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Ms. Elizabeth Ingram
Martifer Renewables Solar Thermal LLC
12555 High Bluff Drive, Suite 100
San Diego CA 92130

Subject: 2009 Biological Survey Results, San Joaquin Solar 1 & 2 Solar Power
Generating Facility
Fresno County, CA
URS Project/Reference No. 27658031

Dear Ms. Ingram:

INTRODUCTION

The purpose of this report is to provide the results of 2009 surveys that were conducted along a proposed transmission line for San Joaquin Solar Power Generating Facility 1 and 2 (Project). Surveys were completed on the proposed solar Project site and an alternative transmission line alignment in 2008 (URS 2008, 2009). The current transmission line was proposed after the survey windows for protocol and focused surveys had already passed in 2008. Results from the previous surveys within the Project area are available in the Application for Certification (AFC), Biological Resources Technical Report (BTR), and responses to data requests that have been docketed with the CEC. URS biologists conducted protocol surveys for blunt-nosed leopard lizard (BNLL, *Gambelia silus*) and focused botanical surveys for special-status plants. Incidental observations of common wildlife and plants along the currently proposed transmission line were also recorded.

PROJECT DESCRIPTION: INTERCONNECTION TO ELECTRICAL GRID

The Project is currently proposed for construction south of Jayne Avenue, approximately 5 miles west of Interstate 5 (I-5), near Coalinga, California (Figure 1). A proposed transmission line would connect the Project to the electrical grid. The transmission line would be an approximately 6-mile-long, 230 kilovolt (kV) line that would begin in the middle of the Project site at each dead-end structure found just beyond the turbine/generator and the 13.8 - 230 kV step-up transformer. It would then travel to the east site boundary where it would head south to the site corner. From there the line would travel east for five miles before it travels north to Gates Substation. At the substation, the line would connect to an existing 230 kV bus. Transmission line pole locations have not yet been determined; however, it is estimated that there will be approximately 25-30 poles. The poles will be situated so they span any sensitive habitats and the channel of the Zapato Chino Creek as well as any riparian habitat that may be present on the banks of the creek.



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METHODS

BOTANICAL SURVEYS

Prior to conducting botanical surveys on the proposed transmission line alignment, a review of historical data from the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) was conducted to determine the locations of special-status plant species that historically occur within the Project area. A list of the special-status plant species potentially occurring with the Project area was generated from the data review and is provided in Table 1.

Surveys for special-status plants were conducted by URS botanist Lee Ripma and Wood Biological Consulting botanist Michael Wood between March and May, 2009. A total of five surveys were conducted within 400 feet of each side (800-foot buffer) of the proposed Project transmission line alignment within the appropriate 2009 survey window (March - May) to maximize the probability of detection. Surveys were conducted on foot. Survey areas were walked in meandering transects within the Project area and buffer. The botanists used aerial photographs (1 inch = 400 ft) as well as handheld GPS units (10-16 ft accuracy) to orient themselves on site. The botanists kept a list of all plant species observed on site (Table 3). If detected, the locations of individual special-status plants were plotted on an aerial photograph and recorded using a GPS unit, and imported to a Geographic Information Systems (GIS) database.

BLUNT-NOSED LEOPARD LIZARD (BNLL) PROTOCOL SURVEYS

State Status: Endangered, Fully Protected

Federal Status: Endangered

BNLL live in grassland and scrub habitats in the southern San Joaquin Valley and eat mostly insects, but opportunistically consume smaller lizards, including young leopard lizards. BNLL are polygamous, with one male mating with several females, and eggs and young are produced during summer and early fall. Predators include snakes, birds, and carnivorous mammals, including the San Joaquin kit fox (*Vulpes macrotis mutica*). Primary threats to the BNLL include habitat fragmentation, habitat disturbance, and habitat destruction. The BNLL is listed as endangered by both the federal government and the state of California (USFWS 2009), and is a CDFG fully-protected species. The nearest CNDDB record of BNLL is located adjacent to the Project site within the California Department of Fish and Game (CDFG) Pleasant Valley Ecological Reserve satellite site. A portion of the reserve falls within the 2008 and 2009 biological survey area.

Two survey periods are prescribed in the BNLL protocol: twelve (12) adult surveys between April 15 and July 31, and five (5) juvenile surveys between August 1 and September 15. During the adult survey period, 12 surveys were completed within the 800-foot buffer of the proposed transmission line alignment between April 21 and July 15, 2009. During the juvenile survey period, a total of five surveys were completed within the 800-foot buffer of the proposed transmission line route between August 11 and September 10, 2009. During the surveys, a team of 3-4 biologists walked in transects 20 meters apart within 400 feet from either side of the proposed transmission line alignment, searching for sign of, or direct observation of BNLL and other lizards. One Level II

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surveyor was present for every three Level I surveyors (3:1 ratio), as required by CDFG protocol. Each survey was started on the opposite side of the alignment from the previous survey day in order to avoid temporal or temperature biases. Temperature and wind limitations stipulated in the protocol were adhered to; no surveys were conducted outside of the permitted time frame, temperature limits, or wind ranges. In addition, consistent with the BNLL surveys conducted during the 2008 season and as described in the AFC and Biological Technical Report, San Joaquin antelope squirrel (SJAS) surveys were conducted concurrently along the proposed transmission line. This methodology was agreed upon by CDFG in 2008 and 2009 because SJAS have similar activity periods as BNLL, and would likely be observed during the BNLL surveys if they were present.

GENERAL WILDLIFE SURVEYS

Incidental observations of common wildlife, plants, and raptors were recorded during the BNLL and focused botanical surveys. Animals were identified by scat, tracks, burrows, vocalizations, or direct visual observations with the aid of 8 x 42 power binoculars. During the BNLL and botanical surveys, biologists searched for kit fox sign (including dens), and burrowing owl sign (including burrows) to assess and document potential utilization of the Project study area by these species. Experienced kit fox surveyors also assessed the habitat in the proposed transmission line and the vicinity of the Project area for kit fox suitability.

RESULTS

BOTANICAL SURVEYS

Vegetation present within the transmission line corridor includes non-native grassland, tilled and/or planted agricultural fields, developed/disturbed habitat is part of an abandoned golf course, and Valley saltbush scrub. Almost all the areas within the transmission line corridor have been developed or disturbed in the past, except the small patch of native Valley saltbush scrub that lies in the area just south of Zapato-Chino Creek (Figure 2). Paved Sutter Avenue runs perpendicular to the proposed transmission line corridor and represents the eastern boundary of the survey area. Except for a small portion of the creek that is located immediately east of Sutter Avenue, all areas east of Sutter Avenue are active orchards and were therefore excluded from the study area. The Zapato-Chino Creek bisects the proposed transmission line corridor, generally running in an east-west direction and crossing below a bridge on Sutter Avenue. The Zapato-Chino Creek bed is sandy and unvegetated and the margins are lined with sparse mulefat (*Baccharis salicifolia*) and Fremont cottonwood (*Populus fremontii*). The banks are dominated by upland vegetation.

No special-status plant species were detected within the transmission line alignment during the 2009 surveys. Special-status plant surveys were conducted on March 26, April 22, April 23, May 20 and May 21, 2009. Table 2 provides the survey dates, conditions, and personnel that conducted the 2009 surveys, and Table 3 provides a botanical species list for the entire SJS I&2 Project area.

Although woolly yerba santa (*Eriodictyon tomentosum*) is not considered a special-status species, a small population found within the project area likely represents a range extension for the species.



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There is only one other recent collection from Fresno County, and the Jepson Manual (Hickman 1993) does not list Fresno County as part of this species' range. Botanists collected a voucher specimen that will be donated to the San Diego Natural History Museum Herbarium.

Vague information on CNDDDB (2009) made it difficult to consult local reference populations. Instead of checking reference populations, botanists thoroughly searched the 800-foot buffer of the proposed transmission line alignment during March, April, and May, therefore encompassing the blooming period of all the sensitive species with potential to occur onsite.

BLUNT-NOSED LEOPARD LIZARD (BNLL) SURVEYS

One adult BNLL was observed by a URS biologist in May 2008 within the 800-foot buffer of the transmission line (Figure 2); however, no BNLL were observed in this area or in other areas of the proposed Project transmission line alignment during the 2009 protocol surveys. Table 2 provides the surveys dates, conditions, and personnel for all protocol BNLL surveys.

WILDLIFE

Within the 800-foot buffer of the transmission line route of the SJS 1&2 transmission line study area, three butterfly species, 29 bird species, four reptile species, and six mammal species were detected or observed during the 2009 surveys. Typical bird species observed include house finch (*Carpodacus mexicanus*), western kingbird (*Tyrannus verticalis*), common raven (*Corvus corax*), red-tailed hawk (*Buteo jamaicensis*), mourning dove (*Zenaida macroura*), cliff swallow (*Petrochelidon pyrrhonota*) and loggerhead shrike (*Lanius ludovicianus*; SSC).

Coyote (*Canis latrans*), California ground squirrel (*Spermophilous beecheyi*), black-tailed jackrabbit (*Lepus californicus*), and cottontail rabbit (*Sylvilagus audubonii*), were common mammals observed or detected within the Project alignment survey area. No kit fox, kit fox sign, or kit fox dens were observed along the transmission line alignment or in the Project survey area. The most recent kit fox observation (sign, den or live animal) in the Project vicinity was recorded approximately one mile to the east of the Project site in 1999.

Common reptile species observed during the 2009 surveys include California whiptail (*Aspidoscelis tigris munda*), California side-blotched lizard (*Uta stansburiana elegans*), yellow-backed spiny lizard (*Sceloporus uniformis*) and Pacific gopher snake (*Pituophis catenifer catenifer*). Wildlife species identified in the Project survey area can be found in Table 4. Special-status wildlife that were observed are discussed below.



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SPECIAL-STATUS WILDLIFE

SWAINSON'S HAWK (*BUTEO SWAINSONI*)

State Status: Threatened, Fully Protected

Federal Status: USFWS Bird Species of Conservation Concern

Compared to other buteos, the Swainson's hawk (*Buteo swainsoni*) is more slender with pointed wings and a long tail that is grayish with narrow, dark bands. This species forages in open stands of grass-dominated vegetation, sparse shrublands, and small, open woodlands; however, it has adapted well to foraging in agricultural areas in many parts of its range. This hawk cannot forage in most perennial crops or annual crops that grow much higher than native grasses as prey is more difficult to find. In the Central Valley, the Swainson's hawk forages in row, grain, and hay crop agriculture, particularly during and after harvest when prey are both numerous and conspicuous. Breeding occurs in west to central Washington and Oregon, extreme northeastern California, western and southern Nevada, northern and southeastern Arizona (Monson and Phillips 1981), and intermittently throughout California in the Sacramento and San Joaquin valleys, and valleys of the Sierra Nevada in Inyo and Mono counties. Swainson's hawks mainly hunt mice, ground squirrels, rabbits, birds, and reptiles during the breeding season, and eat insects like grasshoppers, locusts, and beetles during the non-breeding season. They're a highly gregarious species that can be seen foraging and migrating in flocks of thousands of birds. One Swainson's hawk was observed flying over the transmission line alignment in 2009 (Figure 2). Swainson's hawk utilizes habitat in the study area for foraging but this species was not observed utilizing the site or proposed transmission line alignment for nesting.

LOGGERHEAD SHRIKE (*LANIUS LUDOVICIANUS*)

State Status: Species of Special Concern

Federal Status: None

Loggerhead shrike (*Lanius ludovicianus*) is a robin-sized, gray bird with black wings, white wing-patches, a black mask and a black tail. It is found year-round in most of Mexico and the southern half of the United States. Throughout most of the southern part of its range, the loggerhead shrike is a resident species. Where resident, this species usually lives in pairs on permanent territories. Loggerhead shrike breeding habitat is generally characterized as open areas dominated by grasses and/or forbs, interspersed with shrubs or trees and bare ground. Available cover is the most important criterion for nest site selection, and trees with thorns are preferred. Their prey typically consists of small birds, mice, or large insects. Loggerhead shrikes will stun or kill prey with their hooked beak before impaling it on a plant thorn or barbed-wire fence, then the prey will be picked apart over time. Threats to the loggerhead shrike include changes in human land-use practices; the spraying of biocides, and competition with species that are more tolerant of human-induced changes. This species was observed during the 2009 surveys in the Fremont cottonwoods and upland scrub on the banks of the Zapato Chino Creek near the eastern boundary of the survey area. One pair was potentially breeding along the buffer of the transmission line alignment in 2009.



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RAPTOR NESTS

One active great horned owl (*Bubo virginianus*) nest and one active red-tailed hawk nest were found within the study area in 2009 (Figure 2). Neither species is considered a special-status species; however they are both protected by the Migratory Bird Treaty Act (MBTA). Measures consistent with the MBTA will be followed during construction to avoid impacts to nesting raptors if they are present during pre-construction surveys.

PROJECT IMPACTS

Impacts to the habitat located within the proposed transmission line routes are anticipated to be less than significant, as limited ground disturbance is associated with installation of the poles that support transmission lines. At this time it is not possible to determine the habitats that will be impacted by the installation of the transmission line poles because the locations have not yet been identified. However, all poles will be located in areas that have been cleared for special-status species during pre-construction surveys, and placed in disturbed habitat. Permanent disturbance areas would include a square approximately 50 feet by 50 feet (0.057 acre per pole) where transmission line pole pads will be located, and temporary impact areas would be approximately 20 feet by 100 feet (0.046 acre per pole) for construction and erection of each pole, as well as for cable pulling. For the purposes of this estimate, it is assumed that there would be approximately 5 transmission line poles per linear mile, totaling approximately 25-30 poles, for a maximum of 1.72 acres of permanent impacts and 1.38 acres of temporary impacts.

No impacts to Zapato Chino Creek are expected, as the poles would be placed on either side of the creek to avoid the channel and riparian banks.

SENSITIVE PLANT SPECIES

No sensitive plant species were observed within the survey area in 2008 or 2009; therefore no impacts to sensitive plant species are anticipated.

BNLL

No BNLL were observed within the 800-foot buffer of the transmission line alignment in 2009. The two species of lizard that are commonly found with BNLL (whiptail and side-blotched lizard) were observed consistently during each of the BNLL surveys in 2008 and 2009. The specific habitat requirements for BNLL are not present within the proposed transmission line alignment or the 800-foot buffer. Pre-construction surveys for BNLL will occur in areas where the poles will be located along the transmission line. If BNLL are detected, the pole locations will be sited to avoid native vegetation that may support BNLL, the construction areas will be fenced to exclude BNLL, and monitoring will be conducted during construction of the Project to preclude BNLL mortality.



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WILDLIFE

SWAINSON'S HAWK

The proposed transmission line alignment provides foraging habitat for several raptor species, including Swainson's hawk. No Swainson's hawk nests were detected in the survey area. Nest surveys will be required prior to construction to verify that there are no new nests in the survey area. Foraging opportunities for Swainson's hawk and other raptors will remain unchanged with the construction of a transmission line. The poles may provide additional perching locations for raptor species, which would improve foraging opportunities, which would not be expected to affect special-status small mammal species in the Project area because none were detected during trapping surveys for this project.

LOGGERHEAD SHRIKE

The proposed transmission line alignment provides foraging habitat for several bird species, including loggerhead shrike. No direct impacts to loggerhead shrike are anticipated because the proposed transmission line will be placed outside of the creek habitat. Foraging opportunities will remain unchanged with the construction of a transmission line.

RAPTOR NESTS

Nest surveys will be required prior to construction to determine whether the great-horned owl and red-tailed hawk nests that were observed are still active, and to verify that there are no new nests in the Project area. Any detected nests will be avoided consistent with the MBTA; therefore, no impacts to raptor nests, including Swainson's hawk, are anticipated.

MITIGATION

Mitigation will remain consistent with that described in the BTR and in the AFC.

RAPTOR AND MIGRATORY BIRDS

To avoid any direct and indirect impacts to raptors and/or migratory birds, removal of habitat that may support active nests should occur outside of the breeding season for these species (January 15 to August 15). If removal of habitat and/or construction activities adjacent to nesting habitat must occur during the breeding season, the applicant shall retain a biologist to conduct a pre-construction survey to determine the presence or absence of nesting birds on and within 100-feet of the construction area and nesting raptors within 200-feet of the construction area. The pre-construction survey must be conducted within 10 calendar days prior to the start of construction. If nesting raptors are detected, a biological monitor should be present on site as necessary during construction. The biological monitor shall ensure that perimeter construction fencing is being maintained to minimize construction impacts and ensure that no nests containing eggs or chicks are "taken", as defined by the MTBA or Fish & Game Code Section 86, until all young have fledged or the nest becomes inactive.



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Sincerely,

URS CORPORATION

Theresa Miller, CE
Senior Biologist

Patrick Mock, PhD, CSE, CWB®

Attachments

Table 1	Plant species with potential to occur in project area
Table 2	2009 Survey Dates and Conditions
Table 3	Floral Species List
Table 4	Wildlife Species List
Figure 1	Vicinity Map
Figure 2	2009 Survey Areas and Special-Status Species Observed
Attachment 1	Data Sheets for 2009 Blunt-nosed Leopard Lizard Surveys

References:

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Table 1: Plant Species with the potential to occur in Project area

Scientific Name	Common Name	Status	Habitat	Potential for occurrence
<i>Atriplex depressa</i>	brittlescale	CNPS List 1B.2	Broad flood basins and alluvial fans, barren areas within alkali grassland, alkali meadow, and alkali scrub. Low elevations to 320 m. Annual herb, blooms April to October.	Not detected during 2009 surveys. Small amounts of suitable habitat are present in the study area.
<i>Caulanthus californicus</i>	California jewel-flower	FE, SE, CNPS List 1B.1, BLM Sensitive	Nonnative grassland, upper Sonoran subshrub scrub, cismontane juniper woodland and scrub communities; 61 to 1,000 meters. Annual herb, blooms February to May	Not detected during 2009 surveys. Small amounts of suitable habitat are present in the study area. Known populations include the Kreyenhagen Hills, which is near the Project study area.
<i>Caulanthus coulteri</i> var. <i>lemmonii</i>	Lemmon's jewelflower	CNPS List 1B.2	Dry, exposed slopes in Pinyon and juniper woodland; valley and foothill grasslands; 80-1220 meters. Annual herb, blooms March-May.	Not detected during 2009 surveys. Potential for occurrence within study area is low; suitable habitat is not present.
<i>Delphinium recurvatum</i>	recurved larkspur	CNPS List 1B.2	Chenopod scrub, Cismontane woodland, Valley and foothill grassland within alkaline areas; 3-750 meters. Perennial herb, blooms March-June.	Not detected during 2009 surveys. Small amounts of suitable habitat are present in the study area.
<i>Eriastrum hooveri</i>	Hoover's eriastrum	CNPS List 4.2, (FT delisted 2003)	Drying grassy areas, chenopod scrub, Pinyon and juniper woodland, valley and foothill grassland; 50-915 meters.	Not detected during 2009 surveys. Suitable habitat is present in the study area.
<i>Layia heterotricha</i>	Pale yellow layia	CNPS List 1B.1	Santa Barbara, San Luis Obispo and Ventura Counties. Grassy areas near coast, coastal scrub; 20-90 meters. Annual herb, blooms March to June.	Not detected during 2009 surveys. Potential for occurrence within study area is low; suitable habitat is not present.



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Scientific Name	Common Name	Status	Habitat	Potential for occurrence
<i>Madia radiata</i>	showy golden madia	CNPS List 1B.1	Cismontane woodland, Valley and foothill grassland; 25-900 meters. Perennial herb, blooms Mar-Jun	Not detected during 2009 surveys. Potential for occurrence within study area is low; suitable habitat is not present.
<i>Monolopia congdonii</i>	San Joaquin woollythreads	FE, CNPS List 1B.2	Nonnative grassland, valley saltbush scrub, interior Coast Range saltbush scrub and upper Sonoran subshrub communities on the San Joaquin Valley floor; 60 - 800 meters. Annual herb February -May	Not detected during 2009 surveys. Suitable habitat is present in the study area.



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Table 2: 2009 Survey Dates and Conditions

Survey Date	Survey Type	Start/End Times	Start/End Temp (C)	Start/End Sky Cover (%)	Wind Speed (mph)	Survey Staff
3/26/2009	Rare plant survey	0800-1300	13-18	0/0	1-20	EB, LR
4/21/2009	BNLL Survey #1 - Adult	0908-1059	27-33	20/20	0-8	DP (Level II), SAS, TM (Level II)
4/22/2009	BNLL Survey #2 - Adult	0830-1121	25-34.5	0/0	0-9	DP (Level II), SAS, TM (Level II)
4/22/2009	Rare plant survey	0840-1400	25-34.5	0/0	0-9	MW
4/23/2009	Rare plant survey	0800-1300	25-34.5	0/0	0-9	MW
5/15/2009	BNLL Survey terminated due to high winds					BF, DP (Level II), TM (Level II)
6/2/2009	BNLL Survey #3 - Adult	1017-1201	25-34	90/70	1-7	BF, DP (Level II), EB
5/20/2009	Rare plant survey	1535-1735	33-34	0/0	0-5	MW
5/21/2009	Rare plant survey	0840-1400	20-30	0/0	0-5	MW
6/8/2009	BNLL Survey #4 - Adult	1045-1153	25-32	5/0	0-4	SA (Level II), SAS, TM (Level II)
6/16/2009	BNLL Survey #5 - Adult	0951-1202	25-34	0/0	2-9	BF, TM (Level II)
6/17/2009	BNLL Survey #6 - Adult	0847-1046	25-33	0/0	0-9	BF, BL, TM (Level II)
6/18/2009	BNLL Survey #7 - Adult	0846-1036	25-34	0/0	0-8	BF, BL, TM (Level II)
6/19/2009	BNLL Survey #8 - Adult	0815-0933	27-34	0/0	0-4	BF, BL, TM (Level II)
6/29/2009	BNLL Survey #9 - Adult	0714-0856	25-33.5	0/0	0-5	BF, DP (Level II), TM (Level II)
7/13/2009	BNLL Survey #10 - Adult	0734-0922	25-33	0/0	1-5	BF, DP (Level II), LR
7/14/2009	BNLL Survey #11 - Adult	0746-0923	25-34	0/0	1-2	BF, DP (Level II), LR
7/15/2009	BNLL Survey #12 - Adult	0734-0904	25-35	0/0	1-4	BF, DP (Level II), LR



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Survey Date	Survey Type	Start/End Times	Start/End Temp (C)	Start/End Sky Cover (%)	Wind Speed (mph)	Survey Staff
8/11/2009	BNLL Survey #13 - Juvenile	0803-0934	25-34	0/0	0-2	BF, DP (Level II), EB
8/12/2009	BNLL Survey #14 - Juvenile	0805-0925	25-32	0/0	0-4	BF, DP (Level II), EB
8/13/2009	BNLL Survey #15 - Juvenile	0807-0929	25-30	0/0	0-4	BF, DP (Level II), EB
9/9/2009	BNLL Survey #16 - Juvenile	0930-1050	29-34	0/0	0-5	AB (Level II), DP (Level II), KE (Level II)
9/10/2009	BNLL Survey #17 - Juvenile	0839-0952	26-32	0/0	0-4	AB (Level II), DP (Level II), KE (Level II)

Notes: URS Staff: AB= Alyssa Berry, BF=Brian Felten, BL=Brian Lohstroh, DP=Dallas Pugh (Level II), EB= Eric "Rick" Bailey. KE= Kate Eldridge, LR=Lee Ripma, SAS=Shanti A Santulli, SA=Sundee Amin (Level II), TM=Theresa Miller (Level II); Wood Biological Consulting: MW=Mike Wood

Table 3: Floral Species List

GYMNOSPERMS	
PINACEAE	PINE FAMILY
<i>Pinus sp.*</i>	pine
ANGIOSPERMS (DICOTYLEDONS)	
AMARANTHACEAE	GOOSEFOOT FAMILY
<i>Atriplex suberecta</i>	peregrine Saltbush
<i>Atriplex lentiformis</i>	quail brush
<i>Atriplex polycarpa</i>	allscale
<i>Atriplex semibaccata*</i>	Australian saltbush
<i>Salsola tragus*</i>	Russian thistle
<i>Suaeda nigra</i>	bush seepweed
APOCYNACEAE	DOGBANE FAMILY
<i>Nerium oleander*</i>	oleander
ASCLEPIADACEAE	MILKWEED FAMILY
<i>Asclepias fascicularis</i>	narrow-leaf milkweed
ASTERACEAE	SUNFLOWER FAMILY
<i>Ambrosia acanthicarpa</i>	annual bur-sage
<i>Artemisia californica</i>	California sagebrush
<i>Artemisia douglasiana</i>	mugwort
<i>Baccharis salicifolia</i>	mule fat
<i>Centaurea melitensis*</i>	toocalote
<i>Chamomilla suaveolens*</i>	pineapple weed
<i>Conyza coulteri</i>	Coulter's horseweed
<i>Helianthus annuus</i>	common sunflower
<i>Hemizonia pungens ssp. pungens</i>	common spikeweed
<i>Isocoma acradenia</i>	alkali goldenbush
<i>Lactuca serriola*</i>	prickly lettuce
<i>Lepidospartum squamatum</i>	scale-broom
<i>Lessingia glandulifera var. glandulifera</i>	valley vinegar-weed
<i>Senecio vulgaris*</i>	common groundsel
<i>Sonchus asper ssp. asper*</i>	prickly sow thistle
<i>Stephanomeria pauciflora</i>	wire lettuce
<i>Xanthium strumarium</i>	cocklebur
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia menziesii var. menziesii</i>	common fiddleneck
<i>Heliotropium curassavicum</i>	salt heliotrope
BRASSICACEAE	MUSTARD FAMILY
<i>Brassica nigra*</i>	black mustard
<i>Capsella bursa-pastoris*</i>	shepherd's-purse
<i>Lepidium nitidum</i>	shining peppergrass
<i>Sisymbrium irio*</i>	London rocket



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EUPHORBIACEAE	SPURGE FAMILY
<i>Croton setigerus</i>	dove weed
FAGACEAE	OAK FAMILY
<i>Quercus agrifolia</i>	coast live oak
FABACEAE	LEGUME FAMILY
<i>Lotus purshianus</i>	Spanish clover
<i>Medicago polymorpha</i> *	bur clover
<i>Melilotus indica</i> *	sourclover
FRANKENIACEAE	FRANKENIA FAMILY
<i>Frankenia salina</i>	alkali heath
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
HIPPOCASTANACEAE	BUCKEYE FAMILY
<i>Aesculus californica</i>	California buckeye
HYDROPHYLLACEAE	WATERLEAF FAMILY
<i>Eriodictyon tomentosum</i>	woolly yerba santa
LAMIACEAE	MINT FAMILY
<i>Marrubium vulgare</i> *	horehound
<i>Salvia columbariae</i>	chia
<i>Salvia mellifera</i>	black sage
MALVACEAE	MALLOW FAMILY
<i>Malva parviflora</i> *	cheeseweed
MORACEAE	MULBERRY FAMILY
<i>Ficus carica</i> *	edible fig
<i>Morus alba</i> *	white mulberry
MYRTACEAE	MYRTLE FAMILY
<i>Eucalyptus camaldulensis</i> *	red gum
OLEACEAE	OLIVE FAMILY
<i>Fraxinus sp.</i> *	ash
<i>Olea europaea</i> *	olive
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Polygonum arenastrum</i> *	common knotweed
SALICACEAE	WILLOW FAMILY
<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont cottonwood
<i>Salix lucida</i> ssp. <i>lasioandra</i>	shining willow
SOLANACEAE	NIGHTSHADE FAMILY
<i>Datura wrightii</i>	jimson weed
<i>Nicotiana glauca</i> *	tree tobacco
TAMARICACEAE	TAMARISK FAMILY
<i>Tamarix ramosissima</i> *	Mediterranean tamarisk
ULMACEAE	ELM FAMILY
<i>Ulmus parvifolia</i> *	Chinese elm



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Viscaceae	Mistletoe Family
<i>Phoradendron macrophyllum</i>	big leaf mistletoe
Angiosperms (Monocotyledons)	
Areaceae	Palm Family
<i>Washingtonia robusta</i>	Mexican fan palm
Poaceae	Grass Family
<i>Avena fatua</i> *	wild oat
<i>Bromus diandrus</i> *	ripgut grass
<i>Bromus hordeaceus</i> *	soft chess
<i>Bromus madritensis</i> ssp. <i>rubens</i> *	foxtail chess
<i>Cynodon dactylon</i> *	Bermuda grass
<i>Distichlis spicata</i>	saltgrass
<i>Hordeum murinum</i> ssp. <i>glaucum</i> *	glaucous foxtail barley
<i>Leymus triticoides</i>	beardless wild rye
<i>Schismus barbatus</i> *	Mediterranean schismus
<i>Vulpia myuros</i> *	fescue

* = non native species



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 Martifer Renewables Solar Thermal, LLC
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Table 4: Wildlife List

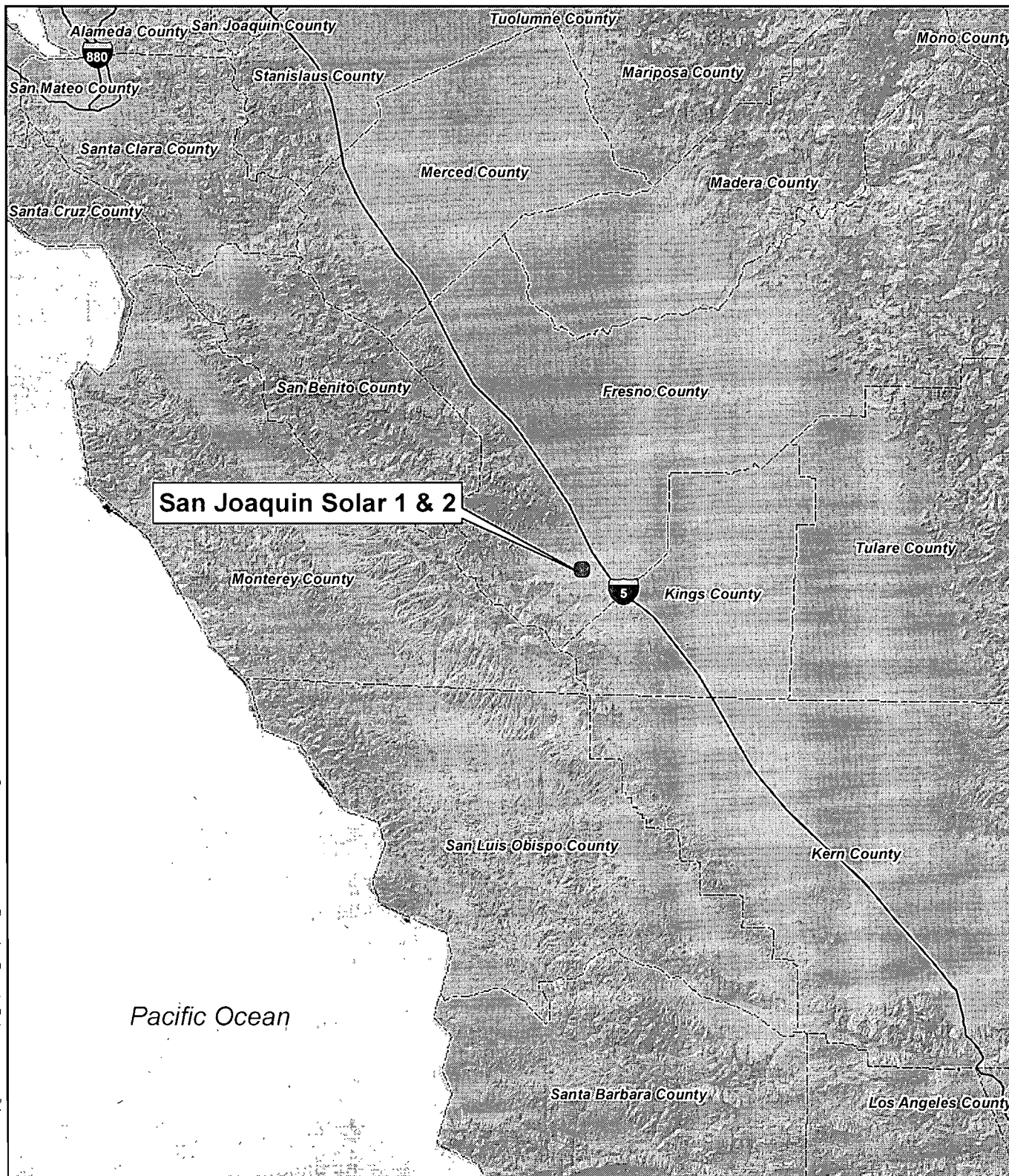
INSECTS	
painted lady	<i>Vanessa cardui</i>
California dogface	<i>Zerene eurydice</i>
common white	<i>Pontia protodice</i>
REPTILES	
yellow-backed spiny lizard	<i>Sceloporus uniformus</i>
California side-blotched lizard	<i>Uta stansburiana elegans</i>
California whiptail	<i>Aspidoscelis tigris munda</i>
pacific gopher snake	<i>Pituophis catenifer catenifer</i>
BIRDS	
Swainson's Hawk (ST)	<i>Buteo swainsoni</i>
red-tailed hawk	<i>Buteo jamaicensis</i>
American kestrel	<i>Falco sparverius</i>
California quail	<i>Callipepla californica</i>
mourning dove	<i>Zenaida macroura</i>
greater roadrunner	<i>Geococcyx californianus</i>
barn owl	<i>Tyto alba</i>
great horned owl	<i>Bubo virginianus</i>
Anna's hummingbird	<i>Calypte anna</i>
acorn woodpecker	<i>Melanerpes formicivorus</i>
Say's phoebe	<i>Sayornis saya</i>
black phoebe	<i>Sayornis nigricans</i>
western kingbird	<i>Tyrannus verticalis</i>
loggerhead shrike (SSC)	<i>Lanius ludovicianus</i>
common raven	<i>Corvus corax</i>
european starling	<i>Sturnus vulgaris</i>
northern mockingbird	<i>Mimus polyglottos</i>
Bewick's wren	<i>Thryomanes bewickii</i>
cliff swallow	<i>Petrochelidon pyrrhonota</i>
California horned lark (WL)	<i>Eremophila alpestris actia</i>
house sparrow	<i>Passer domesticus</i>
house finch	<i>Carpodacus mexicanus</i>
white-crowned sparrow	<i>Zonotrichia leucophrys</i>
common yellowthroat	<i>Geothlypis trichas</i>
western tanager	<i>Piranga ludoviciana</i>
red-winged blackbird	<i>Agelaius phoeniceus</i>
western meadowlark	<i>Sturnella neglecta</i>
Brewer's blackbird	<i>Euphagus cyanocephalus</i>



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MAMMALS	
California ground squirrel	<i>Spermophilus beecheyi nudipes</i>
desert (Audubon) cottontail	<i>Sylvilagus auduboni</i>
Heermann's kangaroo rats	<i>Dipodomys heermanni</i>
deer mouse	<i>Peromyscus maniculatus</i>
black-tailed jackrabbit	<i>Lepus californicus</i>
coyote	<i>Canis latrans</i>

SSC= Department of Fish and Game California Species of Special Concern
CT=California Listed as Threatened
WL= Department of Fish and Game California Watch List



SOURCES: ESRI (background).

REGIONAL MAP SAN JOAQUIN SOLAR 1 & 2

URS

12.5 0 12.5 25 Miles
SCALE: 1" = 25 Miles (1:1,584,000)
SCALE CORRECT WHEN PRINTED AT 8.5X11

CREATED BY JS

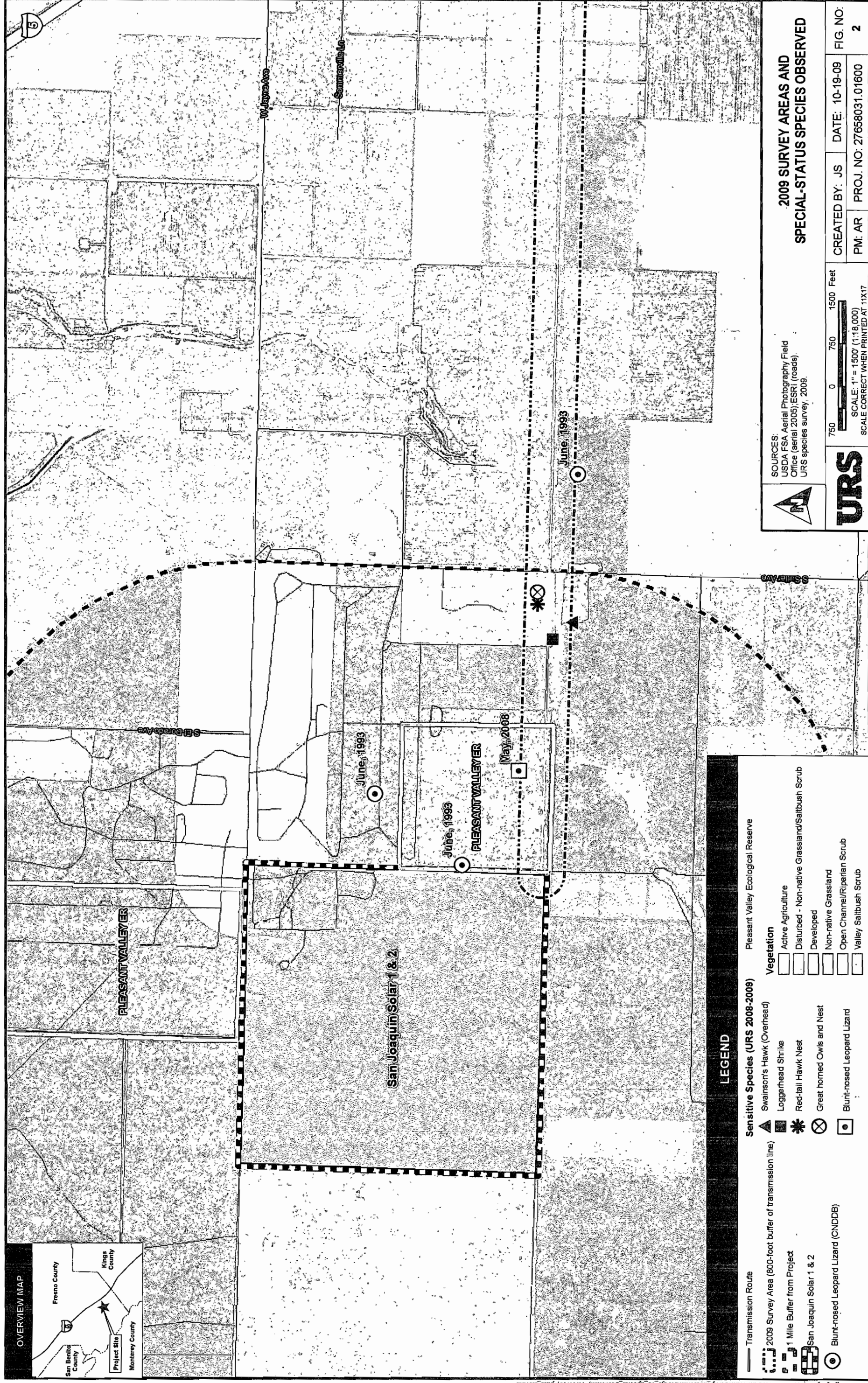
DATE: 9-22-08

FIG. NO:

PM: AR

PROJ. NO: 27658031.01600

1



Attachment 1
Data Sheets for 2009 Blunt-nosed Leopard Lizard Surveys

(A1-2)

2003 Blunt-nosed Leopard Lizard
(*Gambelia sila*)
Survey Reporting Form

SURVEY DATE(S) (up to 5 days of surveys from a single site can be reported on this form): April 21 & 22, 2009

SURVEYORS: T. Miller (Level II), D. Pugh (L2),
Shanti Santulli

SITE NAME AND LOCATION [Please also attach or sketch a map on back]:

County: Fresno **Landowner/Mgr:** Private / Solar 1 & 2

Quad Name: Avenal **Elevation:** 550-640 feet

UTM Zone (10,11): 11 **Datum:** WGS 84 (NAD83, NAD27, WGS84, other) SW 1/4 of SE 1/4 of Section 1 & 2 and NW 1/4 of NE 1/4 of S 11 & S 12

Source (GPS, map & type, other): GPS, Maps **Point Accuracy** ± 3 meters

UTM COORDINATES: see maps

SURVEY RESULTS:

DATE	START TIME	END TIME	START AIR TEMP	END AIR TEMP	# BNLL OBSERVED Adults/Hatchlings	APPROXIMATE DISTANCE COVERED (IN TENTHS OF A MILE)
4/21	0908	1115	27°C	34°C	0/0	3.1
4/22	0830	1121	26°C	34.5°C	0/0	3.1
					1	
					1	
					1	

TOTAL NUMBER OF OBSERVATIONS FOR THE THREE MOST COMMON LIZARDS (combined numbers for all survey days):

Species Uta stansburiana ^{-elegans} Number observed: 21 + 35 = 56

Species Aspidocelis tigris munda Number observed: 5 + 29 = 34

Species Sceloporus uniformis Number observed: 3

San Joaquin Solar 1 1/2
Adult #1 1/2

HABITAT DESCRIPTION: Estimation of average vegetative cover on the site
[circle the correct value]:

% Shrub: 0-10% 10-25% 25-50% 50-75% >75%

% Forb: 0-10% 10-25% 25-50% 50-75% >75%

% Grass: 0-10% 10-25% 25-50% 50-75% >75%

% Bare Ground: 0-10% 10-25% 25-50% 50-75% >75%

HABITAT DESCRIPTION: General description of vegetation community, overall
habitat quality, surrounding land use, threats, etc:

Non-native grassland;
ornamental / disturbed habitat on an abandoned
golf course property; tilled / planted agricultural
fields, and creek bed and banks of the
Zapato-chuno Creek.

OTHER NOTES ABOUT THE SURVEY/HABITAT/ SPECIES/ETC:

area is surrounded by active agriculture;
mostly orchards
* 800-foot buffer of a transmission line *

**PLEASE RETURN THIS SURVEY REPORTING FORM TO THE CALIFORNIA
DEPARTMENT OF FISH AND GAME - SAN JOAQUIN VALLEY SOUTHERN
SIERRA REGION AT THE FOLLOWING ADDRESS:**

California Department of Fish and Game
ATTN: Steve Juarez, Conservation Planning Supervisor
1234 E. Shaw Ave
Fresno, CA 93710

OR EMAIL THE COMPLETED FORM TO: sjuarez@dfg.ca.gov

***ALL OBSERVATIONS OF BLUNT-NOSED LEOPARD LIZARDS AND OTHER SENSITIVE
SPECIES SHOULD BE PROMPTLY REPORTED TO THE CALIFORNIA NATURAL
DIVERSITY DATABASE. SUBMISSION OF THIS FORM DOES NOT ENTAIL REPORTING
TO THE DATABASE, WHICH IS MAINTAINED BY THE WILDLIFE AND HABITAT DATA
ANALYSIS BRANCH OF THE DEPARTMENT OF FISH AND GAME.

(A3)

2003 Blunt-nosed Leopard Lizard
(*Gambelia sila*)
Survey Reporting Form

SURVEY DATE(S) (up to 5 days of surveys from a single site can be reported on this form): June 2, 2009

SURVEYORS: D. Pugh (Level II), B. Felten,
R. Bailey

SITE NAME AND LOCATION [Please also attach or sketch a map on back]:

County: Fresno **Landowner/Mgr:** Private / Solar 1 & 2
Quad Name: Avenal **Elevation:** 550-640 ft Project

T 21 S R 16 E SW 1/4 of SE 1/4 of Section 1 & 2 and NW 1/4 of NE 1/4 of SW 1/4 of SE 1/4

UTM Zone (10,11): 11 **Datum:** WGS 84 (NAD83, NAD27, WGS84, other) S 11 & S 12

Source (GPS, map & type, other): GPS, Maps **Point Accuracy** ± 3 meters

UTM COORDINATES: see maps

SURVEY RESULTS:

DATE	START TIME	END TIME	START AIR TEMP	END AIR TEMP	# BNLL OBSERVED Adults/Hatchlings	APPROXIMATE DISTANCE COVERED (IN TENTHS OF A MILE)
6/2/09	10:17	12:01	25°C	34°C	010	3.1
					1	
					1	
					1	
					1	

TOTAL NUMBER OF OBSERVATIONS FOR THE THREE MOST COMMON LIZARDS (combined numbers for all survey days):

Species Uta stansburiana elegans Number observed: 27

Species Aspidocelis tigris munda Number observed: 2

Species Sceloporus uniformis Number observed: 13

BNLL Survey Site Name: San Joaquin Solar 1 & 2
Adult #3**HABITAT DESCRIPTION: Estimation of average vegetative cover on the site**
[circle the correct value]:

% Shrub: 0-10% 10-25%, 25-50%, 50-75%, >75%
% Forb: 0-10% 10-25%, 25-50%, 50-75%, >75%
% Grass: 0-10%, 10-25%, 25-50%, 50-75%, >75%
% Bare Ground: 0-10%, 10-25%, 25-50%, 50-75%, >75%

HABITAT DESCRIPTION: General description of vegetation community, overall
habitat quality, surrounding land use, threats, etc:

Non-native grassland;
ornamental / disturbed habitat on an abandoned
golf course property; tilled / planted agricultural
fields, and creek bed and banks of the
Zapato-chuno Creek.

OTHER NOTES ABOUT THE SURVEY/HABITAT/ SPECIES/ETC:

area is surrounded by active agriculture;
mostly orchards
* 800-foot buffer of transmission line *

PLEASE RETURN THIS SURVEY REPORTING FORM TO THE CALIFORNIA
DEPARTMENT OF FISH AND GAME - SAN JOAQUIN VALLEY SOUTHERN
SIERRA REGION AT THE FOLLOWING ADDRESS:

California Department of Fish and Game
ATTN: Steve Juarez, Conservation Planning Supervisor
1234 E. Shaw Ave
Fresno, CA 93710

OR EMAIL THE COMPLETED FORM TO: sjuarez@dfg.ca.gov

*****ALL OBSERVATIONS OF BLUNT-NOSED LEOPARD LIZARDS AND OTHER SENSITIVE SPECIES SHOULD BE PROMPTLY REPORTED TO THE CALIFORNIA NATURAL DIVERSITY DATABASE. SUBMISSION OF THIS FORM DOES NOT ENTAIL REPORTING TO THE DATABASE, WHICH IS MAINTAINED BY THE WILDLIFE AND HABITAT DATA ANALYSIS BRANCH OF THE DEPARTMENT OF FISH AND GAME.**

(A4)

2003 Blunt-nosed Leopard Lizard
(*Gambelia sila*)
Survey Reporting Form

SURVEY DATE(S) (up to 5 days of surveys from a single site can be reported on this form): June 8, 2009

SURVEYORS: T. Miller (L2), S. Amun (L2),
Shanty Santulli (L1)

SITE NAME AND LOCATION [Please also attach or sketch a map on back]:

County: Fresno **Landowner/Mgr:** Private / Solar 1 1/2
Quad Name: Avenal **Elevation:** 550-640 ft Project
T 21 S R 16 E SW 1/4 of SE 1/4 of Section 1 1/2 and NW 1/4 of NE 1/4 of
UTM Zone (10,11): 11 **Datum:** WGS 84 (NAD83, NAD27, WGS84, other) SW 1/4 of
Source (GPS, map & type, other): GPS, Maps **Point Accuracy** ± 3 meters
UTM COORDINATES: see maps

SURVEY RESULTS:

DATE	START TIME	END TIME	START AIR TEMP	END AIR TEMP	# BNLL OBSERVED Adults/Hatchlings	APPROXIMATE DISTANCE COVERED (IN TENTHS OF A MILE)
6/8/09	1045	1221	25C	33C	0/0	3.1
					1	
					1	
					1	
					1	

TOTAL NUMBER OF OBSERVATIONS FOR THE THREE MOST COMMON LIZARDS (combined numbers for all survey days):

Species Uta stansburiana elegans Number observed: 20
 Species Aspidocelis tigris munda Number observed: 7
 Species _____ Number observed: _____

BNLL Survey Site Name: San Joaquin Solar 1/2
Acct # 4**HABITAT DESCRIPTION: Estimation of average vegetative cover on the site**
[circle the correct value]:

% Shrub: 0-10% 10-25%, 25-50%, 50-75%, >75%
% Forb: 0-10% 10-25%, 25-50%, 50-75%, >75%
% Grass: 0-10%, 10-25%, 25-50%, 50-75%, >75%
% Bare Ground: 0-10%, 10-25%, 25-50%, 50-75%, >75%

HABITAT DESCRIPTION: General description of vegetation community, overall**habitat quality, surrounding land use, threats, etc:** Non-native grasslands,
ornamental / disturbed habitat on an abandoned
golf course property; tilled / planted agricultural
fields, and creek bed and banks of the
Zapato-chino Creek.**OTHER NOTES ABOUT THE SURVEY/HABITAT/ SPECIES/ETC:**area is surrounded by active agriculture;
mostly orchards, survey is along an
800-foot buffer of a transmission line**PLEASE RETURN THIS SURVEY REPORTING FORM TO THE CALIFORNIA
DEPARTMENT OF FISH AND GAME - SAN JOAQUIN VALLEY SOUTHERN
SIERRA REGION AT THE FOLLOWING ADDRESS:**

California Department of Fish and Game
ATTN: Steve Juarez, Conservation Planning Supervisor
1234 E. Shaw Ave
Fresno, CA 93710

OR EMAIL THE COMPLETED FORM TO: sjuarez@dfg.ca.gov

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ANALYSIS BRANCH OF THE DEPARTMENT OF FISH AND GAME.

(A5-8)

2003 Blunt-nosed Leopard Lizard
(*Gambelia sila*)
Survey Reporting Form

SURVEY DATE(S) (up to 5 days of surveys from a single site can be reported on this form): June 16, 17, 18, 19; 2009

SURVEYORS: T. Miller (L2), B. Lohstroh (L1),
B. Felten (L1)

SITE NAME AND LOCATION [Please also attach or sketch a map on back]:

County: Fresno **Landowner/Mgr:** Private / Solar 1 & 2
Quad Name: Avenal **Elevation:** 550-640 ft Project

UTM Zone (10,11): 11 **Datum:** WGS 84 (NAD83, NAD27, WGS84, other) SW 1/4 of SE 1/4 of Section 1 & 2 and NW 1/4 of NE 1/4 of S 11 & S 12

Source (GPS, map & type, other): GPS, Maps **Point Accuracy** ± 3 meters

UTM COORDINATES: See maps

SURVEY RESULTS:

DATE	START TIME	END TIME	START AIR TEMP	END AIR TEMP	# BNLL OBSERVED Adults/Hatchlings	APPROXIMATE DISTANCE COVERED (IN TENTHS OF A MILE)
6/16	0930	1202	25C	34C	0, 0	3.1
6/17	0830	1046	25C	34C	0, 0	3.0
6/18	0846	1036	25C	34C	0, 0	3.1
6/19	0815	0933	27C	34C	0, 0	3.1
					1	

TOTAL NUMBER OF OBSERVATIONS FOR THE THREE MOST COMMON LIZARDS (combined numbers for all survey days):

Species *Uta stansburiana elegans* Number observed: 31 + 21 + 15 = 70

Species *Aspidocelis tigris munda* Number observed: 1 + 6 + ~~20~~ = 7

Species *Sceloporus uniformis* Number observed: 6 + 1 = 7

BNLL Survey Site Name: San Joaquin Solar 132
Plot # 5-8**HABITAT DESCRIPTION:** Estimation of average vegetative cover on the site
[circle the correct value]:% Shrub: 0-10% 10-25%, 25-50%, 50-75%, >75%% Forb: 0-10% 10-25%, 25-50%, 50-75%, >75%% Grass: 0-10%, 10-25%, 25-50%, 50-75%, >75%% Bare Ground: 0-10%, 10-25%, 25-50%, 50-75%, >75%**HABITAT DESCRIPTION:** General description of vegetation community, overallhabitat quality, surrounding land use, threats, etc: Non-native grassland;
ornamental / disturbed habitat on an abandoned
golf course property; tilled / planted agricultural
fields, and creek bed and banks of the
Zapato-chino Creek.**OTHER NOTES ABOUT THE SURVEY/HABITAT/ SPECIES/ETC:**area is surrounded by active agriculture;
mostly orchards; survey along a
800-foot buffer of a transmission line**PLEASE RETURN THIS SURVEY REPORTING FORM TO THE CALIFORNIA
DEPARTMENT OF FISH AND GAME – SAN JOAQUIN VALLEY SOUTHERN
SIERRA REGION AT THE FOLLOWING ADDRESS:**California Department of Fish and Game
ATTN: Steve Juarez, Conservation Planning Supervisor
1234 E. Shaw Ave
Fresno, CA 93710**OR EMAIL THE COMPLETED FORM TO: sjuarez@dfg.ca.gov*******ALL OBSERVATIONS OF BLUNT-NOSED LEOPARD LIZARDS AND OTHER SENSITIVE
SPECIES SHOULD BE PROMPTLY REPORTED TO THE CALIFORNIA NATURAL
DIVERSITY DATABASE. SUBMISSION OF THIS FORM DOES NOT ENTAIL REPORTING
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ANALYSIS BRANCH OF THE DEPARTMENT OF FISH AND GAME.**

(49)

2003 Blunt-nosed Leopard Lizard
(*Gambelia sila*)
Survey Reporting Form

SURVEY DATE(S) (up to 5 days of surveys from a single site can be reported on this form): June 29, 2009

SURVEYORS: T. Miller (L2), B. Felten (L1),
D. Pugh (L2)

SITE NAME AND LOCATION [Please also attach or sketch a map on back]:

County: Fresno **Landowner/Mgr:** Private / Solar 132

Quad Name: Avenal **Elevation:** 550-640 ft Project

T 21 S R 16 E SW 1/4 of SE 1/4 of Section 132 and NW 1/4 of NE 1/4 of S 11 & S 12

UTM Zone (10,11): 11 **Datum:** WGS 84 (NAD83, NAD27, WGS84, other)

Source (GPS, map & type, other): GPS, Maps **Point Accuracy** ± 3 meters

UTM COORDINATES: see maps

SURVEY RESULTS:

DATE	START TIME	END TIME	START AIR TEMP	END AIR TEMP	# BNLL OBSERVED Adults/Hatchlings	APPROXIMATE DISTANCE COVERED (IN TENTHS OF A MILE)
6/29/09	0714	0856	25C	34C	010	3.1
					1	
					1	
					1	
					1	

TOTAL NUMBER OF OBSERVATIONS FOR THE THREE MOST COMMON LIZARDS (combined numbers for all survey days):

Species Uta stansburiana elegans Number observed: 29 + 3 hatchlings = 32

Species Aspidocelis tigris munda Number observed: 3

Species Sceloporus ^{uniformis} ~~tigris~~ Number observed: 3

BNLL Survey Site Name: San Joaquin Solar 142
Tract #9**HABITAT DESCRIPTION:** Estimation of average vegetative cover on the site
[circle the correct value]:% Shrub: 0-10% 10-25%, 25-50%, 50-75%, >75%% Forb: 0-10% 10-25%, 25-50%, 50-75%, >75%% Grass: 0-10%, 10-25%, 25-50%, 50-75%, >75%% Bare Ground: 0-10%, 10-25%, 25-50%, 50-75%, >75%**HABITAT DESCRIPTION:** General description of vegetation community, overallhabitat quality, surrounding land use, threats, etc: Non-native grassland,
ornamental (disturbed habitat on an abandoned
golf course property; tilled/planted agricultural
fields, and creek bed and banks of the
Zapato-Chino Creek.**OTHER NOTES ABOUT THE SURVEY/HABITAT/ SPECIES/ETC:**area is surrounded by active agriculture;
mostly orchards - survey area is in
an 800-foot buffer of a transmission line**PLEASE RETURN THIS SURVEY REPORTING FORM TO THE CALIFORNIA
DEPARTMENT OF FISH AND GAME - SAN JOAQUIN VALLEY SOUTHERN
SIERRA REGION AT THE FOLLOWING ADDRESS:**California Department of Fish and Game
ATTN: Steve Juarez, Conservation Planning Supervisor
1234 E. Shaw Ave
Fresno, CA 93710**OR EMAIL THE COMPLETED FORM TO: sjuarez@dfg.ca.gov*******ALL OBSERVATIONS OF BLUNT-NOSED LEOPARD LIZARDS AND OTHER SENSITIVE
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ANALYSIS BRANCH OF THE DEPARTMENT OF FISH AND GAME.**

(A 10-12)

2003 Blunt-nosed Leopard Lizard
(*Gambelia sila*)
Survey Reporting Form

SURVEY DATE(S) (up to 5 days of surveys from a single site can be reported on this form): July 13 - July 15, 2009

SURVEYORS: D. Pugh (L2), B. Felten (L1)
Lee Ripma (L1)

SITE NAME AND LOCATION [Please also attach or sketch a map on back]:

County: Fresno **Landowner/Mgr:** Private / Solar 132

Quad Name: Avenal **Elevation:** 550-640 feet Project

UTM Zone (10,11): 11 **Datum:** WGS 84 (NAD83, NAD27, WGS84, other) SW 1/4 of SE 1/4 of Section 132 and NW 1/4 of NE 1/4 of S11 & S12

Source (GPS, map & type, other): GPS, Maps **Point Accuracy** ± 3 meters

UTM COORDINATES: See maps

SURVEY RESULTS:

DATE	START TIME	END TIME	START AIR TEMP	END AIR TEMP	# BNLL OBSERVED Adults/Hatchlings	APPROXIMATE DISTANCE COVERED (IN TENTHS OF A MILE)
7/13/09	0734	0922	25C	33C	0 1 0	3.1
7/14/09	0746	0923	25C	34C	0 1 0	3.0
7/15/09	0734	0904	25C	35C	0 1 0	3.1
					1	
					1	

TOTAL NUMBER OF OBSERVATIONS FOR THE THREE MOST COMMON LIZARDS (combined numbers for all survey days):

Species Uta stansburiana elegans Number observed: 30 + 34 + 51 = 115

Species Aspidocelis tigris munda Number observed: 1 + 1 + 0 = 2

Species Sceloporus uniformis Number observed: 5 + 12 + 5 = 22

BNLL Survey Site Name: San Joaquin Delta #2
Adult #10-12**HABITAT DESCRIPTION: Estimation of average vegetative cover on the site**
[circle the correct value]:

% Shrub: 0-10%, 10-25%, 25-50%, 50-75%, >75%
% Forb: 0-10%, 10-25%, 25-50%, 50-75%, >75%
% Grass: 0-10%, 10-25%, 25-50%, 50-75%, >75%
% Bare Ground: 0-10%, 10-25%, 25-50%, 50-75%, >75%

HABITAT DESCRIPTION: General description of vegetation community, overall habitat quality, surrounding land use, threats, etc: Non-native grassland; ornamental (disturbed) habitat on an abandoned golf course property; tilled/planted agricultural fields, and creek bed and banks of the Zapato-chino Creek.

OTHER NOTES ABOUT THE SURVEY/HABITAT/ SPECIES/ETC:

area is surrounded by active agriculture; mostly orchards; survey area is in an 800-foot buffer of a transmission line

PLEASE RETURN THIS SURVEY REPORTING FORM TO THE CALIFORNIA DEPARTMENT OF FISH AND GAME - SAN JOAQUIN VALLEY SOUTHERN SIERRA REGION AT THE FOLLOWING ADDRESS:

California Department of Fish and Game
ATTN: Steve Juarez, Conservation Planning Supervisor
1234 E. Shaw Ave
Fresno, CA 93710

OR EMAIL THE COMPLETED FORM TO: sjuarez@dfg.ca.gov

*****ALL OBSERVATIONS OF BLUNT-NOSED LEOPARD LIZARDS AND OTHER SENSITIVE SPECIES SHOULD BE PROMPTLY REPORTED TO THE CALIFORNIA NATURAL DIVERSITY DATABASE. SUBMISSION OF THIS FORM DOES NOT ENTAIL REPORTING TO THE DATABASE, WHICH IS MAINTAINED BY THE WILDLIFE AND HABITAT DATA ANALYSIS BRANCH OF THE DEPARTMENT OF FISH AND GAME.**

(J1-3)

2003 Blunt-nosed Leopard Lizard
(*Gambelia sila*)
Survey Reporting Form

SURVEY DATE(S) (up to 5 days of surveys from a single site can be reported on this form): August 12-13, 2009

SURVEYORS:

D. Pugh (L2), R. Bailey (L1),
B. Felten (L1)

SITE NAME AND LOCATION [Please also attach or sketch a map on back]:

County: Fresno

Landowner/Mgr:

Private / Solar 1 1/2

Quad Name:

Avenal

Elevation:

550-640 ft

T 21 S R 16 E SW 1/4 of SE 1/4 of Section 1 1/2 and NW 1/4 of NE 1/4 of S 11 R 12

UTM Zone (10,11): 11 **Datum:** WGS 84 (NAD83, NAD27, WGS84, other)

Source (GPS, map & type, other): GPS, Maps **Point Accuracy** ± 3 meters

UTM COORDINATES: See maps

SURVEY RESULTS:

DATE	START TIME	END TIME	START AIR TEMP	END AIR TEMP	# BNLL OBSERVED Adults/Hatchlings	APPROXIMATE DISTANCE COVERED (IN TENTHS OF A MILE)
8/11/09	0803	0934	25C	34C	010	3.1
8/12/09	0805	0925	25C	32C	010	3.1
8/13/09	0807	0929	25C	30C	010	3.1
					1	
					1	

TOTAL NUMBER OF OBSERVATIONS FOR THE THREE MOST COMMON LIZARDS (combined numbers for all survey days):

Species Uta stansburiana elegans Number observed: 6 + 46 + 62 = 172

Species Sceloporus uniformis Number observed: 3 + 9 + 5 = 17

Species _____ Number observed: _____

BNLL Survey Site Name: San Joaquin Solar 1 1/2
Juvenile #13**HABITAT DESCRIPTION: Estimation of average vegetative cover on the site**
[circle the correct value]:

% Shrub: 0-10% 10-25%, 25-50%, 50-75%, >75%
% Forb: 0-10% 10-25%, 25-50%, 50-75%, >75%
% Grass: 0-10%, 10-25%, 25-50% 50-75%, >75%
% Bare Ground: 0-10%, 10-25%, 25-50% 50-75%, >75%

HABITAT DESCRIPTION: General description of vegetation community, overall**habitat quality, surrounding land use, threats, etc:** Non-native grassland;
ornamental / disturbed habitat on an abandoned
golf course property; tilled / planted agricultural
fields, and creek bed and banks of the
Zapato-Chino Creek.**OTHER NOTES ABOUT THE SURVEY/HABITAT/ SPECIES/ETC:**area is surrounded by active agriculture;
mostly orchards - survey area is along
a proposed transmission line (800-ft
buffer)**PLEASE RETURN THIS SURVEY REPORTING FORM TO THE CALIFORNIA
DEPARTMENT OF FISH AND GAME - SAN JOAQUIN VALLEY SOUTHERN
SIERRA REGION AT THE FOLLOWING ADDRESS:**

California Department of Fish and Game
ATTN: Steve Juarez, Conservation Planning Supervisor
1234 E. Shaw Ave
Fresno, CA 93710

OR EMAIL THE COMPLETED FORM TO: sjuarez@dfg.ca.gov

***ALL OBSERVATIONS OF BLUNT-NOSED LEOPARD LIZARDS AND OTHER SENSITIVE
SPECIES SHOULD BE PROMPTLY REPORTED TO THE CALIFORNIA NATURAL
DIVERSITY DATABASE. SUBMISSION OF THIS FORM DOES NOT ENTAIL REPORTING
TO THE DATABASE, WHICH IS MAINTAINED BY THE WILDLIFE AND HABITAT DATA
ANALYSIS BRANCH OF THE DEPARTMENT OF FISH AND GAME.

2003 Blunt-nosed Leopard Lizard
(*Gambelia sila*)
Survey Reporting Form

SURVEY DATE(S) (up to 5 days of surveys from a single site can be reported on this form): September 9-10, 2009

SURVEYORS: ~~B.~~ D. Pugh (L2), Alyssa Berry (L2),
Kate Eldridge (L2)

SITE NAME AND LOCATION [Please also attach or sketch a map on back]:

County: Fresno Landowner/Mgr: Private / Solar 1 1/2
 Quad Name: Avenal Elevation: 550-640 ft Project

T 21 S R 16 E ^{SW} SE $\frac{1}{4}$ of SE $\frac{1}{4}$ of Section 192 and NW $\frac{1}{4}$ of NW $\frac{1}{4}$ of 14 of

UTM Zone (10,11): 11 Datum: WGS 84 (NAD83, NAD27, WGS84, other) S11 $\frac{1}{4}$ S12

Source (GPS, map & type, other): GPS, MapS Point Accuracy ± 3 meters

UTM COORDINATES: see maps

SURVEY RESULTS:

DATE	START TIME	END TIME	START AIR TEMP	END AIR TEMP	# BNLL OBSERVED Adults/Hatchlings	APPROXIMATE DISTANCE COVERED (IN TENTHS OF A MILE)
9/9/09	0930	1050	29.5C	33.3C	0 1 0	31
9/10/09	0839	0952	26.5C	33C	0 1 0	
					1	
					1	
					1	

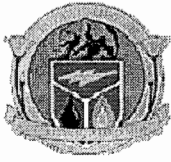
TOTAL NUMBER OF OBSERVATIONS FOR THE THREE MOST COMMON LIZARDS (combined numbers for all survey days):

Species Uta stansburiana elegans Number observed: 34 + 49 = 83

Species Sceloporus uniformis Number observed: 5 + 9 = 14

Species _____ Number observed: _____

BNLL Survey Site Name: San Joaquin Solar 172
Juvenile #4-5**HABITAT DESCRIPTION: Estimation of average vegetative cover on the site**
[circle the correct value]:% Shrub: 0-10% 10-25%, 25-50%, 50-75%, >75%% Forb: 0-10% 10-25%, 25-50%, 50-75%, >75%% Grass: 0-10%, 10-25%, 25-50%, 50-75%, >75%% Bare Ground: 0-10%, 10-25%, 25-50%, 50-75%, >75%**HABITAT DESCRIPTION: General description of vegetation community, overall**habitat quality, surrounding land use, threats, etc: Non-native grassland;
ornamental / disturbed habitat on an abandoned
golf course property; tilled / planted agricultural
fields, and creek bed and banks of the
Zapato-chino Creek.**OTHER NOTES ABOUT THE SURVEY/HABITAT/ SPECIES/ETC:**area is surrounded by active agriculture;
mostly orchards
Survey area is an 800 ft buffer of a transmission
line**PLEASE RETURN THIS SURVEY REPORTING FORM TO THE CALIFORNIA
DEPARTMENT OF FISH AND GAME - SAN JOAQUIN VALLEY SOUTHERN
SIERRA REGION AT THE FOLLOWING ADDRESS:**California Department of Fish and Game
ATTN: Steve Juarez, Conservation Planning Supervisor
1234 E. Shaw Ave
Fresno, CA 93710**OR EMAIL THE COMPLETED FORM TO: sjuarez@dfg.ca.gov*******ALL OBSERVATIONS OF BLUNT-NOSED LEOPARD LIZARDS AND OTHER SENSITIVE
SPECIES SHOULD BE PROMPTLY REPORTED TO THE CALIFORNIA NATURAL
DIVERSITY DATABASE. SUBMISSION OF THIS FORM DOES NOT ENTAIL REPORTING
TO THE DATABASE, WHICH IS MAINTAINED BY THE WILDLIFE AND HABITAT DATA
ANALYSIS BRANCH OF THE DEPARTMENT OF FISH AND GAME.**



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV**

**APPLICATION FOR CERTIFICATION
FOR THE *SAN JOAQUIN SOLAR UNITS 1 AND 2*
LICENSING PROJECT**

Docket No. 08-AFC-12

**PROOF OF SERVICE
(Revised 10/19/2009)**

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Declaration of Service

I, Anne Runnalls, declare that on October 19, 2009, I served and filed copies of the attached Phase II Environmental Site Assessment Report, dated October 16, 2009. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [<http://www.energy.ca.gov/sitingcases/sjsolar/index.html>]. The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(Check all that Apply)

For service to all other parties:

 x sent electronically to all email addresses on the Proof of Service list;

 by personal delivery or by depositing in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

For filing with the Energy Commission:

 x sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (preferred method);

OR

 depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION

Attn: Docket No. 08-AFC-12

1516 Ninth Street, MS-4

Sacramento, CA 95814-5512

docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.



Anne Runnalls