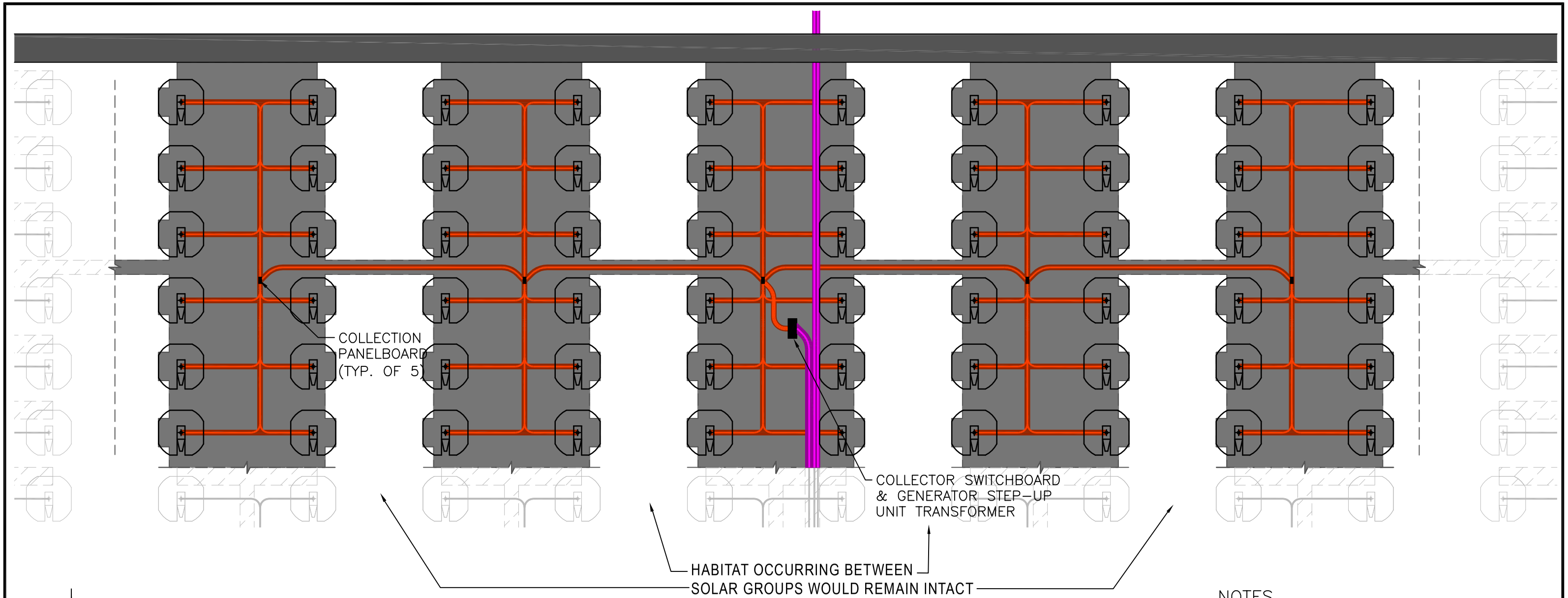

N

0 80' 160'
SCALE

LEGEND

- UNPAVED ACCESS ROUTE
- PAVED ROADWAYS
- SUNCATCHER UNIT
- 600V COLLECTOR CABLE WITH 4' BUFFER
- 34.5kV CABLE WITH 12' BUFFER

NOTES

1. THIS IS A REPRESENTATION OF A 1.5MW SOLAR GROUP. THE 1.5MW SOLAR GROUPS WILL BE ARRANGED TO FIT THE CONTOURS OF THE SITE.
2. ONE 1.5MW SOLAR GROUP IS COMPRISED OF SIXTY (60) SUNCATCHER UNITS CONNECTED INTO FIVE (5) TWELVE-UNIT GROUPS CONNECTED TO A 600V, 400A COLLECTION PANELBOARD.

PRELIMINARY

NO.	DATE		BY	APP.
P1	07/30/07	ISSUED FOR PRELIMINARY REVIEW	PH	
P2	02/27/08	RELOCATED ACCESS ROUTE	PH	
P3	04/16/08	RELOCATED ACCESS ROUTE	PH	

STANTEC CONSULTING INC.
9400 S.W. BARNES ROAD
STE. 200
PORTLAND, OREGON, 97225
503.297.1631
STANTEC.COM

DRN. STC/GSP	DES. STC/PH	CHK. STC/	DATE 07/30/07
SCALE 1"=80'-0"		APP.	DATE

1.5 MW SOLAR GROUP CONSTRUCTION DISTURBANCE PLAN SOLAR TWO PROJECT

URS

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Attachment A

Site Photographs

	Photograph #1 **Comments:** Project Site from the northeast corner looking west.
	Photograph #2 **Comments:** Project Site from the northwest corner looking southeast.

	Photograph #3 **Comments:** Project Site from the southeast corner looking northwest.
	Photograph #4 **Comments:** Project Site from the southwest corner looking northeast.

	Photograph #5 **Comments:** Eroded channel in the north central portion of the Project Site.
	Photograph #6 **Comments**: Large eroded channel in the south central portion of the Project Site looking northeast.

	Photograph #7 **Comments:** Typical Sonoran creosote bush scrub on desert pavement in the western portion of the Project Site.
	Photograph #8 **Comments**: Typical Sonoran creosote bush scrub on sandy substrate found in washes throughout the Project Site.

	Photograph #9 **Comments:** Flat-tailed horned lizard found on-Project Site during focused surveys.
	Photograph #10 **Comments:** Juvenile flat-tailed horned lizard observed on-site during focused surveys.

	Photograph #11 **Comments:** Photo showing existing off-site transmission line and access road. The new transmission line for the Project will be constructed parallel to the existing transmission line.
	Photograph #12 **Comments:** Area where proposed off-site water pipeline is proposed to be built between the railroad right-of-way and Evan Hewes Highway.

Attachment B

Plant Species List

Plant Species Observed on the Solar Two Project Site

Scientific Name	Common Name
GYMNOSPERMS	
Ephedraceae	**Ephedra Family**
Ephedra nevadensis	mormon tea
Ephedra trifurca	long-leaved ephedra
Ephedra viridis	green ephedra
ANGIOSPERMS: MONOCOTS	
Agavaceae	**Agave Family**
Hesperocallis undulata	desert lily
Poaceae	**Grass Family**
Aristida adscensionis	six-weeks three-awn
Bouteloua aristidoides	needle grama
Bouteloua barbata var. *barbata*	six weeks grama
*Bromus madritensis**	foxtail chess
*Cynodon dactylon**	Bermuda grass
Eragrostis sp.	lovegrass
*Phalaris minor**	Mediterranean canary grass
Pleuraphis rigida	galleta grass
*Schismus barbatus**	Mediterranean schismus
ANGIOSPERMS: EUDICOTS	
Aizoaceae	**Fig-Marigold Family**
*Mesembryanthemum crystallinum**	crystalline iceplant
Mesembryanthemum nodiflorum	slender-leaved iceplant
Amaranthaceae	**Amaranth Family**
Atriplex canescens	four-wing saltbush
Atriplex hymenelytra	desert holly
Atriplex polycarpa	allscale
Chenopodium sp.*	pigweed
Tidestromia oblongifolia	honeysweet
Asclepiadaceae	**Milkweed Family**
Asclepias albicans	white-stem milkweed
Cyanchum utahense	Utah cyanchum
Asteraceae	**Sunflower Family**
Ambrosia dumosa	bursage
Baileya pauciradiata	desert marigold
Bebbia juncea	rush sweetbush
Calycoseris wrightii	white tackstem
Chaenactis carphoclinia var. *carphoclinia*	pebble pincushion
Chaenactis fremontii	pincushion
Chaenactis stevioides	desert pincushion
Encelia farinosa	brittlebrush
Encelia frutescens	rayless encelia

Plant Species Observed on the Solar Two Project Site

Scientific Name	Common Name
Geraea canescens	desert sunflower
Gutierrezia sarothrae	matchweed
Hymenoclea salsola	Burrobrush
Isocoma acradenia var. *acradenia*	alkali goldenbush
*Lactuca serriola**	prickly lettuce
Malacothrix glabrata	desert dandelion
Monoptilon belloides	desert star
Palafoxia arida var. *arida*	desert Spanish-needle
Pectis papposa	cinchweed
Perityle emoryi	rock daisy
Pluchea sericea	arrow weed
Psathyrotes ramosissima	turtleback
Rafinesquia neomexicana	desert chicory
Sonchus asper	Prickly sow thistle
*Sonchus oleraceus**	common sow thistle
Stephanomeria pauciflora	wire lettuce
Tetradymia stenolepis	cotton-thorn
Viguiera parishii	Parish's golden-eyes
Boraginaceae	**Borage Family**
Cryptantha angustifolia	narrow-leaf cryptantha
Cryptantha maritima	cryptantha
Pectocarya heterocarpa	pectocarya
Pectocarya peninsularis	peninsular pectocarya
Pectocarya platycarpa	pectocarya
Brassicaceae	**Mustard Family**
Brassica tournefortii	wild turnip
Lepidium sp.	peppergrass
Sisymbrium altissimum	tumble mustard
Cactaceae	**Cactus family**
Cylindropuntia ramosissima	pencil cholla
Opuntia acanthocarpa	buckhorn cholla
Opuntia echinocarpa	silver cholla
Caryophyllaceae	**Pink Family**
Achyronychia cooperi	frost-mat
Ehretiaceae	**Ehretia Family**
Tiquilia palmeri	Palmer's tiquilia
Tiquilia plicata	plicate coldenia
Euphorbiaceae	**Spurge Family**
Chamaesyce micromera	Prostrate spurge
Chamaesyce polycarpa	sand mat
Ditaxis serrata	Yuma silverbush

Plant Species Observed on the Solar Two Project Site

Scientific Name	Common Name
Stillingia linearifolia	stillingia
Stillingia spinulosa	annual stillingia
Fabaceae	**Legume Family**
Astragalus sp.	milkvetch
Cercidium floridum	palo verde
Dalea mollis	dalea
Dalea mollissima	hairy dalea
Prosopis glandulosa	mesquite
Psorothamnus emoryi	dye plant
Psorothamnus schottii	indigobush
Psorothamnus spinosus	smoke tree
Fouquieriaceae	**Ocotillo Family**
Fouquieria spendens ssp. *splendens*	ocotillo
Geraniaceae	**Geranium Family**
*Erodium cicutarium**	red-stemmed filaree
Erodium taxanum	filaree
Hydrophyllaceae	**Waterleaf Family**
Phacelia crenulata	notch-leaved phacelia
Krameriaceae	**Rhatany Family**
Krameria erecta	pima rhatany
Karmeria grayi	white rhatany
Loasaceae	**Loasa Family**
Mentzelia sp.	Mentzelia
Petalonyx thurberi ssp. *thurberi*	sandpaper plant
Malvaceae	**Mallow Family**
Eremalche rotundifolia	desert five-spot
*Malva parviflora**	cheeseweed
Sphaeralcea ambigua	desert mallow
Nyctaginaceae	**Four O-clock Family**
Abronia villosa var. *villosa*	hairy sand-verbena
Allionia incarnata	trailing windmills
Onagraceae	**Evening-Primrose Family**
Camissonia boothii	bottlebrush primrose
Camissonia brevipes var. *brevipes*	golden sun cup
Camissonia californica	California evening primrose
Camissonia claviformis ssp. *claviformis*	brown-eyed evening primrose
Camissonia claviformis spp. *peirsonii*	brown-eyed evening primrose
Camissonia sp.	camissonia
Oenothera californica ssp. *californica*	California evening primrose
Oenothera deltoids ssp. *deltoids*	devil’s lantern

Plant Species Observed on the Solar Two Project Site

Scientific Name	Common Name
Orobanchaceae	**Broom-Rape Family**
Orobanche cooperi	pine broom-rape
Papaveraceae	**Poppy Family**
Eschscholzia minutiflora	pygmy goldenpoppy
Plantaginaceae	**Plantain Family**
Plantago ovata	wooly plantain
Polemoniaceae	**Phlox Family**
Gilia latiflora	broad-flowered gilia
Langloisia setosissima	langlosia
Polygonaceae	**Buckwheat Family**
Chorizanthe brevicornu	brittle spineflower
Chorizanthe corrugata	wrinkled spineflower
Chorizanthe rigida	rigid spineflower
Eriogonum deflexum	skeleton weed
Eriogonum inflatum	desert trumpet
Eriogonum reniforme	buckwheat
Eriogonum thomasii	Thomas buckwheat
Portulacaceae	**Purselane Family**
Calandrinia ambigua	calandrinia
Calyptridium monandrum	pussypaws
Resdaceae	**Mignonette Family**
Oligomeris linifolia	narrow-leaved oligomeris
Solanaceae	**Nightshade Family**
Datura discolor	desert thornapple
Lycium brevipes var. *brevipes*	desert-thorn
Lycium fremontii	Fremont desert-thorn
Tamaricaceae	**Tamarisk Family**
*Tamarix aphylla**	Athel
*Tamarix parviflora**	tamarisk
*Tamarix ramosissima**	Mediterranean tamarisk
Viscaceae	**Mistletoe Family**
Phoradendron californicum	desert mistletoe
Zygophyllaceae	**Caltrop Family**
Larrea tridentata	creosote

Source: URS, 2008.
Note:
*Non-native.

Attachment C

Wildlife Species List

Wildlife Species Observed on the Solar Two Project Site

Common Name	Scientific Name
Invertebrates	
Harvester ant	*Pogonomyrmex* sp.
Cabbage white	*Pieris rapae*
Dragonfly	Suborder Anisoptera
Funereal duskywing	*Erynnis funeralis*
Grasshopper	Family Acrididae
Painted lady	*Vanessa cardui*
Sulphur butterfly	*Colias* sp.
White-lined sphinx moth	*Hiles lineata*
Reptiles	
California side-blotched lizard	*Uta stansburiana elegans*
Colorado Desert shovel-nosed snake	*Chionactis occipitalis annulatus*
Desert horned lizard	*Phrynosoma platyrhinos*
Desert iguana	*Dipsosaurus dorsalis*
Desert spiny lizard	*Sceloporus magister*
Flat-tailed horned lizard (SSC, BLM-Sensitive)	*Phrynosoma mcallii*
Great Basin whiptail	*Aspidocelis tigiris tigris*
Long-tailed brush lizard	*Urosaurus graciosus*
Sidewinder	*Crotalus cerastes*
Zebra-tailed lizard	*Callisuarus draconoides*
Mammals	
Black-tailed jackrabbit	*Lepus californicus*
California ground squirrel	*Spermophilus beecheyi*
Coyote	*Canis latrans*
Kangaroo rat	*Dipodomys* sp.
Kit fox	*Vulpes macrotis*

Wildlife Species Observed on the Solar Two Project Site

Common Name	Scientific Name	Relative Abundance On-site	Potential to breed On-site?	Carrying Capacity (pairs)
Birds				
American kestrel	*Falco sparverius*	Common	Yes	5
Ash-throated flycatcher	*Myiarchus cinerascens*	Rare	No	
Bewick's wren	*Thryomanes bewickii*	Uncommon	No	
Black-tailed gnatcatcher	*Polioptila melanura*	Common	Yes	5
Burrowing owl (SSC, BLM-Sensitive)	*Athene cunicularia*	Rare	Yes	5
California horned lark (SSC)	*Eremophila alpestris*	Abundant	Yes	1,600
Cliff swallow	*Hirundo pyrrhonota*	Common	No	
Common poorwill	*Phalaenoptilus nuttallii*	Uncommon	No	
Common raven	*Corvus corax*	Common	No	
Great-blue heron	*Ardea herodias*	Rare	No	
Great egret	*Areda alba*	Rare	No	
Great-tailed grackle	*Quiscalus mexicanus*	Abundant	No	
House finch	*Carpodacus mexicanus*	Common	Yes	1,600
Killdeer	*Charadrius vociferus*	Uncommon	No	
Le Conte's thrasher (SSC)	*Toxostoma lecontei*	Rare	No	
Lesser goldfinch	*Carduelis psaltria*	Common	No	
Lesser nighthawk	*Chordeiles acutipennis*	Abundant	Yes	500
Loggerhead shrike (SSC)	*Lanius ludovicianus*	Rare	Yes	5
Mourning dove	*Zenaida macroura*	Common	Yes	2,000
Northern mockingbird	*Mimus polyglottos*	Common	Yes	40
Red-tailed hawk	*Buteo jamaicenis*	Uncommon	Yes	3
Rock dove	*Columba livia*	Common	No	
Snowy egret	*Egretta thula*	Uncommon	No	
Townsend's warbler	*Dendroica townsendi*	Rare	No	
Turkey vulture	*Cathartes aura*	Uncommon	No	
Verdin	*Auriparus flaviceps*	Uncommon	Yes	6
Western kingbird	*Tyrannus verticalis*	Common	Yes	3
Western meadowlark	*Sturnella neglecta*	Common	No	
Western tanager	*Piranga ludoviciana*	Rare	No	
White crowned sparrow	*Zonotrichia leucophrys*	Common	No	
White-winged dove	*Zenaida asiatica*	Common	Yes	20
Wilson's warbler	*Wilsonia pusilla*	Rare	No	
Yellow-rumped warbler	*Dendroica coronata*	Rare	No	
Yellow warbler	*Dendroica petechia*	Rare	No	

Attachment D

Potential Sensitive Species List

Sensitive Species Potentially Occurring in the Vicinity of the Solar Two Site

Species	Sensitivity Status	Potential to Occur	Habitat	Status On-site
Plants				
Astragalus insularis var. *harwoodii* Harwood's milk-vetch	Federal – None State – None BLM – None CNPS List – 2.2	Moderate	Occurs in sand and gravelly desert dune areas. Annual herb that blooms January through May.	Suitable habitat occurs on-site; nearest documented location of this species is within the adjacent Kane Spring Northeast quad. Species not observed on-site during 2007 or 2008 surveys.
Castela emoryi Crucifixion thorn	Federal – None State – None BLM – None CNPS List – 2.3	Moderate	Occurs in Sonoran desert scrub, playas, and on gravelly soils; 90-670 m. Deciduous shrub that blooms April through July.	Suitable habitat occurs on-site; nearest documented location occurs in the adjacent Coyote Wells and Yuha Basin quads. Species not observed on-site during 2007 or 2008 surveys.
Chamaesyce platysperma flat-seeded spurge	Federal – None State – None BLM – Sensitive CNPS List – 1B.2	Moderate	Occurs in desert dunes and Sonoran Desert scrub with sandy soil. Annual herb that blooms February through September.	Suitable habitat does occur on-site; nearest documented location of this species is within the adjacent Superstition Mountain quad in the 1980s. Not observed on-site during 2007 or 2008 surveys.
Eucnide rupestris annual rock nettle	Federal – None State – None BLM - None CNPS List – 2.2	Low	Occurs in Sonoran desert scrub on rock or talus substrate; 500-600 m. Annual herb that blooms December through April.	Suitable substrate does not occur on-site; this species generally occurs at higher elevations than found on-site. Previously documented in the adjacent Coyote Wells, Mount Signal, and Painted Gorge quads.
Ipomopsis effusa Baja California ipomopsis	Federal – None State – None BLM – None CNPS List – 2.1	Moderate	Occurs in chaparral, Sonoran desert scrub (alluvial fan) in sandy substrate between 0 to 100 m. Annual herb that blooms April through June.	Suitable habitat occurs on-site; species documented in the adjacent Yuha Basin quad. Not observed on-site during 2007 or 2008 surveys.

Sensitive Species Potentially Occurring in the Vicinity of the Solar Two Site

Species	Sensitivity Status	Potential to Occur	Habitat	Status On-site
Ipomopsis tenuifolia slender-leaved ipomopsis	Federal – None State – None BLM – None CNPS List – 2.3	Low	Occurs in chaparral, pinyon and juniper woodlands, and Sonoran desert scrub on rocky or gravelly soil between 100 and 1,200 m. Perennial herb that blooms March through May.	Suitable habitat occurs on-site, but this species is normally found at a higher elevation. Species documented on the adjacent In-ko-pah Gorge quad. Not observed during 2007 or 2008 surveys.
Lupinus excubitus var. *medius* Mountain Springs bush lupine	Federal – None State – None BLM – Sensitive CNPS – 1B.3	Low	Occurs in pinyon and juniper woodland and Sonoran desert scrub between 425 and 1,370 m. Shrub that blooms March through May	Suitable habitat occurs on-site, but this species is normally found at a higher elevation. Species documented on the adjacent Carrizo Mountain and In-ko-pah Gorge quads. Not observed during 2007 or 2008 surveys.
Malperia tenuis brown turbans	Federal – None State – None BLM – None CNPS List – 2.3	Moderate	Occurs in Sonoran Desert scrub with sandy soil. Annual herb that blooms March and April.	Suitable habitat does occur on-site; nearest documented locations of this species are within the Harper's Well and Plaster City Northwest quads. Not observed during 2007 or 2008 surveys.
Mentzelia hirsutissima hairy stickleaf	Federal – None State – None BLM – None CNPS List – 2.3	Moderate	Occurs in rocky Sonoran desert scrub between 0 and 700 m. Annual herb that blooms March through May.	Suitable habitat occurs on-site; species documented in adjacent Mount Signal quad. Not observed on-site during 2007 or 2008 surveys.
Nemacaulis denudata var. gracilis slender woolly-heads	Federal – None State – None BLM – None CNPS List – 2.2	Moderate	Occurs in coastal dunes, desert dunes, Sonoran desert scrub between 50 and 400 m. Annual herb that blooms March through May.	Suitable habitat occurs on-site; species documented in adjacent Coyote Wells and Painted Gorge quads. Not observed on-site during 2007 or 2008 surveys.

Sensitive Species Potentially Occurring in the Vicinity of the Solar Two Site

Species	Sensitivity Status	Potential to Occur	Habitat	Status On-site
Xylorhiza orcuttii Orcutt's woody-aster	Federal – None State – None BLM – Sensitive CNPS List – 1B.3	Moderate	Occurs in Sonoran desert scrub between 20 and 365 m. Perennial herb that blooms March through May.	Suitable habitat occurs on-site; species documented in the adjacent Carrizo Mountain quad. Not observed on-site during 2007 or 2008 surveys.
Reptiles				
Coleonyx switaki barefoot banded gecko	Federal – None State – Threatened BLM – None	Low	Inhabits rocky, boulder-strewn desert foothills, where it spends most of its life deep in rock crevices and subterranean chambers.	No suitable habitat occurs on-site. Species has been documented in the adjacent Coyote Wells and Painted Gorge quads.
Phrynosoma mcallii flat-tailed horned lizard	Federal – None State – SSC BLM – Sensitive	High – On-site Present on-site and along proposed T-line	Inhabits sparsely vegetated desert scrub areas with fine, wind-blown (aeolian) sand deposits and shifting sand substrate.	Suitable habitat and food source occurs on-site. Species has been observed on-site and along the proposed transmission line during 2007 focused surveys. None detected during 2008 focused surveys.
Birds				
Athene cunicularia burrowing owl	Federal – None State – SSC BLM – Sensitive	High – On-site Present along proposed T-line and off-site near the eastern Project boundary	Found in open grasslands and agricultural areas with suitable fossorial mammal burrows for nesting.	Several suitable burrows were detected on-site. Owls were observed along the proposed transmission line and off-site near the eastern Project boundary during 2007 surveys. One owl was detected off-site near the eastern Project boundary during 2008 surveys.
Eremophila alpestris California horned lark	Federal – None State – SSC BLM – None	High – On-site Present throughout the site	Generally occurs in open scrub grasslands and agricultural fields.	Species observed in several locations throughout the Project Site during 2007 and 2008 surveys. Frequently observed in and around irrigated fields east of the Project Site.

Sensitive Species Potentially Occurring in the Vicinity of the Solar Two Site

Species	Sensitivity Status	Potential to Occur	Habitat	Status On-site
Falco mexicanus prairie falcon	Federal – None State – SSC BLM – None	Moderate	Generally occurs in barren mountains, dry plains, and prairies.	No suitable nesting habitat occurs on-site; species documented in the adjacent Painted Gorge quad. Potential foraging habitat present on-site.
Toxostoma lecontei Le Conte's thrasher	Federal – None State – SSC BLM – None	High – On-site Present on-site	Desert flats with sparse bushes; preferred nest sites are in large shrubs along washes.	This species was observed on-site during 2007 surveys. Also documented in adjacent Coyote Wells and Painted Gorge quads.
Mammals				
Antrozous pallidus pallid bat	Federal – None State – SSC BLM – Sensitive	Moderate	Most common in open, dry habitats with rocky areas for roosting. A year-long resident in most of the range.	Species documented in adjacent Carrizo Mountain quad. No suitable roosting sites observed on-site, but may use area for foraging.
Nyctinomops femorosaccus pocketed free-tailed bat	Federal – None State – SSC BLM – None	Moderate	Habitats used include pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis. Prefers rock crevices in cliffs as roosting sites.	Species documented in the adjacent Carrizo Mountain quad. No suitable roosting sites occur on-site, but may use area for foraging.
Ovis canadensis nelsoni desert bighorn sheep	Federal – Endangered State – Threatened BLM – Sensitive	Low	Habitats used include alpine dwarf-shrub, low sage, sagebrush, bitterbrush, pinyon-juniper, palm oasis, desert riparian, desert succulent shrub, desert scrub, sub-alpine conifer, perennial grassland, montane chaparral, and montane riparian.	Species documented in the adjacent In-ko-pah Gorge quad. Usually prefers higher elevations with rocky substrates.

Sensitive Species Potentially Occurring in the Vicinity of the Solar Two Site

Species	Sensitivity Status	Potential to Occur	Habitat	Status On-site
Taxidea taxus American badger	Federal – None State – SSC BLM – None	Moderate	Grasslands, savannas, and mountain meadows near timberline are preferred, but also occur in desert scrub areas.	Species has been documented in the adjacent Coyote Wells, Mount Signal, Painted Gorge, and Seeley quads. Several potential burrows occur on-site, but species not observed during 2007 or 2008 surveys.

Source: URS, 2008.

Notes:

BLM = Bureau of Land Management
CNPS = California Native Plant Society
m = meters
SSC = Species of Special Concern

Sensitivity Codes

Federal

Endangered:	Taxa threatened throughout all or a significant portion of their range
Threatened:	Taxa likely to become endangered in the foreseeable future.
Candidate:	Taxa for which the USFWS currently has on file substantial information on biological vulnerability and threat(s) to support the appropriateness of proposing to list them as endangered or threatened species.
Federal Species of Concern	Taxa that were formerly Category 2 Candidates for listing as threatened or endangered. This category is an "unofficial" designation for species that may warrant listing, but for which substantial information to support the listing is lacking.

State of California

Endangered:	Taxa which are in serious danger of becoming extinct throughout all, or a significant portion, of their range due to one or more causes including loss of habitat, change in habitat, over exploitation, predation, competition, or disease (Section 2062 of the Fish and Game Code).
Threatened:	Taxa which, although not presently threatened with extinction, are likely to become endangered species in the foreseeable future (Section 2067 of the Fish and Game Code).
Rare:	Taxa which, although not presently threatened with extinction, are present in such small numbers throughout their range that they may become endangered if the present environment worsens (Section 1901 of the Fish and Game Code).
Candidate:	Taxa which the Fish and Game Commission has formally noticed as being under review by the Department in addition to the list of threatened and endangered species.
California Species of Special Concern (SSC):	Taxa that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats.

Attachment E

Result of CNDDB Queries and Field Survey Forms

Record	QUADNAME	ELMCODE	Scientific Name	Common Name	Federal Status	California Status	CDFG	CNPS LIST
1	Brawley NW	ABNSB10010	*Athene cunicularia*	burrowing owl	None	None	SC	
2	Brawley NW	ARACF12040	*Phrynosoma mcallii*	flat-tailed horned lizard	None	None	SC	
3	Coyote Wells	ABPBJ08030	*Polioptila melanura*	black-tailed gnatcatcher	None	None		
4	Coyote Wells	ABPBK06100	*Toxostoma lecontei*	Le Conte's thrasher	None	None	SC	
5	Coyote Wells	AMAJF04010	*Taxidea taxus*	American badger	None	None	SC	
6	Coyote Wells	ARACD01040	*Coleonyx switaki*	barefoot banded gecko	None	Threatened		
7	Coyote Wells	ARACF12040	*Phrynosoma mcallii*	flat-tailed horned lizard	None	None	SC	
8	Coyote Wells	CTT75200CA	*Crucifixion Thorn Woodland*	Crucifixion Thorn Woodland	None	None		
9	Coyote Wells	PDAST67010	*Malperia tenuis*	brown turbans	None	None		2.3
10	Coyote Wells	PDFAB0F491	*Astragalus insularis var. harwoodii*	Harwood's milk-vetch	None	None		2.2
11	Coyote Wells	PDLOA02020	*Eucnide rupestris*	rock nettle	None	None		2.2
12	Coyote Wells	PDPGN0G012	*Nemacaulis denudata var. gracilis*	slender woolly-heads	None	None		2.2
13	Coyote Wells	PDSIM03030	*Castela emoryi*	crucifixion thorn	None	None		2.3
14	Mount Signal	ABNSB10010	*Athene cunicularia*	burrowing owl	None	None	SC	
15	Mount Signal	AMAJF04010	*Taxidea taxus*	American badger	None	None	SC	
16	Mount Signal	ARACF12040	*Phrynosoma mcallii*	flat-tailed horned lizard	None	None	SC	
17	Mount Signal	PDAST67010	*Malperia tenuis*	brown turbans	None	None		2.3
18	Mount Signal	PDLOA02020	*Eucnide rupestris*	rock nettle	None	None		2.2
19	Mount Signal	PDLOA030K0	*Mentzelia hirsutissima*	hairy stickleaf	None	None		2.3
20	Painted Gorge	ABNKD06090	*Falco mexicanus*	prairie falcon	None	None	SC	
21	Painted Gorge	ABPBK06100	*Toxostoma lecontei*	Le Conte's thrasher	None	None	SC	
22	Painted Gorge	AMAJF04010	*Taxidea taxus*	American badger	None	None	SC	
23	Painted Gorge	ARACD01040	*Coleonyx switaki*	barefoot banded gecko	None	Threatened		
24	Painted Gorge	ARACF12040	*Phrynosoma mcallii*	flat-tailed horned lizard	None	None	SC	

Record	QUADNAME	ELMCODE	Scientific Name	Common Name	Federal Status	California Status	CDFG	CNPS LIST
25	Painted Gorge	PDAST67010	*Malperia tenuis*	brown turbans	None	None		2.3
26	Painted Gorge	PDFAB0F491	*Astragalus insularis var. harwoodii*	Harwood's milk-vetch	None	None		2.2
27	Painted Gorge	PDLOA02020	*Eucnide rupestris*	rock nettle	None	None		2.2
28	Painted Gorge	PDPGN0G012	*Nemacaulis denudata var. gracilis*	slender woolly-heads	None	None		2.2
29	Plaster City	ABPBK06100	*Toxostoma lecontei*	Le Conte's thrasher	None	None	SC	
30	Plaster City	ARACF12040	*Phrynosoma mcallii*	flat-tailed horned lizard	None	None	SC	
31	Plaster City Northwest	ARACF12040	*Phrynosoma mcallii*	flat-tailed horned lizard	None	None	SC	
32	Plaster City Northwest	PDAST67010	*Malperia tenuis*	brown turbans	None	None		2.3
33	Seeley	AAABH01250	*Rana yavapaiensis*	lowland (=Yavapai & San Felipe) leopard frog	None	None	SC	
34	Seeley	ABNME0501A	*Rallus longirostris yumanensis*	Yuma clapper rail	Endangered	Threatened		
35	Seeley	ABNSB10010	*Athene cunicularia*	burrowing owl	None	None	SC	
36	Seeley	AMAFF08031	*Neotoma albigula venusta*	Colorado Valley woodrat	None	None		
37	Seeley	AMAJF04010	*Taxidea taxus*	American badger	None	None	SC	
38	Seeley	ARACF12040	*Phrynosoma mcallii*	flat-tailed horned lizard	None	None	SC	
39	Superstition Mountain	ARACF12040	*Phrynosoma mcallii*	flat-tailed horned lizard	None	None	SC	
40	Superstition Mountain	PDEUP0D1X0	*Chamaesyce platysperma*	flat-seeded spurge	None	None		1B.2
41	Yuha Basin	ARACF12040	*Phrynosoma mcallii*	flat-tailed horned lizard	None	None	SC	
42	Yuha Basin	PDAST67010	*Malperia tenuis*	brown turbans	None	None		2.3
43	Yuha Basin	PDPLM060U0	*Ipomopsis effusa*	Baja California ipomopsis	None	None		2.1
44	Yuha Basin	PDSIM03030	*Castela emoryi*	crucifixion thorn	None	None		2.3

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 03/19/2007

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Toxostoma lecontei*

Common Name: Le Conte's thrasher

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Erika Alfaro
Address: 1615 Murray Canyon Rd., Suite 1000
E-mail Address: Erika_Alfaro@URScorp.com
Phone: (619) 294-9400

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
1				

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☑ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Imperial County Landowner / Mgr.: BLM
Quad Name: Plaster City Elevation: _____
T____ R____ Sec ____, ____ ¼ of ____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of ____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Rino 120
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 16ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 600070 3625100

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Sonoran creosote bush scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor
Immediate AND surrounding land use: Undeveloped.
Visible disturbances: Off-road vehicles.
Threats:
Comments:

Determination: *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☑ Compared with photo / drawing in: Sibley 2000
☐ By another person (name): _____
☐ Other: Detected visually and aurally.

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 05/02/2007

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Phrynosoma mcalli*

Common Name: flat-tailed horned lizard

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Erika Alfaro
Address: 1615 Murray Canyon Rd., Suite 1000
San Diego, CA 92108
E-mail Address: Erika_Alfaro@URScorp.com
Phone: (619) 294-9400

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
1				

breeding	wintering	burrow site	rookery	nesting	other
☐	☐	☐	☐	☐	☑

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Imperial County Landowner / Mgr.: BLM
Quad Name: Plaster City Elevation: below mean sea level
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Rino 120
DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy 16ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 617690 3621710

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Sonoran creosote bush scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Undeveloped.

Visible disturbances: Off-road vehicles.

Threats:

Comments: Deceased.

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☑ Compared with photo / drawing in: Sherbrook 2003
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
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Date of Field Work (mm/dd/yyyy): _____

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Phrynosoma mcalli*

Common Name: flat-tailed horned lizard

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Erika Alfaro
Address: 1615 Murray Canyon Rd., Suite 1000
San Diego, CA 92108
E-mail Address: Erika_Alfaro@URScorp.com
Phone: (619) 294-9400

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
1				

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☑ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Imperial County Landowner / Mgr.: BLM
Quad Name: Plaster City Elevation: below mean sea level
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Rino 120
DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy 16ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 613830 3623696

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Sonoran creosote bush scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Undeveloped.

Visible disturbances: Off-road vehicles.

Threats:

Comments: Deceased.

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☑ Compared with photo / drawing in: Sherbrook 2003
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

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1807 13th Street, Suite 202
Sacramento, CA 95811
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Date of Field Work (mm/dd/yyyy): 05/04/2007

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Lanius ludovicianus*

Common Name: loggerhead shrike

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Erika Alfaro
Address: 1615 Murray Canyon Rd., Suite 1000
E-mail Address: Erika_Alfaro@URScorp.com
Phone: (619) 294-9400

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☑ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Imperial County Landowner / Mgr.: BLM
Quad Name: Plaster City Elevation: _____
T____ R____ Sec ____, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Rino 120
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 16ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 602773 3625347

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Open Sonoran creosote bush scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Undeveloped.

Visible disturbances: Off-road vehicles.

Threats:

Comments:

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☑ Compared with photo / drawing in: Sibley 2000
- ☐ By another person (name): _____
- ☐ Other: Detected visually and aurally.

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

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Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 06/05/2007

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Athene cunicularia*

Common Name: burrowing owl

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Erika Alfaro
Address: 1615 Murray Canyon Rd., Suite 1000
San Diego, CA 92108
E-mail Address: Erika_Alfaro@URScorp.com
Phone: (619) 294-9400

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
1				

☐ breeding ☐ wintering ☑ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Imperial County Landowner / Mgr.: BLM
Quad Name: Plaster City Elevation: below mean sea level
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Rino 120
DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy 16ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 613851 3623613

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Sonoran creosote bush scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Undeveloped.

Visible disturbances: Off-road vehicles.

Threats:

Comments: Deceased.

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☑ Compared with photo / drawing in: Sherbrook 2003
☐ By another person (name): _____
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

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Date of Field Work (mm/dd/yyyy): _____

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Athene cunicularia*

Common Name: burrowing owl

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Erika Alfaro
Address: 1615 Murray Canyon Rd., Suite 1000
San Diego, CA 92108
E-mail Address: Erika_Alfaro@URScorp.com
Phone: (619) 294-9400

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
1				

☐ breeding ☐ wintering ☑ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Imperial County Landowner / Mgr.: BLM
Quad Name: Plaster City Elevation: below mean sea level
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Rino 120
DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy 16ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 613036 3628123

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Sonoran creosote bush scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Undeveloped.

Visible disturbances: Off-road vehicles.

Threats:

Comments:

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☑ Compared with photo / drawing in: Sibley 2000
☐ By another person (name): _____
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

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Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 06/05/2007

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Phrynosoma mcalli*

Common Name: flat-tailed horned lizard

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Erika Alfaro
Address: 1615 Murray Canyon Rd., Suite 1000
San Diego, CA 92108
E-mail Address: Erika_Alfaro@URScorp.com
Phone: (619) 294-9400

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
1				

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☑ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Imperial County Landowner / Mgr.: BLM
Quad Name: Plaster City Elevation: below mean sea level
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Rino 120
DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy 16ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 608702 3628238

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Sonoran creosote bush scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Undeveloped.

Visible disturbances: Off-road vehicles.

Threats:

Comments: Deceased.

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☑ Compared with photo / drawing in: Sherbrook 2003
☐ By another person (name): _____
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

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Date of Field Work (mm/dd/yyyy): _____

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Phrynosoma mcalli*

Common Name: flat-tailed horned lizard

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Erika Alfaro
Address: 1615 Murray Canyon Rd., Suite 1000
San Diego, CA 92108
E-mail Address: Erika_Alfaro@URScorp.com
Phone: (619) 294-9400

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
1				

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☑ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Imperial County Landowner / Mgr.: BLM
Quad Name: Plaster City Elevation: below mean sea level
T____ R____ Sec ____, ____ ¼ of ____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of ____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Rino 120
DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy 16ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 610528 3626806

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Sonoran creosote bush scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Undeveloped.

Visible disturbances: Off-road vehicles.

Threats:

Comments: Deceased.

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☑ Compared with photo / drawing in: Sherbrook 2003
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

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1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 03/16/2008

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Athene cunicularia*

Common Name: burrowing owl

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Erika Alfaro
Address: 1615 Murray Canyon Rd., Suite 1000
E-mail Address: Erika_Alfaro@URScorp.com
Phone: (619) 294-9400

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
1				

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☑ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Imperial County Landowner / Mgr.: BLM
Quad Name: Plaster City Elevation: _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Rino 120
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 16ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 611578 3626271

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Open Sonoran creosote bush scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Undeveloped.

Visible disturbances: Off-road vehicles.

Threats:

Comments:

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☑ Compared with photo / drawing in: Sibley 2000
☐ By another person (name): _____
☐ Other: Detected visually and aurally.

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

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1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 03/24/2008

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Phrynosoma platyrhinos*

Common Name: desert horned lizard

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Erika Alfaro
Address: 1615 Murray Canyon Rd., Suite 1000
E-mail Address: Erika_Alfaro@URScorp.com
Phone: (619) 294-9400

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
1				

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☑ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Imperial County Landowner / Mgr.: BLM
Quad Name: Plaster City Elevation: _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Rino 120
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 16ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 607095 3627309

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Open Sonoran creosote bush scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor
Immediate AND surrounding land use: Undeveloped.
Visible disturbances: Off-road vehicles.
Threats:
Comments:

Determination: *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☑ Compared with photo / drawing in: Sherbrook 2003
☐ By another person (name): _____
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
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Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 05/07/2008

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Eremophila alpestris*

Common Name: horned lark

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 3 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Erika Alfaro
Address: 1615 Murray Canyon Rd., Suite 1000
E-mail Address: Erika_Alfaro@URScorp.com
Phone: (619) 294-9400

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
3				

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Imperial County Landowner / Mgr.: BLM
Quad Name: Plaster City Elevation: _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Rino 120
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 16ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 606952 3625358

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Open Sonoran creosote bush scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Undeveloped.

Visible disturbances: Off-road vehicles.

Threats:

Comments:

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☑ Compared with photo / drawing in: Sibley 2000
☐ By another person (name): _____
☑ Other: Detected visually and aurally.

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 05/07/2008

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Lanius ludovicianus*

Common Name: loggerhead shrike

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 2 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Erika Alfaro
Address: 1615 Murray Canyon Rd., Suite 1000
E-mail Address: Erika_Alfaro@URScorp.com
Phone: (619) 294-9400

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
2				

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☑ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Imperial County Landowner / Mgr.: BLM
Quad Name: Plaster City Elevation: _____
T____ R____ Sec ____, ____ ¼ of ____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of ____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Rino 120
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 16ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 607141 3627414

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Open Sonoran creosote bush scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Undeveloped.

Visible disturbances: Off-road vehicles.

Threats:

Comments:

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☑ Compared with photo / drawing in: Sibley 2000
- ☐ By another person (name): _____
- ☑ Other: Detected visually and aurally.

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 05/07/2008

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Phrynosoma platyrhinos*

Common Name: desert horned lizard

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☑ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Erika Alfaro
Address: 1615 Murray Canyon Rd., Suite 1000
E-mail Address: Erika_Alfaro@URScorp.com
Phone: (619) 294-9400

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
1				

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☑ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Imperial County Landowner / Mgr.: BLM
Quad Name: Plaster City Elevation: _____
T____ R____ Sec ____, ____ ¼ of ____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): _____
T____ R____ Sec ____, ____ ¼ of ____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Rino 120
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 16ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 606357 3625903

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Open Sonoran creosote bush scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Undeveloped.

Visible disturbances: Off-road vehicles.

Threats:

Comments:

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☑ Compared with photo / drawing in: Sherbrook 2003
☐ By another person (name): _____
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐