



DOCKET	
08-AFC-5	
DATE	<u>JUN 11 2010</u>
RECD.	<u>JUN 11 2010</u>

June 11, 2010

Mr. Christopher Meyer
Project Manager
Attn: Docket No. 08-AFC-5
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Imperial Valley Solar (formerly Solar Two) (08-AFC-5)
Applicant's Submittal of Late Spring Botany Report
URS Project No. 27657106.00804

Dear Mr. Meyer:

On behalf of Imperial Valley Solar (formerly Solar Two), LLC, URS Corporation Americas (URS) hereby submits Applicant's Late Spring Botany Report.

I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge. I also certify that I am authorized to submit on behalf of Imperial Valley Solar, LLC.

Sincerely,

Angela Leiba
Project Manager

AL: ml



May 8, 2010

Andrew Trouette
Bureau of Land Management
El Centro Field Office
1661 S. Fourth Street
El Centro, CA 92243

Joy Nishida
California Energy Commission
1516 Ninth Street, MS-4
Sacramento, CA 95814

Subject: Late Spring 2010 Botanical Surveys for Imperial Valley Solar (formerly
Solar Two) URS Project No. 27657106

INTRODUCTION

In response to above average rainfall events that have occurred within Imperial County during 2010 year to date, two rounds of spring botanical surveys were conducted by URS Corporation (URS) for the Imperial Valley Solar Project Site (IVS) to supplement botanical surveys conducted in both 2007 and 2008.

The surveys incorporated survey protocols published by the Bureau of Land Management (BLM) (BLM 1996a, BLM 1996b, BLM 2001, and BLM 2009) and reviewed and approved by the California Department of Fish and Game (CDFG), California Energy Commission (CEC) and BLM (BLM 2010, CDFG 2010a, and CEC 2010) prior to commencement of botanical surveys on the site.

During the 2007 and 2008 surveys and the early spring (round one) botanical surveys conducted from February 22 to March 2, 2010, no special-status plant species were detected. Two of the species detected on the site during the early spring (round one) surveys are on the California Native Plant Society (CNPS) “watch list” (List 4). These species were Thurber’s pilostyles (*Pilostyles thurberi*) and Utah vine milkweed (*Cynanchum utahense*).

This report describes the results of a second round of spring 2010 botanical surveys. Between April 5 and April 13, 2010 surveys were conducted for the IVS site, the transmission line and the waterline. From April 28 to 29, 2010 botanists conducted a survey of the laydown area and the access road from the laydown area adjacent to Dunaway Road to the IVS site. Collectively, these areas are referred to as the “Project area” (Figure 1). The methodology and results of this second round of spring 2010 botanical surveys is discussed below.

METHODS

For the second round of 2010 spring botanical surveys, the IVS Project area was divided into 69 approximately 95-acre survey cells (Figure 1). Working in teams of two (Table 1), botanists surveyed an average of two cells each day, documenting the occurrence of special-status plant taxa and preparing a floristic inventory for each cell (Tables 2 through 4). Surveys were performed by walking transects spaced 100 feet apart throughout each cell. The survey corridor width for the waterline survey was 150 feet from either side of Evan Hewes Highway. The transmission line survey corridor was 500-feet wide (250 feet from each side of the centerline), and the access road survey corridor was 300-feet wide (150 feet from each side of the centerline).

Surveyors used hand-held GPS units to orient themselves on site and walked transects in either north-south or east-west bearings. On average, each team spent a minimum of three hours surveying each 95-acre cell, surveying a maximum of 15 acres per person-hour. Typical rate of coverage was 12 acres per person-hour.

A focal species list of potentially occurring sensitive species was developed prior to the survey effort in consultation with CEC and BLM agency staff (Table 5). For all special-status plant populations detected, the population was photographed and enumerated, GPS waypoints were recorded, and data sheets completed.

A total of 13 botanists participated in the late spring survey, nine of which participated in the early spring survey. First-time participants underwent a day-long orientation whereby they were shown reference populations of Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*), brown turbans (*Malperia tenuis*), Wiggins' croton (*Croton wigginsii*), Emory's crucifixion-thorn (*Castela emoryi*) Utah vine milkweed (*Funastrum [=Cynanchum] utahense*), and Thurber's pilostyles (*Pilostyles thurberi*), along with its host, dye plant (*Psoralea emoryi*). Subsequently, new participants were paired with veterans from the first round of surveys to assist in becoming quickly familiar with the survey methodology and the site's flora. All participants in the late spring survey have experience with the flora of California's desert regions. Résumés of the surveyors are provided as Appendix A.

Once all cells were surveyed, eight surveyors dedicated one and a half days (12 person-days) to perform follow-up surveys of targeted areas. Areas of specific interest consisted of all locations where brown turbans (*Malperia tenuis*) were found, all locations where Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*) populations were detected, and areas deemed to be especially suitable habitat for each of these two species. The team visited each location and conducted random, meandering surveys to determine if additional individuals were present. During these surveys, eight or more person-hours were spent conducting intensive surveys at these locations.

RESULTS

The 2010 survey was performed by thirteen botanists (Table 1) after an above-average rainfall year and during what was considered to be a spring season with very favorable conditions for native wild flowers in the desert regions. The difference in conditions from previous years was readily apparent

Andrew Trouette, BLM
Joy Nishida, CEC
May 8, 2010
Page 3

to the three team members that surveyed the site in 2008 and 2010 and is demonstrated by the number of new species recorded in the Project area compared with earlier years. All CNPS List 1 and 2 species detected during the spring botanical surveys are shown on Figure 2 (no List 1 or 2 species were detected in the early spring 2010 botany surveys). All CNPS List 4 species detected during either the early spring or second round of spring surveys are presented on Figure 3.

The 2010 surveys added a total of 24 native plant species, 2 subspecies and 2 varieties to the 2008 inventory. Complete floral species lists for the Project site and laydown area, transmission line, waterline, and access road ROWs are provided (Tables 2-4). Three of these species are special-status taxa (CNPS List 2 species). Each of these species is discussed in detail, below.

During the early spring surveys conducted February 22 to March 2, 2010, two CNPS List 4 species were detected (Figure 3). Additional occurrences of these species were detected during the second round of spring surveys. These species are also described below.

CNPS LIST 2 SPECIES

Brown Turbans

Brown turbans (*Malperia tenuis*) is a small annual herb belonging to the daisy family (Asteraceae). It is known from Imperial and San Diego counties and Baja California. It is found in Sonoran Desert (creosote-bush) scrub growing on sandy, clay or rocky slopes and flats at between 50 and 1,000 feet in elevation. It is distinguished by having discoid heads, a naked receptacle, and a pappus of three bristles and three minute scales. Corollas are white and tinged with pink. Flowering occurs March through April. It is a CNPS List 2.3 species.

Brown turbans is a relatively non-descript herb. Where it grows among other annual members of the daisy family, unless growing in a dense colony, it is easily missed. According to botanist Michelle Balk, who participated in the spring surveys at IVS, it is also likely to be much more widespread than previously reported (M. Balk, pers. comm.). At IVS, it was found at five locations (cells 5, 6, 53, 63, and 67; see Figure 2), in populations consisting of only one to three individuals. Each of the populations is situated along the southern boundary of the Project area, bordering the Interstate-8 corridor. It is somewhat surprising to find annual species in such small numbers. Among the botanists participating in the survey, it was concluded that these few, scattered individuals likely represent only isolated individuals carried by winds along the highway from source populations west or south of the site. The nearest large population of brown turbans is at Painted Gorge approximately 7.5 miles to the northwest of the western end of the study area.

The year 2010 was considered to be a fairly favorable year for the species, as it was found in very large numbers at reference populations in Painted Gorge and Fish Creek (M. Balk, pers. comm.) For this reason, the botanists conducting the surveys did not feel that the ten individuals of brown turbans scattered over the 6,400-acre Project area represented viable populations of the species onsite. No collections of this plant were made due to the uncommon and patchy nature of its occurrence onsite.

Andrew Trouette, BLM
Joy Nishida, CEC
May 8, 2010
Page 4

Harwood's Milk-Vetch

Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*) is an annual herb belonging to the pea family (Fabaceae). It is known from San Diego, Riverside and Imperial counties, as well as Arizona and northwestern Mexico. It is found in Sonoran Desert (creosote-bush) scrub growing on sandy or gravelly substrate between sea level and 1000 feet in elevation. It is distinguished by having 11-19 leaflets over 1 mm wide that are not spine-tipped, terminal leaflets that are clearly jointed to the midrib, un-forked hairs, with purplish flowers and linear to ovate inflated fruits over 4 mm long. Flowering occurs January through May. Harwood's milk-vetch is on CNPS List 2.2.

At IVS, the greatest concentration of Harwood's milk-vetch was found in cell #5, where as many as 26 individuals were found (Figure 2). Another seven plants were found in cell #6, approximately 0.6 mile to the east. Three plants were found in cell #33, approximately 3.3 miles to the east. With the exception of one plant, all individuals were detected on slightly sandy, minor swales in desert pavement with bursage (*Ambrosia dumosa*), creosote-bush (*Larrea tridentata*), and wild turnip (*Brassica tournefortii*). The one exception was a single plant found on deep sand in a wash. Despite consensus by the botanists participating in the surveys that the plants found growing onsite are Harwood's milk-vetch, a specimen was collected and sent to Jon Rebman of the San Diego Natural History Museum (SDNHM) for independent confirmation. Results from this consultation are expected in May.

Wiggins' Croton

Wiggins' croton (*Croton wigginsii*) is a perennial shrub belonging to the spurge family (Euphorbiaceae). In California, it is restricted to Imperial County, although it is also found in Arizona, Baja California and Sonora, Mexico. It is found in Sonoran Desert scrub and is considered principally restricted to sand dunes. It is distinguished from the more common and widely occurring California croton (*C. californicus*) by having larger seeds (6.5-7 mm vs. 3.5-5.5 mm) and, when in fruit, having longer pedicels (4-7 mm vs. <2 mm). Flowering occurs March through May. Wiggins' croton is listed by the State of California (CDFG 2010b) as rare and it is on the CNPS List 2.2.

Most California records for the species are from the Algodones Dunes approximately 35 miles northeast of Plaster City. However, two mature individuals and five seedlings and young plants were found growing in deep sand along the side of Evan Hewes Highway near the eastern entrance to the Plaster City Off-Highway Vehicle (OHV) Area (Figure 2). The croton were located about 60 feet from the highway pavement on the south side for the road between the railroad and highway. No other plants were found in deep sand anywhere else in the IVS study area. It is strongly suspected that the presence of these few plants are the result of propagules being transported by OHVs from the Algodones Dunes to the OHV park, north of Plaster City and the highway. A specimen was collected and sent to Jon Rebman of the SDNHM for verification of species identification; Dr. Rebman confirmed it to be Wiggins' croton.

CNPS LIST 4 SPECIES

Utah Vine Milkweed

Utah vine milkweed (*Funastrum* [=*Cynanchum*] *utahense*) is a vining perennial member of the dogbane family (Apocynaceae²). It is recorded from Imperial, Riverside, San Bernardino and San Diego counties, as well as Arizona, Nevada and Utah. It is found in Sonoran Desert (creosote-bush) scrub growing on sandy or gravelly substrate between 500 and 4,500 feet in elevation. Utah vine milkweed is on CNPS “Watch” List 4.3.

At the IVS study area, Utah vine milkweed was found growing in sandy and gravelly soil either alone or intertwined on support plants such as bursage, creosote bush, galleta grass (*Pleuraphis rigida*), and white rhatany (*Krameria grayi*), among others. The majority of the plants found are in the western half of the site with the greatest density occurring in cells 8, 12, 13, 15. Populations were also found in cells 1, 3, 4, 5, 6, 7, 11, 33, 34, and 44, for a total of 85 locations on the IVS site (Figure 3). Recent surveys indicate that Utah vine milkweed appears to be more common in the desert regions of California than previously documented (L. LaPre, pers comm.). The species was also detected during the early spring 2010 surveys conducted on the Project site (Figure 3).

Thurber’s Pilostyles

Thurber’s pilostyles (*Pilostyles thurberi*) is a perennial stem parasite belonging to the rafflesia family (Rafflesiaceae), a group found in tropical America, Africa, Australia and southern and southeast Asia. Thurber’s pilostyles is an uncommon inhabitant of open desert scrub, parasitizing members of the genus *Psorothamnus*, particularly dye plant (*Psorothamnus emoryi*). It is known from Imperial, Riverside and San Diego counties, as well as Arizona, Nevada, and in Mexico from Baja California and Sonora. This completely parasitic, non-chlorophyll producing plant consists of thread-like tissue growing within its host plant. The only parts that appear outside of the host plant are the flowers and bracts, which begin appearing as early as January. It is a CNPS “Watch” List 4 species.

At the IVS Project site, Thurber’s pilostyles was found strictly on dye plant in widely scattered locations. Infected dye plants were found in cells 2, 9, 17, 18, 32 and 34 as well as along the water line on the north side of Evan Hewes Highway, just west of the intersection with Dunaway Road. The greatest concentration of dye plants infected with Thurber’s pilostyles was found along the transmission line approximately 4.4 miles from its intersection with Interstate Highway 8. The species was also detected during the early spring 2010 surveys conducted on the Project site (Figure 3).

ADDITIONAL BOTANICAL SURVEYS

CEC and BLM have requested late season (fall) surveys to be conducted to verify that impacts to state and federally listed Threatened, Endangered, Proposed, Petitioned, and Candidate or California Native Plant Society List 1A, 1B, or 2 plants will be minimized and mitigated.

² The genus was previously placed in the milkweed family (Asclepiadaceae)



Andrew Trouette, BLM
Joy Nishida, CEC
May 8, 2010
Page 6

Sincerely,

URS CORPORATION

Patrick Mock, PhD
Principal Scientist

PM:mv

cc: Daniel Stewart, BLM
Larry LaPre, BLM
Jim Stobaugh, BLM
Rick York, CEC
Christopher Meyer, CEC
Richard Knox, TSNA
Angela Leiba, URS

Attachments:

- Table 1: Late Spring 2010 Survey Effort by Grid Cell
- Table 2: Botanical Species Detected to Date on the IVS Site, Access Road and Laydown Area
- Table 3: Botanical Species Detected in the IVS Waterline Corridor
- Table 4: Botanical Species Detected in the IVS Transmission Line Corridor
- Table 5: Special Status Plant Species Occurring or Potentially Occurring in the Vicinity of the IVS Site
- Figure 1: Botany Survey Area
- Figure 2: Special Status Species Locations Recorded in Early and Late Spring Surveys 2010
- Figure 3: CNPS List 4 "Watch List Plant Species" Recorded in Early and Late Spring Surveys 2010

Appendix A: Resumes of Surveyors

REFERENCES:

- BLM 1996a. Bureau of Land Management. Special Status Plant Management. BLM Manual Handbook 6840-1.
- BLM 1996b. Bureau of Land Management. Special Status Plant Management. BLM Manual Supplement 6840-06.
- BLM 2001. Bureau of Land Management. Special Status Species Management. BLM Manual 6840 Revision.



Andrew Trouette, BLM
Joy Nishida, CEC
May 8, 2010
Page 7

BLM 2009. Bureau of Land Management. Survey Protocols for NEPA/ESA Compliance for BLM Special Status Plant Species.

BLM 2010. Personal communication between Patrick Mock and Andrew Trouette (BLM) in February 2010 regarding the botanical survey effort for the Imperial Valley Solar site.

CDFG 2010a. Personal communication between Patrick Mock and Magdalena Rodriguez (CDFG) in February 2010 regarding the botanical survey effort for the Imperial Valley Solar site.

CDFG 2010b. California Department of Fish and Game, Natural Diversity Database. April 2010. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication. 71 pp. Available on line at <http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf>

CEC 2010. Personal communication between Patrick Mock and Joy Nishida (CEC) in February 2010 regarding the botanical survey effort for the Imperial Valley Solar site.

L. Lapre, pers. comm. Personal communication with BLM biologist Larry LaPre, 2010.

M. Balk, pers. comm. Personal communication with botanist Michelle Balk, 2010.



Table 1
Late Spring 2010 Survey Effort by Grid Cell

Cell #	Surveyors	Date
1	JB, CT	4/6
2	JB, CT	4/7
3	JB, CT	4/6
4	AR, MW	4/6
5	AR, MW	4/6
6	MB, MF, NK, BL	4/6; 4/7
7	MB, BL	4/6
8	MF, NK	4/9
9	MF, NK	4/7
10	MF, NK	4/7; 4/8
11	MF, NK	4/8
12	CB, JL	4/6
13	CB, JL	4/6; 4/7
14	JE, CS	4/6
15	JE, CS	4/6
16	AR, MW	4/7
17	AR, MW	4/7
18	CB, JL	4/8
19	CB, MF, NK, JL	4/9
20	JE	4/7
21	MF, NK, CS	4/6
22	MF, NK	4/6
23	CB, JL	4/7
24	MB, BL	4/7
25	JE, CS	4/7
26	JB, CT	4/8
27	JE, CS	4/8
28	JE, CS	4/8
29	JB, CB, JL	4/5
30	JB, CB, JL	4/5
31	JB, AR, CT, MW	4/8
32	MB, BL	4/8
33	MF, BL, AR, MW	4/5
34	MB, BL	4/7; 4/8
35	AR, MW	4/9
36	AR, MW	4/8
37	AR, MW	4/8
38	JE, CS	4/5
39	JE, CT	4/5
40	NK, CS	4/5
41	MF, NK	4/9
42	NK, CT	4/5



Table 1
Late Spring 2010 Survey Effort by Grid Cell
(Continued)

Cell #	Surveyors	Date
43	MB, BL	4/9
44	MB, BL	4/9
45	MB, MW	4/12
46	MF, LN, CS	4/12
47	JE, AR, CS, MW	4/9
48	JE, AR, CS, MW	4/10
49	JE	4/10
50	MF, LN	4/12
51	MB, MW	4/12
52	NK, BL	4/12
53	JB, NK, BL, JL	4/12
54	AR, CT	4/12
55	CB, JL	4/9
56	CB, JL	4/9
57	JB, CT	4/9
58	JB, CT	4/9
59	NK, MW	4/11
60	JB, CS, CT	4/11
61	AR, CT	4/12
62	JE, CS	4/12
63	JE, CS	4/12
64	JB, JL	4/12
65	JB, JL	4/12
66	JE, AR, CT	4/11
67	NK, BL	4/11
68	MF, LN	4/11
69	LN, MW	4/28
Access road between 67 & 69	LN, MW	4/29
Transmission Line	JB, JE, MF, NK, AR, MW	4/10
Water Line	BL, JL, LN, CS, CT	4/10
Reference Pop Checks	MF, BL, AR, MW	4/5
Reference Pop Checks	MB, JB, JE, NK, JL, LN, CS, CT	4/11

Notes:

Surveyor Acronyms: AR = Amy Richey, BL = Barbara Leitner, CB = Caesara Brungraber, CS = Cecile Shohet, CT = Chris Thayer, JB = Jessica Birnbaum, JE = Jolie Egert, JL = Julie Love, LN = Lech Naumovich, MB = Michelle Balk, MF = Mark Fogiel, MW = Michael Wood, NK = Neal Kramer

Table 2
Botanical Species Detected to Date on IVS Site, Access Road and Laydown Area

Scientific Name	Common Name
GYMNOSPERMS	
Ephedraceae	Ephedra Family
<i>Ephedra trifurca</i>	long-leaved ephedra
ANGIOSPERMS: MONOCOTS	
Agavaceae	Agave Family
<i>Hesperocallis undulata</i>	desert lily
Poaceae	Grass Family
<i>Aristida adscensionis</i>	six-weeks three-awn
<i>Avena fatua</i> *	wild oats
<i>Bouteloua barbata</i> var. <i>barbata</i>	six weeks grama
<i>Bromus madritensis</i> *	foxtail chess
<i>Cynodon dactylon</i> *	Bermuda grass
<i>Hordeum murinum</i> ssp. <i>leporinum</i> *	foxtail barley
<i>Phalaris minor</i> *	Mediterranean canary grass
<i>Pleuraphis rigida</i>	galleta grass
<i>Schismus barbatus</i> *	Mediterranean schismus
ANGIOSPERMS: EUDICOTS	
Aizoaceae	Fig-Marigold Family
<i>Mesembryanthemum crystallinum</i> *	crystalline iceplant
<i>Mesembryanthemum nodiflorum</i> *	slender-leaved iceplant
<i>Sesuvium verrucosum</i>	sea-purslane
Amaranthaceae	Amaranth Family
<i>Tidestromia oblongifolia</i>	honeysweet
Apocynaceae	Dogbane Family
<i>Asclepias albicans</i>	white-stem milkweed
<i>Asclepias subulata</i>	rush milkweed
<i>Funastrum [=Cynanchum] utahense</i> (CNPS List 4.2)	Utah vine milkweed
Asteraceae	Sunflower Family
<i>Ambrosia dumosa</i>	bursage
<i>Ambrosia [= Hymenoclea] salsola</i>	burrobrush
<i>Baileya pauciradiata</i>	desert marigold
<i>Bebbia juncea</i>	rush sweetbush
<i>Calycoseris wrightii</i>	white tackstem
<i>Chaenactis carphoclinia</i> var. <i>carphoclinia</i>	pebble pincushion
<i>Chaenactis fremontii</i>	pincushion
<i>Chaenactis stevioides</i>	desert pincushion
<i>Encelia farinosa</i>	brittlebrush
<i>Encelia frutescens</i>	rayless encelia
<i>Geraea canescens</i>	desert sunflower
<i>Isocoma acradenia</i> var. <i>acradenia</i>	alkali goldenbush
<i>Lactuca serriola</i> *	prickly lettuce
<i>Malacothrix glabrata</i>	desert dandelion

Table 2
Botanical Species Detected to Date on IVS Site, Access Road and Laydown Area
(Continued)

Scientific Name	Common Name
<i>Malperia tenuis</i> (CNPS List 2.3)	brown turbans
<i>Monoptilon bellioides</i>	desert star
<i>Palafoxia arida</i> var. <i>arida</i>	desert Spanish-needle
<i>Pectis papposa</i> var. <i>papposa</i>	cinchweed
<i>Perityle emoryi</i>	rock daisy
<i>Pluchea sericea</i>	arrow weed
<i>Psathyrotes ramosissima</i>	turtleback
<i>Rafinesquia neomexicana</i>	desert chicory
<i>Senecio mohavensis</i>	mojave groundsel
<i>Sonchus asper</i> *	prickly sow thistle
<i>Sonchus oleraceus</i> *	common sow thistle
<i>Stephanomeria pauciflora</i>	wire lettuce
<i>Trichoptilium incisum</i>	yellow dome
Boraginaceae	Borage Family
<i>Cryptantha angustifolia</i>	narrow-leaf cryptantha
<i>Cryptantha barbiger</i>	bearded forget-me-not
<i>Cryptantha dumetorum</i>	bush-loving cryptantha
<i>Cryptantha maritima</i>	whitehair cryptantha
<i>Cryptantha micrantha</i>	purple-root cryptantha
<i>Cryptantha nevadensis</i>	Nevada forget-me-not
<i>Heliotropium curassavicum</i>	salt heliotrope
<i>Pectocarya heterocarpa</i>	Chuckwalla combseed
<i>Pectocarya peninsularis</i>	peninsular pectocarya
<i>Pectocarya platycarpa</i>	broad-fruited combseed
<i>Tiquilla palmeri</i>	Palmer's tiquilla
<i>Tiquilla plicata</i>	plicate coldenia
Brassicaceae	Mustard Family
<i>Brassica tournefortii</i> *	wild turnip
<i>Dithyrea californica</i>	California shieldpod
<i>Lepidium lasiocarpum</i> var. <i>lasiocarpum</i>	hairy podded pepper grass
<i>Lepidium nitidum</i> var. <i>howellii</i>	Howell's pepperweed
<i>Sisymbrium altissimum</i> *	tumble mustard
<i>Sisymbrium irio</i> *	London rocket
Cactaceae	Cactus family
<i>Cylindropuntia echinocarpa</i>	silver cholla
Campanulaceae	Bellflower Family
<i>Nemacladus rubescens</i>	desert threadplant
Caryophyllaceae	Pink Family
<i>Achyronychia cooperi</i>	frost-mat
Chenopodiaceae	Goosefoot Family
<i>Atriplex canescens</i>	four-wing saltbush
<i>Atriplex hymenelytra</i>	desert holly
<i>Atriplex polycarpa</i>	allscale

Table 2
Botanical Species Detected to Date on IVS Site, Access Road and Laydown Area
(Continued)

Scientific Name	Common Name
<i>Chenopodium album</i> *	lamb's quarters
<i>Chenopodium murale</i> *	nettle-leaf goosefoot
Euphorbiaceae	Spurge Family
<i>Chamaesyce micromera</i>	prostrate spurge
<i>Chamaesyce polycarpa</i>	sand mat
<i>Chamaesyce setiloba</i>	Yuma sand mat
<i>Ditaxis lanceolata</i>	lance-leaved ditaxis
<i>Ditaxis neomexicana</i>	common ditaxis
<i>Stillingia linearifolia</i>	narrow-leaved stillingia
<i>Stillingia spinulosa</i>	annual stillingia
Fabaceae	Legume Family
<i>Astragalus didymocarpus</i>	dwarf white milk-vetch
<i>Astragalus insularis</i> var. <i>harwoodii</i> (CNPS List 2.2)	Harwood's milk-vetch
<i>Dalea mollis</i>	dalea
<i>Dalea mollissima</i>	hairy dalea
<i>Medicago polymorpha</i> *	burclover
<i>Parkinsonia floridum</i>	palo verde
<i>Prosopis glandulosa</i>	mesquite
<i>Prosopis pubescens</i>	screwbean mesquite
<i>Psoralea argemone</i>	dye plant
<i>Psoralea schottii</i>	indigobush
<i>Psoralea spinosus</i>	smoke tree
Fouquieriaceae	Ocotillo Family
<i>Fouquieria splendens</i> ssp. <i>splendens</i>	ocotillo
Geraniaceae	Geranium Family
<i>Erodium cicutarium</i> *	red-stemmed filaree
<i>Erodium texanum</i>	filaree
Hydrophyllaceae	Waterleaf Family
<i>Phacelia crenulata</i> var. <i>minutiflora</i>	notch-leaved phacelia
<i>Phacelia neglecta</i>	alkali phacelia
Krameriaceae	Rhatany Family
<i>Krameria erecta</i>	pima rhatany
<i>Krameria grayi</i>	white rhatany
Loasaceae	Loasa Family
<i>Mentzelia albicaulis</i>	white-stemmed blazing star
<i>Mentzelia involucrata</i>	bracted blazing star
<i>Petalonyx thurberi</i> ssp. <i>thurberi</i>	sandpaper plant
Malvaceae	Mallow Family
<i>Eremalche rotundifolia</i>	desert five-spot
<i>Malva parviflora</i> *	Cheeseweed
<i>Sphaeralcea ambigua</i>	desert mallow
Montiaceae	Montia Family

Table 2
Botanical Species Detected to Date on IVS Site, Access Road and Laydown Area
(Continued)

Scientific Name	Common Name
<i>Cistanthe [=Calandrinia] ambigua</i>	desert red maids
Nyctaginaceae	Four O'clock Family
<i>Abronia villosa</i> var. <i>villosa</i>	hairy sand-verbena
<i>Allionia incarnata</i>	trailing windmills
Onagraceae	Evening-Primrose Family
<i>Camissonia boothii</i> ssp. <i>boothii</i>	bottlebrush primrose
<i>Camissonia boothii</i> ssp. <i>condensata</i>	bottlebrush primrose
<i>Camissonia brevipes</i> ssp. <i>brevipes</i>	golden sun cup
<i>Camissonia californica</i>	California evening primrose
<i>Camissonia claviformis</i> ssp. <i>claviformis</i>	brown-eyed evening primrose
<i>Camissonia claviformis</i> ssp. <i>peirsonii</i>	brown-eyed evening primrose
<i>Oenothera deltooides</i> ssp. <i>deltooides</i>	devil's lantern
Orobanchaceae	Broom-Rape Family
<i>Orobanche cooperi</i>	pine broom-rape
Papaveraceae	Poppy Family
<i>Eschscholzia minutiflora</i>	pygmy goldenpoppy
Plantaginaceae	Plantain Family
<i>Plantago ovata</i>	woolly plantain
Polemoniaceae	Phlox Family
<i>Aliciella [=Gilia] latifolia</i>	broad-leaved gilia
<i>Langloisia setosissima</i> ssp. <i>setosissima</i>	bristly langlosia
<i>Loeseliastrum matthewsii</i>	desert calico
Polygonaceae	Buckwheat Family
<i>Chorizanthe brevicornu</i>	brittle spineflower
<i>Chorizanthe corrugata</i>	wrinkled spineflower
<i>Chorizanthe rigida</i>	rigid spineflower
<i>Eriogonum deflexum</i> var. <i>deflexum</i>	skeleton weed
<i>Eriogonum inflatum</i>	desert trumpet
<i>Eriogonum reniforme</i>	buckwheat
<i>Eriogonum thomasii</i>	Thomas buckwheat
<i>Eriogonum trichopes</i>	little desert trumpet
Rafflesiaceae	Rafflesia Family
<i>Pilostyles thurberi</i> (CNPS List 4.3)	Thurber's pilostyles
Resdaceae	Mignonette Family
<i>Oligomeris linifolia</i>	narrow-leaved oligomeris
Solanaceae	Nightshade Family
<i>Datura discolor</i>	desert thornapple
<i>Lycium brevipes</i> var. <i>brevipes</i>	desert-thorn
Tamaricaceae	Tamarisk Family
<i>Tamarix aphylla</i> *	athel tamarisk
<i>Tamarix parviflora</i> *	small flower tamarisk
<i>Tamarix ramosissima</i> *	Mediterranean tamarisk
Viscaceae	Mistletoe Family



Table 2
Botanical Species Detected to Date on IVS Site, Access Road and Laydown Area
(Continued)

Scientific Name	Common Name
<i>Phoradendron californicum</i>	desert mistletoe
Zygophyllaceae	Caltrop Family
<i>Fagonia pachyacantha</i>	sticky fagonia
<i>Kallstroemia grandiflora</i> *	Arizona caltrop
<i>Larrea tridentata</i>	creosote bush
<i>Tribulus terrestris</i> *	puncture vine

*non-native

Table 3
Botanical Species Detected in the IVS Waterline Corridor

Scientific Name	Common Name
ANGIOSPERMS: MONOCOTS	
Arecaeae	Palm Family
<i>Phoenix dactylifera</i> *	date palm
<i>Washingtonia filifera</i> *	Washington fan palm
Agavaceae	Agave Family
<i>Hesperocallis undulata</i>	desert lily
<i>Yucca schidigera</i> **	Mojave yucca
Araceae	Arum Family
<i>Lemna gibba</i>	duckweed
Poaceae	Grass Family
<i>Aristida adscensionis</i>	six-weeks three-awn
<i>Arundo donax</i> *	giant reed
<i>Avena fatua</i> *	wild oats
<i>Avena sativa</i> *	cultivated oats
<i>Bouteloua barbata</i> var. <i>barbata</i>	six weeks grama
<i>Cynodon dactylon</i> *	Bermuda grass
<i>Distichlis spicata</i>	saltgrass
<i>Echinochloa colona</i> *	jungle rice
<i>Hordeum murinum</i> ssp. <i>leporinum</i> *	foxtail barley
<i>Hordeum vulgare</i> *	cultivated barley
<i>Leptochloa uninervia</i>	Mexican sprangletop
<i>Lolium temulentum</i> *	Darnel ryegrass
<i>Phalaris canariensis</i> *	annual canarygrass
<i>Phalaris minor</i> *	Mediterranean canary grass
<i>Phragmites australis</i>	common reed
<i>Pleuraphis rigida</i>	galleta grass
<i>Polypogon interruptus</i> *	ditch rabbitsfoot grass
<i>Polypogon monspeliensis</i> *	annual rabbitsfoot grass
<i>Schismus barbatus</i> *	Mediterranean schismus
<i>Triticum aestivum</i> *	cultivated wheat
Typhaceae	Cattail Family
<i>Typha angustifolia</i>	narrow-leaved cattail
<i>Typha latifolia</i>	broad-leaved cattail
ANGIOSPERMS: EUDICOTS	
Aizoaceae	Fig-Marigold Family
<i>Sesuvium verrucosum</i>	western sea-purslane
Amaranthaceae	Amaranth Family
<i>Tidestromia oblongifolia</i>	honeysweet
Apocynaceae	Dogbane Family
<i>Nerium oleander</i> *	oleander

Table 3
Botanical Species Detected in the IVS Waterline Corridor
(Continued)

Scientific Name	Common Name
Asteraceae	Sunflower Family
<i>Ambrosia dumosa</i>	bursage
<i>Baccharis emoryi</i>	Emory's baccharis
<i>Calycoseris wrightii</i>	white tackstem
<i>Chaenactis carphoclinia</i> var. <i>carphoclinia</i>	pebble pincushion
<i>Chaenactis stevioides</i>	desert pincushion
<i>Chloracantha spinosa</i> var. <i>spinosa</i>	spiny goldenbush
<i>Encelia frutescens</i>	rayless encelia
<i>Geraea canescens</i>	desert sunflower
<i>Helianthus annuus</i>	western sunflower
<i>Isocoma acradenia</i> var. <i>acradenia</i>	alkali goldenbush
<i>Lactuca serriola</i> *	prickly lettuce
<i>Malacothrix glabrata</i>	desert dandelion
<i>Palafoxia arida</i> var. <i>arida</i>	desert Spanish-needle
<i>Pectis papposa</i> var. <i>papposa</i>	cinchweed
<i>Pluchea sericea</i>	arrow weed
<i>Rafinesquia neomexicana</i>	desert chicory
<i>Sonchus asper</i> *	prickly sow thistle
<i>Sonchus oleraceus</i> *	common sow thistle
<i>Stephanomeria pauciflora</i>	wire lettuce
<i>Xanthium strumarium</i>	cocklebur
Boraginaceae	Borage Family
<i>Cryptantha angustifolia</i>	narrow-leaf cryptantha
<i>Cryptantha maritima</i>	whitehair cryptantha
<i>Heliotropium curassavicum</i>	salt heliotrope
<i>Pectocarya heterocarpa</i>	Chuckwalla combseed
<i>Tiquilla palmeri</i>	Palmer's tiquilla
<i>Tiquilla plicata</i>	plicate coldenia
Brassicaceae	Mustard Family
<i>Brassica tournefortii</i> *	wild turnip
<i>Capsella bursa-pastoris</i> *	shepard's purse
<i>Lepidium lasiocarpum</i> var. <i>lasiocarpum</i>	hairy podded pepper grass
<i>Sisymbrium altissimum</i> *	tumble mustard
<i>Sisymbrium irio</i> *	London rocket
Caryophyllaceae	Pink Family
<i>Achyronychia cooperi</i>	frost-mat
<i>Spergularia salina</i>	salt-marsh sand-spurry
Chenopodiaceae	Goosefoot Family
<i>Allenrolfea occidentalis</i>	iodinebush
<i>Atriplex canescens</i>	four-wing saltbush
<i>Atriplex hymenelytra</i>	desert holly
<i>Atriplex lentiformis</i> ssp. <i>torreyi</i>	Torrey's saltbush
<i>Atriplex polycarpa</i>	allscale

Table 3
Botanical Species Detected in the IVS Waterline Corridor
(Continued)

Scientific Name	Common Name
<i>Atriplex semibaccata</i> *	Australian saltbush
<i>Atriplex triangularis</i>	spearscale
<i>Bassia hyssopifolia</i> *	five-hook bassia
<i>Chenopodium murale</i> *	nettle-leaf goosefoot
<i>Salsola tragus</i> *	prickly Russian thistle
<i>Suaeda nigra</i>	seepweed
Convolvulaceae	Morning-glory Family
<i>Cressa truxillensis</i>	alkali weed
Euphorbiaceae	Spurge Family
<i>Chamaesyce micromera</i>	prostrate spurge
<i>Chamaesyce polycarpa</i>	sand mat
<i>Croton wigginsii</i> (CNPS List 2.2)	Wiggins' croton
<i>Ditaxis neomexicana</i>	common ditaxis
Fabaceae	Legume Family
<i>Acacia greggii</i>	catclaw acacia
<i>Dalea mollissima</i>	hairy dalea
<i>Medicago sativa</i> *	alfalfa
<i>Parkinsonia floridum</i>	palo verde
<i>Prosopis glandulosa</i>	mesquite
<i>Prosopis strombulifera</i> *	Argentine screwbean
<i>Psoralea argemone</i>	dye plant
<i>Psoralea schottii</i>	indigobush
<i>Psoralea spinosus</i>	smoke tree
Fouquieriaceae	Ocotillo Family
<i>Fouquieria splendens</i> ssp. <i>splendens</i>	ocotillo
Geraniaceae	Geranium Family
<i>Erodium cicutarium</i> *	red-stemmed filaree
<i>Erodium texanum</i>	filaree
Hydrophyllaceae	Waterleaf Family
<i>Phacelia crenulata</i>	notch-leaved phacelia
<i>Phacelia neglecta</i>	alkali phacelia
Krameriaceae	Rhatany Family
<i>Krameria grayi</i>	white rhatany
Malvaceae	Mallow Family
<i>Malva parviflora</i> *	cheeseweed
<i>Malvella leprosa</i>	alkali mallow
<i>Sphaeralcea ambigua</i>	desert mallow
Montiaceae	Montia Family
<i>Cistanthe [=Calandrinia] ambigua</i>	desert red maids
Myrtaceae	Myrtle Family
<i>Eucalyptus sideroxylon</i> *	red ironbark

Table 3
Botanical Species Detected in the IVS Waterline Corridor
(Continued)

Scientific Name	Common Name
Nyctaginaceae	Four O'clock Family
<i>Abronia villosa</i> var. <i>villosa</i>	hairy sand-verbena
<i>Allionia incarnata</i>	trailing windmills
Onagraceae	Evening-Primrose Family
<i>Camissonia boothii</i> ssp. <i>condensata</i>	bottlebrush primrose
<i>Camissonia brevipes</i> ssp. <i>brevipes</i>	golden sun cup
<i>Camissonia claviformis</i> ssp. <i>claviformis</i>	brown-eyed evening primrose
<i>Camissonia claviformis</i> spp. <i>peirsonii</i>	brown-eyed evening primrose
<i>Oenothera deltooides</i> ssp. <i>deltooides</i>	devil's lantern
Orobanchaceae	Broom-Rape Family
<i>Orobanche cooperi</i>	pine broom-rape
Oxalidaceae	Oxalis Family
<i>Oxalis corniculata</i> *	creeping wood-sorrel
Papaveraceae	Poppy Family
<i>Eschscholzia minutiflora</i>	pygmy goldenpoppy
Plantaginaceae	Plantain Family
<i>Plantago ovata</i>	wooly plantain
Polygonaceae	Buckwheat Family
<i>Chorizanthe brevicornu</i>	brittle spineflower
<i>Chorizanthe corrugata</i>	wrinkled spineflower
<i>Chorizanthe rigida</i>	rigid spineflower
<i>Eriogonum inflatum</i>	desert trumpet
<i>Eriogonum thomasii</i>	Thomas buckwheat
<i>Persicaria hydropiperoides</i>	water pepper
<i>Polygonum arenastrum</i> *	common knotweed
<i>Polygonum argyrocoleon</i> *	Persian knotweed
ANGIOSPERMS: MONOCOTS	
Rafflesiaceae	Rafflesia Family
<i>Pilostyles thurberi</i> (CNPS List 4.3)	Thurber's pilostyles
Resdaceae	Mignonette Family
<i>Oligomeris linifolia</i>	narrow-leaved oligomeris
Rutaceae	Rue Family
<i>Citrus sinensis</i> *	orange
Salicaceae	Willow Family
<i>Salix exigua</i>	narrow-leaved willow
Solanaceae	Nightshade Family
<i>Datura discolor</i>	desert thornapple
<i>Lycium brevipes</i> var. <i>brevipes</i>	desert-thorn
Tamaricaceae	Tamarisk Family
<i>Tamarix aphylla</i> *	athel tamarisk
<i>Tamarix ramosissima</i> *	Mediterranean tamarisk

Table 3
Botanical Species Detected in the IVS Waterline Corridor
(Continued)

Scientific Name	Common Name
Zygophyllaceae	Caltrop Family
<i>Larrea tridentata</i>	creosote bush
<i>Tribulus terrestris</i> *	puncture vine

*non-native

**California native species not indigenous to site

Table 4
Botanical Species Detected in the IVS Transmission Line Corridor

Scientific Name	Common Name
GYMNOSPERMS	
Ephedraceae	Ephedra Family
<i>Ephedra trifurca</i>	long-leaved ephedra
ANGIOSPERMS: MONOCOTS	
Agavaceae	Agave Family
<i>Hesperocallis undulata</i>	desert lily
Poaceae	Grass Family
<i>Aristida adscensionis</i>	six-weeks three-awn
<i>Pleuraphis rigida</i>	galleta grass
<i>Schismus barbatus*</i>	Mediterranean schismus
<i>Triticum aestivum*</i>	cultivated wheat
ANGIOSPERMS: EUDICOTS	
Amaranthaceae	Amaranth Family
<i>Tidestromia oblongifolia</i>	honeysweet
Asteraceae	Sunflower Family
<i>Ambrosia dumosa</i>	bursage
<i>Ambrosia [= Hymenoclea] salsola</i>	burrobrush
<i>Baileya pauciradiata</i>	desert marigold
<i>Chaenactis carphoclinia</i> var. <i>carphoclinia</i>	pebble pincushion
<i>Chaenactis stevioides</i>	desert pincushion
<i>Encelia frutescens</i>	rayless encelia
<i>Geraea canescens</i>	desert sunflower
<i>Isocoma acradenia</i> var. <i>acradenia</i>	alkali goldenbush
<i>Malacothrix glabrata</i>	desert dandelion
<i>Monoptilon bellioides</i>	desert star
<i>Palafoxia arida</i> var. <i>arida</i>	desert Spanish-needle
<i>Perityle emoryi</i>	rock daisy
<i>Pluchea sericea</i>	arrow weed
<i>Psathyrotes ramosissima</i>	turtleback
<i>Rafinesquia neomexicana</i>	desert chicory
<i>Sonchus asper*</i>	prickly sow thistle
<i>Sonchus oleraceus*</i>	common sow thistle
<i>Stephanomeria pauciflora</i>	wire lettuce
Boraginaceae	Borage Family
<i>Cryptantha angustifolia</i>	narrow-leaf cryptantha
<i>Cryptantha maritima</i>	cryptantha
<i>Cryptantha nevadensis</i>	Nevada forget-me-not
<i>Nama demissum</i>	purplemat
<i>Pectocarya heterocarpa</i>	Chuckwalla combseed
<i>Tiquillia palmeri</i>	Palmer's tiquillia
<i>Tiquillia plicata</i>	plicate coldenia

Table 4
Botanical Species Detected in the IVS Transmission Line Corridor
(Continued)

Scientific Name	Common Name
Brassicaceae	Mustard Family
<i>Brassica tournefortii*</i>	wild turnip
<i>Lepidium lasiocarpum</i> var. <i>lasiocarpum</i>	hairy podded pepper grass
Caryophyllaceae	Pink Family
<i>Achyronychia cooperi</i>	frost-mat
Chenopodiaceae	Goosefoot Family
<i>Atriplex canescens</i>	four-wing saltbush
<i>Atriplex hymenelytra</i>	desert holly
Euphorbiaceae	Spurge Family
<i>Chamaesyce micromera</i>	prostrate spurge
<i>Chamaesyce polycarpa</i>	sand mat
<i>Ditaxis neomexicana</i>	common ditaxis
<i>Stillingia spinulosa</i>	annual stillingia
<i>Salsola tragus*</i>	prickly Russian thistle
Fabaceae	Legume Family
<i>Dalea mollissima</i>	hairy dalea
<i>Prosopis glandulosa</i>	mesquite
<i>Psoralea argemone</i>	dye plant
<i>Psoralea schottii</i>	indigobush
<i>Psoralea spinosa</i>	smoke tree
Fouquieriaceae	Ocotillo Family
<i>Fouquieria splendens</i> ssp. <i>splendens</i>	ocotillo
Hydrophyllaceae	Waterleaf Family
<i>Phacelia crenulata</i> var. <i>minutiflora</i>	notch-leaved phacelia
<i>Phacelia neglecta</i>	alkali phacelia
Krameriaceae	Rhatany Family
<i>Krameria grayi</i>	white rhatany
Malvaceae	Mallow Family
<i>Eremalche rotundifolia</i>	desert five-spot
Montiaceae	Montia Family
<i>Cistanthe [=Calandrinia] ambigua</i>	desert red maids
Nyctaginaceae	Four O'clock Family
<i>Abronia villosa</i> var. <i>villosa</i>	hairy sand-verbena
<i>Allionia incarnata</i>	trailing windmills
Onagraceae	Evening-Primrose Family
<i>Camissonia boothii</i> ssp. <i>condensata</i>	bottlebrush primrose
<i>Camissonia claviformis</i> spp. <i>peirsonii</i>	brown-eyed evening primrose
<i>Oenothera deltoides</i> ssp. <i>deltoides</i>	devil's lantern
Orobanchaceae	Broom-Rape Family
<i>Orobanche cooperi</i>	pine broom-rape
Plantaginaceae	Plantain Family
<i>Plantago ovata</i>	wooly plantain

Table 4
Botanical Species Detected in the IVS Transmission Line Corridor
(Continued)

Scientific Name	Common Name
Polemoniaceae	Phlox Family
<i>Aliciella [=Gilia] latifolia</i>	broad-leaved gilia
<i>Langloisia setosissima</i> ssp. <i>setosissima</i>	bristly langlosia
Polygonaceae	Buckwheat Family
<i>Chorizanthe brevicornu</i>	brittle spineflower
<i>Chorizanthe corrugata</i>	wrinkled spineflower
<i>Chorizanthe rigida</i>	rigid spineflower
<i>Eriogonum deflexum</i> var. <i>deflexum</i>	flatcrown buckwheat
<i>Eriogonum deserticola</i>	dune buckwheat
<i>Eriogonum inflatum</i>	desert trumpet
<i>Eriogonum thomasii</i>	Thomas buckwheat
<i>Eriogonum trichopes</i>	little desert trumpet
Portulacaceae	Purselane Family
<i>Calandrinia ambigua</i>	calandrinia
Rafflesiaceae	Rafflesia Family
<i>Pilostyles thurberi</i> (CNPS List 4.3)	Thurber's pilostyles
Solanaceae	Nightshade Family
<i>Lycium brevipes</i> var. <i>brevipes</i>	desert-thorn
Tamaricaceae	Tamarisk Family
<i>Tamarix aphylla</i> *	athel
<i>Tamarix ramosissima</i> *	Mediterranean tamarisk
Viscaceae	Mistletoe Family
<i>Phoradendron californicum</i>	desert mistletoe
Zygophyllaceae	Caltrop Family
<i>Larrea tridentata</i>	creosote bush
<i>Tribulus terrestris</i> *	puncture vine

*non-native



**Table 5
Special Status Plant Species Occurring or Potentially Occurring on the IVS Site**

SPECIES		RARITY STATUS			DISTRIBUTION and NEAREST RECORDS	HABITAT ASSOCIATIONS AND BLOOMING PERIOD	POTENTIAL TO OCCUR ON SITE	STATUS ON SITE
COMMON NAME	SCIENTIFIC NAME	FED	STATE	CNPS				
Watson's amaranth	<i>Amaranthus watsonii</i>	None	None	List 4.3	Recorded from Imperial, Los Angeles, San Bernardino counties, and Baja California and Sonora, Mexico. There are no site locations listed in the CNDDDB. Herbarium records show three locations south of El Centro, the nearest of which is 18 miles ESE of Plaster City.	This annual herb occurs in Mojavean and Sonoran Desert scrub, in depressions and wetlands, at 20-1700 meters in elevation. The blooming period is April-September	None: Suitable habitat is present along the water line route, but the species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
Jacumba milk-vetch	<i>Astragalus douglasii</i> var. <i>perstrictus</i>	BLM Sensitive	None	List 1B.2	Recorded from Imperial and San Diego counties, and Baja California, Mexico. The CNDDDB lists 46 records statewide, none from Imperial County. There is one CalFlora record for Imperial County at In-ko-pah Gorge, approximately 14 miles SW of Plaster City.	This perennial herb occurs in chaparral, cismontane woodland and valley and foothill grassland. It is associated with stony hillsides and gravelly or sandy flats in open oak woodland, at 900-1370 meters in elevation. The blooming period is April – June.	None: No suitable habitat is present on site. Species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.



SPECIES		RARITY STATUS			DISTRIBUTION and NEAREST RECORDS	HABITAT ASSOCIATIONS AND BLOOMING PERIOD	POTENTIAL TO OCCUR ON SITE	STATUS ON SITE
COMMON NAME	SCIENTIFIC NAME	FED	STATE	CNPS				
Harwood's milk-vetch	<i>Astragalus insularis</i> var. <i>harwoodii</i>	None	None	List 2.2	Recorded from Imperial, Riverside, San Bernardino, and San Diego counties, Arizona, and Sonora, Mexico. The CNDDDB lists 43 records statewide, 8 of which are from Imperial County. The nearest of which is from Painted Gorge approximately 5 miles WNW of Plaster City.	This annual herb occurs in sandy and gravelly desert dune areas, at 0-710 meters in elevation. The blooming period is January – May.	Present: see discussion above.	This species was not detected during botanical surveys conducted in 2007, 2008, or 2009. However, during the 2010 surveys, as many as 36 plants were found in three areas on site.
little-leaf elephant tree	<i>Bursera microphylla</i>	None	None	List 2.3	Recorded from Imperial, Riverside, and San Diego counties, Arizona, and Baja California and Sonora, Mexico. The CNDDDB lists 14 records statewide, only 1 of which is from Imperial County. The nearest record is from Borrego Mountain, approx. 23 miles WNW of Plaster City.	This tree occurs in Sonoran Desert scrub, It occurs on hillsides, washes, canyon sides and rocky sites, at 200-700 meters in elevation. The blooming period is June-July.	None: No suitable habitat is present on site. Species would have been detectable during each of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
pink fairy-duster	<i>Calliandra eriophylla</i>	None	None	List 2.3	Recorded from Imperial, Riverside and San Diego counties, Arizona, and Baja California, Mexico. The CNDDDB lists 41 records statewide, 36 of which are from Imperial County. The nearest record is from the Yuha Basin approx. 8 miles SSE of Plaster City.	This perennial shrub occurs in Sonoran Desert scrub in sandy or rocky sites, at 120-1500 meters in elevation. The blooming period is January - March	None: Suitable habitat is present on site. However, the species would have been detectable during each of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.



SPECIES		RARITY STATUS			DISTRIBUTION and NEAREST RECORDS	HABITAT ASSOCIATIONS AND BLOOMING PERIOD	POTENTIAL TO OCCUR ON SITE	STATUS ON SITE
COMMON NAME	SCIENTIFIC NAME	FED	STATE	CNPS				
Emory's crucifixion-thorn	<i>Castela emoryi</i>	None	None	List 2.3	Recorded from Imperial, Inyo, Riverside and San Bernardino counties, Arizona, and Sonora, Mexico. The CNDDDB lists 30 records statewide, 5 of which are from Imperial County. The nearest record is from the Yuha Basin, approx. 9 miles SSW of Plaster City.	This shrub occurs in Sonoran Desert scrub, playas, and on gravelly soils, at 90-670 meters in elevation. The blooming period is June - July	None: Marginally suitable habitat is present on site. However, the species would have been detectable during each of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
Peirson's pincushion	<i>Chaenactis carphoclinia</i> var. <i>peirsonii</i>	None	None	List 1B.3	Recorded from Imperial and San Diego counties, with a questionable record from Riverside County. The CNDDDB lists 12 records statewide, 7 of which are from Imperial County. The nearest record is from Borrego Mountain, approx. 22 miles NW of Plaster City.	This annual herb occurs in Sonoran Desert scrub on sandy soils, at 3-500 meters in elevation. The blooming period is March-April.	None: Suitable habitat is present on site. However, the species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
Abram's spurge	<i>Chamaesyce abramsiana</i>	None	None	List 2.2	Recorded from Imperial, Inyo, Riverside, San Bernardino and San Diego counties, Arizona, Nevada and Baja California and Sonora, Mexico. The CNDDDB lists 15 records statewide, 5 of which are from Imperial County. The nearest record is from the Yuha Basin, approx. 9 miles SSW of Plaster City.	This annual herb occurs in Mojavean and Sonoran Desert scrub, on sandy soils, at 5-915 meters in elevation. The blooming period is September-November.	Low to Moderate: would not have been detectable during spring surveys.	Unknown: fall surveys are scheduled for 2010.

SPECIES		RARITY STATUS			DISTRIBUTION and NEAREST RECORDS	HABITAT ASSOCIATIONS AND BLOOMING PERIOD	POTENTIAL TO OCCUR ON SITE	STATUS ON SITE
COMMON NAME	SCIENTIFIC NAME	FED	STATE	CNPS				
flat-seeded spurge	<i>Chamaesyce platysperma</i>	BLM Sensitive	None	List 1B.2	Recorded from Imperial, Riverside, and San Diego counties with a questionable record from San Bernardino County, Arizona, and Sonora, Mexico. The CNDDDB lists 4 records statewide, 1 of which is from Imperial County. The nearest record is from Superstition Mountain, approx. 10 miles NNE of Plaster City.	This annual herb occurs in desert dunes and Sonoran Desert scrub with sandy soil, at 65-100 meters in elevation. The blooming period is February-September.	None: Suitable habitat is present on site. However, the species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
Wiggins' croton	<i>Croton wigginsii</i>	None	None	List 2.2	Recorded from Imperial, County, Arizona, and Sonora, Mexico. The CNDDDB lists 6 records statewide, all of which are from eastern Imperial County. The nearest record is from Holtville, approx. 32 miles E of Plaster City.	This shrub occurs in desert dunes and Sonoran Desert scrub, at 50-100 meters in elevation. The blooming period is March - May	Present: see discussion above.	Not detected during 2007, 2008 or 2009 surveys; as many as 7 young plants and seedlings were found in the water line route during the 2010 spring surveys.
glandular ditaxis	<i>Ditaxis claryana</i>	None	None	List 2.2	Recorded from Imperial, Riverside, and San Bernardino counties, Arizona, and Sonora, Mexico. The CNDDDB lists 19 records statewide, 7 of which are from Imperial County. The nearest record is from Oligibly Hills, approx. 61 miles E of Plaster City.	This perennial herb occurs in Mojavean and Sonoran Desert scrub, on sandy soils, at 0-465 meters in elevation. The blooming period is October-May.	None: Suitable habitat is present on site. However, the species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.



SPECIES		RARITY STATUS			DISTRIBUTION and NEAREST RECORDS	HABITAT ASSOCIATIONS AND BLOOMING PERIOD	POTENTIAL TO OCCUR ON SITE	STATUS ON SITE
COMMON NAME	SCIENTIFIC NAME	FED	STATE	CNPS				
California ditaxis	<i>Ditaxis serrata</i> var. <i>californica</i>	None	None	List 3.2	Recorded from Imperial, Riverside, San Bernardino and San Diego counties, and Sonora, Mexico. The CNDDDB lists 17 records statewide, none of which is from Imperial County. The nearest record is from Starfish Cove Canyon in Anza-Borrego Desert State Park, approx. 25 miles NW of Plaster City.	This perennial herb occurs in Sonoran Desert scrub on sandy soils, at 30-1000 meters in elevation. The blooming period is March-December.	None: Suitable habitat is present on site. However, the species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.



SPECIES		RARITY STATUS			DISTRIBUTION and NEAREST RECORDS	HABITAT ASSOCIATIONS AND BLOOMING PERIOD	POTENTIAL TO OCCUR ON SITE	STATUS ON SITE
COMMON NAME	SCIENTIFIC NAME	FED	STATE	CNPS				
annual rock-nettle	<i>Eucnide rupestris</i>	None	None	List 2.2	Recorded from Imperial and San Diego counties, and Baja California and Sonora, Mexico. The CNDDDB lists 5 records statewide, 4 of which are from Imperial County. The nearest record is from Coyote Wells, approx. 9 miles SW of Plaster City.	This annual herb occurs in Sonoran Desert scrub on rock talus substrate, at 500-600 meters in elevation. The blooming period is December-April.	None: Suitable habitat is present on site. However, the species would be detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
Utah vine milkweed	<i>Funastrum [=Cynanchum] utahense</i>	None	None	List 4.2	Recorded from Imperial, Riverside, San Bernardino and San Diego counties, Arizona, Nevada, and Utah. There are no site locations listed in the CNDDDB. Herbarium records show 46 locations statewide, the nearest of which is from Carrizo Mountain, approx. 17 miles WNW of Plaster City.	This perennial herb occurs in Mojavean and Sonoran Desert scrub, at 150-1435 meters in elevation. The blooming period is April –June.	Present: see discussion above	Species was detected during the spring 2010 surveys.
sticky geraea	<i>Geraea viscida</i>	None	None	List 2.3	Recorded from Imperial and San Diego counties, and Baja California, Mexico. The CNDDDB lists 47 records statewide, 1 of which is from Imperial County. The nearest record is from near Ocotillo, approx. 9 miles SW of Plaster City.	This perennial herb occurs in chaparral, at 450-1700 meters in elevation. The blooming period is May-June.	None: No suitable habitat is present on site. The species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.

SPECIES		RARITY STATUS			DISTRIBUTION and NEAREST RECORDS	HABITAT ASSOCIATIONS AND BLOOMING PERIOD	POTENTIAL TO OCCUR ON SITE	STATUS ON SITE
COMMON NAME	SCIENTIFIC NAME	FED	STATE	CNPS				
curly herissantia	<i>Herissantia crispa</i>	None	None	List 2.3	Recorded from Imperial and San Diego counties, and Baja California, Mexico. The CNDDDB lists 2 records statewide, 1 of which is from Imperial County. The nearest record is from In-ko-pah Gorge, approx. 14 miles SW of Plaster City.	This annual or perennial herb occurs in Sonoran Desert scrub, at 700-725 meters in elevation. The blooming period is August-September and occasionally in April.	Low: marginally suitable habitat is present on site, although the species is only known from much higher elevations. It might not have been detectable during spring surveys.	Unknown: fall surveys are scheduled for 2010.
Mexican hulsea	<i>Hulsea mexicana</i>	None	None	List 2.3	Recorded from Imperial and San Diego counties, and Baja California, Mexico. The CNDDDB lists 3 records statewide, 1 of which is from Imperial County. The nearest record is from In-ko-pah Gorge, approx. 14 miles SW of Plaster City.	This annual herb occurs in chaparral, Sonoran Desert scrub (alluvial fan) in sandy substrates, at 0-100 meters in elevation. The blooming period is March-May.	None: Suitable habitat is present on site. However, the species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
Baja California ipomopsis	<i>Ipomopsis effusa</i>	None	None	List 2.1	Recorded from Imperial County and Baja California, Mexico. The CNDDDB lists 1 record statewide. The nearest record is from the Yuha Basin, approx. 7 miles SSE of Plaster City.	This perennial herb occurs in chaparral, pinyon and juniper woodlands, and Sonoran Desert scrub on rocky or gravelly soil, at 100-1200 meters in elevation. The blooming period is April-June.	None: Suitable habitat is present on site. However, the species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.



SPECIES		RARITY STATUS			DISTRIBUTION and NEAREST RECORDS	HABITAT ASSOCIATIONS AND BLOOMING PERIOD	POTENTIAL TO OCCUR ON SITE	STATUS ON SITE
COMMON NAME	SCIENTIFIC NAME	FED	STATE	CNPS				
slender-leaved ipomopsis	<i>Ipomopsis tenuifolia</i>	None	None	List 2.3	Recorded from Imperial and San Diego counties, and Baja California, Mexico. The CNDDDB lists 18 records statewide, 2 of which are from Imperial County. The nearest record is from the In-ko-pah Gorge, approx. 14 miles SW of Plaster City.	This perennial herb occurs in chaparral pinyon and juniper woodlands, and Sonoran Desert scrub on rocky or gravelly soils, at 100-1200 meters in elevation. The blooming period is March-May	None: Marginally suitable habitat is present on site. However, the species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
pygmy lotus	<i>Lotus haydonii</i>	None	None	List 1B.3	Recorded from Imperial and San Diego counties, and Baja California, Mexico. The CNDDDB lists 5 records statewide, 1 of which is from Imperial County. The nearest record is from the Davies Valley, approx. 11 miles SW of Plaster City.	This perennial herb occurs in Sonoran Desert scrub, pinyon and juniper woodlands, at 100-1200 meters in elevation. The blooming period is March-May.	None: Marginally suitable habitat is present on site. However, the species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.



SPECIES		RARITY STATUS			DISTRIBUTION and NEAREST RECORDS	HABITAT ASSOCIATIONS AND BLOOMING PERIOD	POTENTIAL TO OCCUR ON SITE	STATUS ON SITE
COMMON NAME	SCIENTIFIC NAME	FED	STATE	CNPS				
Mountain Springs bush lupine	<i>Lupinus excubitus</i> var. <i>medius</i>	None	None	List 1B.3	Recorded from Imperial and San Diego counties, and Baja California, Mexico. The CNDDDB lists 33 records statewide, 3 of which are from Imperial County. The nearest record is from Carrizo Mountain, approx. 12 miles WNW of Plaster City.	This perennial shrub occurs in coastal scrub and Sonoran Desert scrub, at 425-1370 meters in elevation. The blooming period is March-May	None: Marginally suitable habitat is present on site, although it is known from much higher elevations. The species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
Parish's desert-thorn	<i>Lycium parishii</i>	None	None	List 2.3	Recorded from Imperial, Riverside, and San Diego counties, possibly from San Bernardino County, Arizona, and Sonora, Mexico. The CNDDDB lists 4 records statewide, 2 of which are from Imperial County. The nearest record is from Coyote Mountains, approx. 9 miles W of Plaster City.	This perennial shrub occurs in coastal scrub and Sonoran Desert scrub, at 300-1370 meters in elevation. The blooming period is March-April	None: Marginally suitable habitat is present on site, although it is known from much higher elevations. The species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.



SPECIES		RARITY STATUS			DISTRIBUTION and NEAREST RECORDS	HABITAT ASSOCIATIONS AND BLOOMING PERIOD	POTENTIAL TO OCCUR ON SITE	STATUS ON SITE
COMMON NAME	SCIENTIFIC NAME	FED	STATE	CNPS				
brown turbans	<i>Malperia tenuis</i>	None	None	List 2.3	Recorded from Imperial and San Diego counties, and Baja California, Mexico. The CNDDDB lists 9 records statewide, 6 of which are from Imperial County. The nearest record is from Painted Gorge, approx. 5 miles WNW of Plaster City.	This annual herb occurs in Sonoran Desert scrub with sandy soil, at 15-335 meters in elevation. The blooming period is March-April.	Present: see discussion above.	This species was not detected during botanical surveys conducted in 2007, 2008, or 2009; scattered individuals were detected during the spring surveys in 2010.
hairy stickleaf	<i>Mentzelia hirsutissima</i>	None	None	List 2.3	Recorded from Imperial and San Diego counties, and Baja California, Mexico. The CNDDDB lists 10 records statewide, 2 of which are from Imperial County. The nearest record is from In-ko-pah Gorge, approx. 14 miles SW of Plaster City.	This annual herb occurs in Sonoran Desert scrub on rocky sites, at 0-700- meters in elevation. The blooming period is March-May.	None: Marginally suitable habitat is present on site. However, the species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
creamy blazing star	<i>Mentzelia tridentata</i>	None	None	List 1B.3	Recorded from Imperial, Inyo, Kern, Riverside, San Bernardino and San Diego counties. The CNDDDB lists 18 records statewide, 1 of which is from Imperial County. The nearest record is from In-ko-pah Gorge, approx. 14 miles SW of Plaster City.	This annual herb occurs in Mojavean Desert scrub, at 700-1160 meters in elevation. The blooming period is March-May.	None: Marginally suitable habitat is present on site, although it is known from much higher elevations. The species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.

SPECIES		RARITY STATUS			DISTRIBUTION and NEAREST RECORDS	HABITAT ASSOCIATIONS AND BLOOMING PERIOD	POTENTIAL TO OCCUR ON SITE	STATUS ON SITE
COMMON NAME	SCIENTIFIC NAME	FED	STATE	CNPS				
slender cottonheads	<i>Nemacaulis denudata</i> var. <i>gracilis</i>	None	None	List 2.2	Recorded from Imperial, Riverside, San Bernardino and San Diego counties, Arizona, and Baja California and Sonora, Mexico. The CNDDDB lists 17 records statewide, 2 of which are from Imperial County. The nearest record is from Painted Gorge, approx. 5 miles WNW of Plaster City.	This annual herb occurs in coastal and desert dunes, and Sonoran Desert scrub, at 50-400 meters in elevation. The blooming period is April-May.	None: Suitable habitat is present on site. However, the species would be detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
giant Spanish-needle	<i>Palafoxia arida</i> var. <i>gigantea</i>	None	None	List 1B.3	Recorded from Imperial County and Sonora, Mexico. The CNDDDB lists 5 records statewide, all of which are from eastern Imperial County. The nearest record is from Holtville, approx. 33 miles NE of Plaster City.	This annual to perennial herb occurs in desert dunes in Imperial County and Sonora, Mexico, at 15-100 meters in elevation. The blooming period is April-May.	None: Marginally suitable habitat is present on site. However, the species would be detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
Thurber's pilostyles	<i>Pilostyles thurberi</i>	None	None	List 2.2	Recorded from Imperial, Riverside, and San Diego counties, Arizona, Nevada, and Sonora, Mexico. The CNDDDB lists 26 records statewide, 22 of which are from Imperial County. The nearest record is from Painted Gorge, approx. 5 miles WNW of Plaster City.	This stem parasite on <i>Psorothamnus emoryi</i> occurs in Sonoran Desert scrub on sandy alluvial plains and sandstone talus, at 0 to 365 meters in elevation. The blooming period is January, although fruits are detectable on infected stems throughout the year.	Present: see discussion above	Species was detected during the spring 2010 surveys.

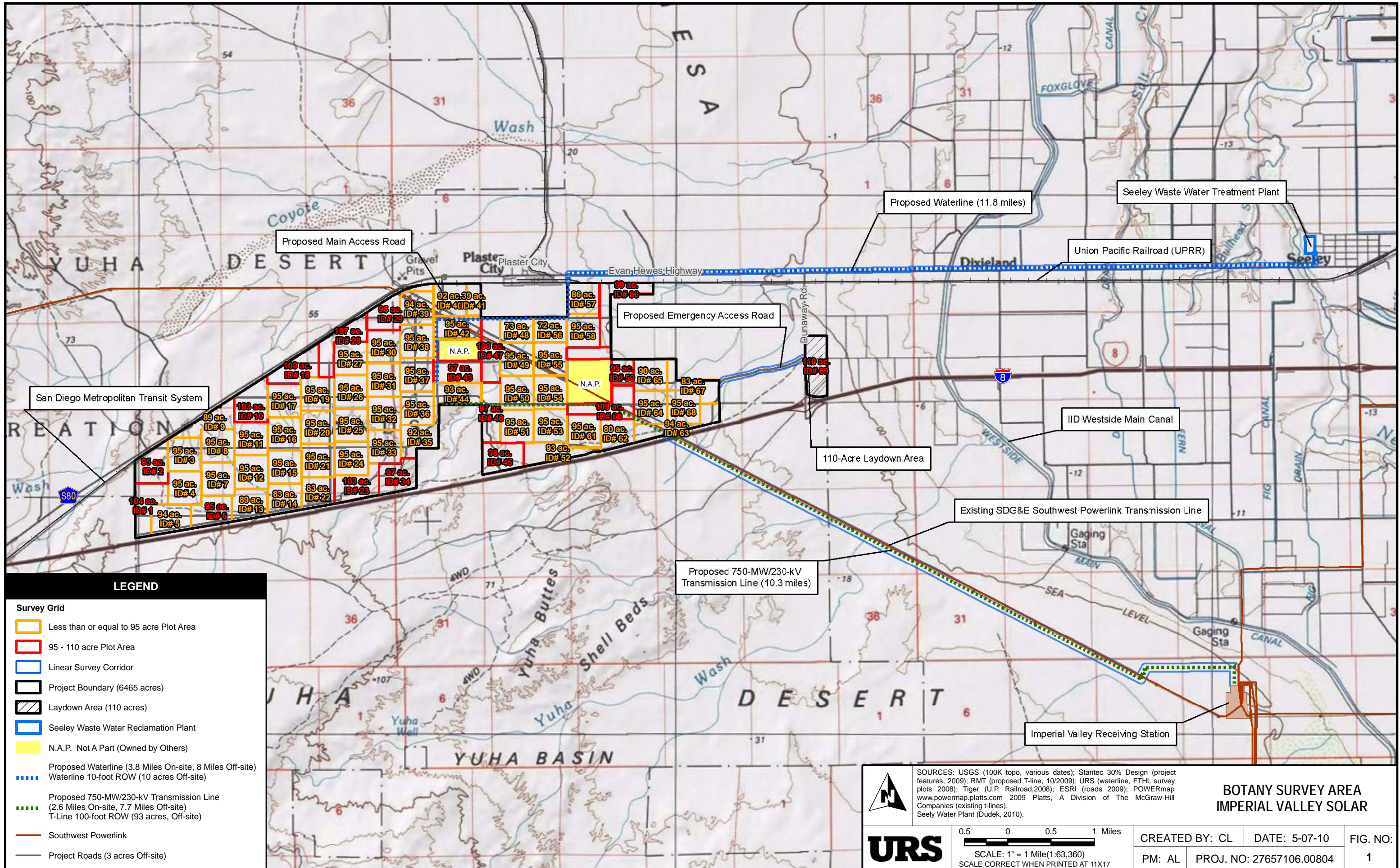


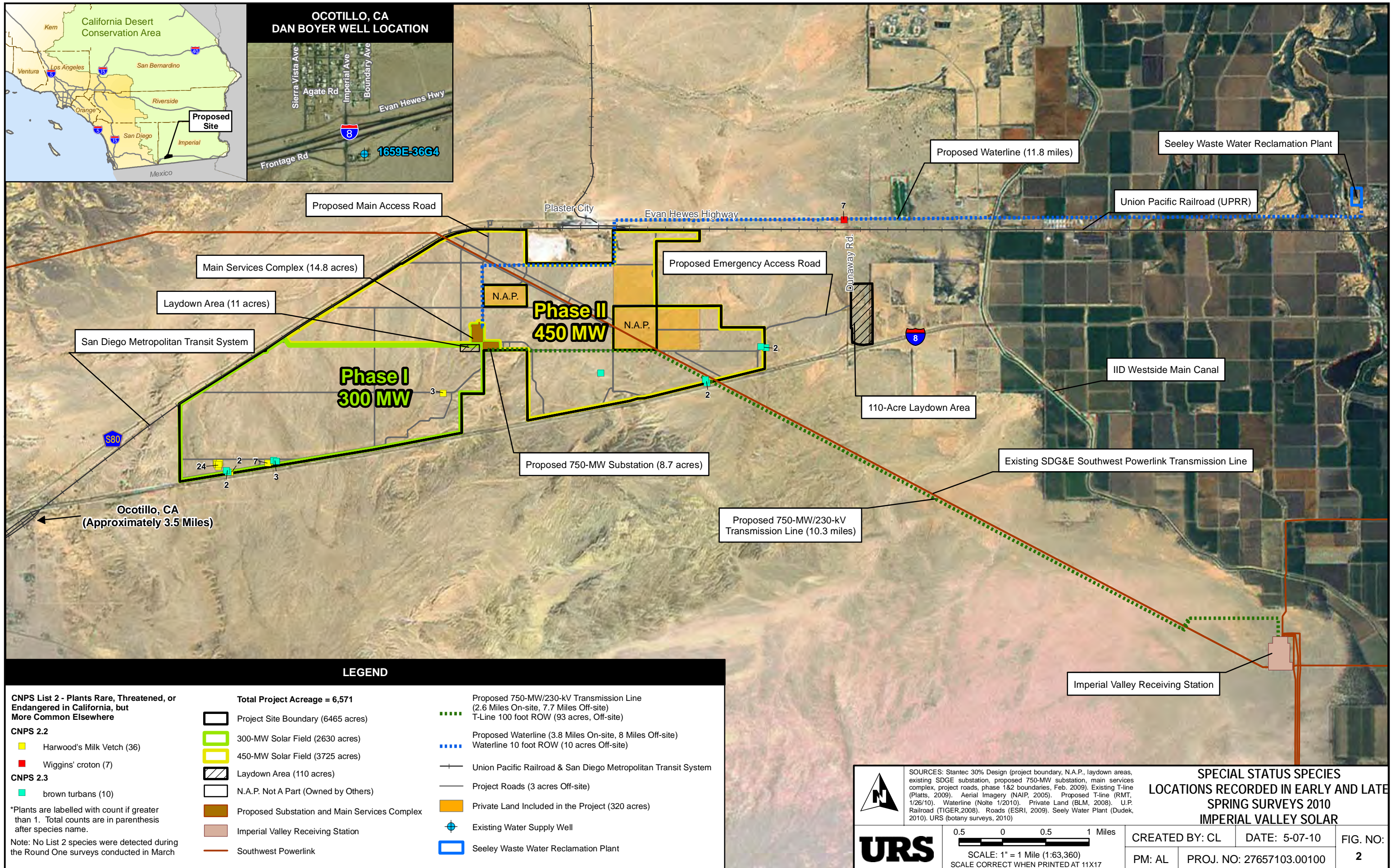
SPECIES		RARITY STATUS			DISTRIBUTION and NEAREST RECORDS	HABITAT ASSOCIATIONS AND BLOOMING PERIOD	POTENTIAL TO OCCUR ON SITE	STATUS ON SITE
COMMON NAME	SCIENTIFIC NAME	FED	STATE	CNPS				
desert unicorn-plant	<i>Proboscidea althaeifolia</i>	None	None	List 4.3	Recorded from Imperial, Riverside, San Bernardino, and San Diego counties, Arizona, New Mexico, and Baja California and Sonora, Mexico. There are no site locations listed in the CNDDDB, but herbarium records list 27 locations statewide, 9 in eastern Imperial County. The nearest record is from Sweeney Pass in the Carrizo Mountains (San Diego County), approx. 20 miles WNW of Plaster City.	This perennial herb occurs in Sonoran Desert scrub on sandy soils, at 150-1000 meters in elevation. The blooming period is May-August.	None: Suitable habitat is present on site, although the species is only known from much higher elevations. As a perennial, it would have been vegetative during spring surveys and would have been identifiable at least to genus; no unidentified members of the genus were detected.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
desert spike-moss	<i>Selaginella eremophila</i>	None	None	List 2.2	Recorded from Imperial, Riverside, and San Diego counties, Arizona, Nevada, and Baja California, Mexico. The CNDDDB lists 20 records statewide, 1 of which is from Imperial County. The nearest record is from In-ko-pah Gorge, approx. 14 miles SW of Plaster City.	This rhizomatous perennial herb occurs in Sonoran desert scrub, shaded sites, gravelly soils and crevices or among rocks, at 200-900 meters in elevation. The fruiting period is June (and rarely May-July).	None: Suitable habitat is present on site. However, the species would have been detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.



SPECIES		RARITY STATUS			DISTRIBUTION and NEAREST RECORDS	HABITAT ASSOCIATIONS AND BLOOMING PERIOD	POTENTIAL TO OCCUR ON SITE	STATUS ON SITE
COMMON NAME	SCIENTIFIC NAME	FED	STATE	CNPS				
dwarf germander	<i>Teucrium cubense</i> ssp. <i>depressum</i>	None	None	List 2.2	Recorded from Imperial and Riverside counties, Arizona, New Mexico, Texas, and Baja California, Mexico. The CNDDDB lists 5 records statewide, 2 of which are from Imperial County. The nearest record is from Coyote Wells, approx. 9 miles SW of Plaster City.	This annual herb occurs in desert dunes, the margins of playas, and Sonoran Desert scrub, at 45-400 meters in elevation. The blooming period is March-May (rarely also September-November).	None: Suitable habitat is present on site. However, the species would be detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.
Orcutt's woody-aster	<i>Xylorhiza orcuttii</i>	None	None	List 1B.2	Recorded from Imperial and San Diego counties, and Baja California, Mexico. The CNDDDB lists 30 records statewide, 7 of which are from Imperial County. The nearest record is from Carrizo Mountain, approx. 12 miles WNW of Plaster City.	This perennial herb occurs in Sonoran Desert scrub, at 0-365 meters in elevation. The blooming period is March-April.	None: Suitable habitat is present on site. However, the species would be detectable during one or more of the botanical surveys.	This species was not detected during botanical surveys conducted in 2007, 2008, 2009 or 2010. Because surveys were performed when the species would have been detectable, it is presumed absent from the site.

FIGURES





**OCOTILLO, CA
DAN BOYER WELL LOCATION**

Sierra Vista Ave
Agate Rd
Imperial Ave
Boundary Ave
Evan Hewes Hwy
Frontage Rd

1659E-36G4



LEGEND

<p>CNPS List 2 - Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere</p> <p>CNPS 2.2</p> <ul style="list-style-type: none"> ■ Harwood's Milk Vetch (36) ■ Wiggins' croton (7) <p>CNPS 2.3</p> <ul style="list-style-type: none"> ■ brown turbans (10) <p>*Plants are labelled with count if greater than 1. Total counts are in parenthesis after species name.</p> <p>Note: No List 2 species were detected during the Round One surveys conducted in March</p>	<p>Total Project Acreage = 6,571</p> <ul style="list-style-type: none"> ▭ Project Site Boundary (6465 acres) ▭ 300-MW Solar Field (2630 acres) ▭ 450-MW Solar Field (3725 acres) ▭ Laydown Area (110 acres) ▭ N.A.P. Not A Part (Owned by Others) ▭ Proposed Substation and Main Services Complex ▭ Imperial Valley Receiving Station — Southwest Powerlink 	<ul style="list-style-type: none"> Proposed 750-MW/230-kV Transmission Line (2.6 Miles On-site, 7.7 Miles Off-site) T-Line 100 foot ROW (93 acres, Off-site) Proposed Waterline (3.8 Miles On-site, 8 Miles Off-site) Waterline 10 foot ROW (10 acres Off-site) — Union Pacific Railroad & San Diego Metropolitan Transit System — Project Roads (3 acres Off-site) ▭ Private Land Included in the Project (320 acres) ● Existing Water Supply Well ▭ Seeley Waste Water Reclamation Plant
--	--	---

**SPECIAL STATUS SPECIES
LOCATIONS RECORDED IN EARLY AND LATE
SPRING SURVEYS 2010
IMPERIAL VALLEY SOLAR**

0.5 0 0.5 1 Miles

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

CREATED BY: CL

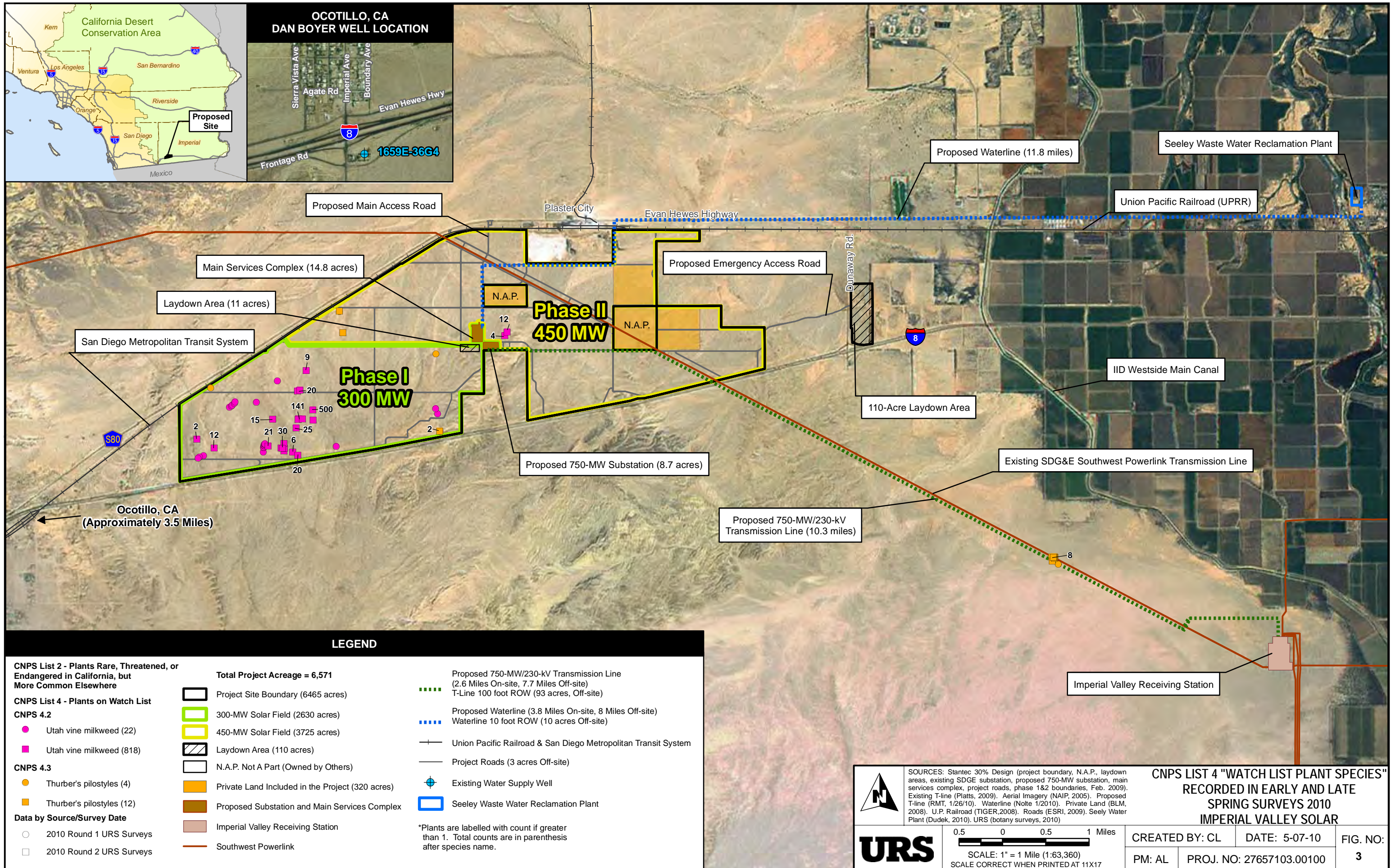
PM: AL

DATE: 5-07-10

PROJ. NO: 27657103.00100

FIG. NO:
2

Path: G:\gis\projects\1577\22238980\mxd\Biology\Botany\PlantSpecies_2010Survey_Special_Status_Species_2010_05.mxd, 05/08/10, Charles_Dare



LEGEND

<p>CNPS List 2 - Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere</p> <p>CNPS List 4 - Plants on Watch List</p> <p>CNPS 4.2</p> <ul style="list-style-type: none"> ● Utah vine milkweed (22) ■ Utah vine milkweed (818) <p>CNPS 4.3</p> <ul style="list-style-type: none"> ● Thurber's pilostyles (4) ■ Thurber's pilostyles (12) <p>Data by Source/Survey Date</p> <ul style="list-style-type: none"> ○ 2010 Round 1 URS Surveys □ 2010 Round 2 URS Surveys 	<p>Total Project Acreage = 6,571</p> <ul style="list-style-type: none"> ▭ Project Site Boundary (6465 acres) ▭ 300-MW Solar Field (2630 acres) ▭ 450-MW Solar Field (3725 acres) ▨ Laydown Area (110 acres) ▭ N.A.P. Not A Part (Owned by Others) ▭ Private Land Included in the Project (320 acres) ▭ Proposed Substation and Main Services Complex ▭ Imperial Valley Receiving Station — Southwest Powerlink 	<ul style="list-style-type: none"> — Proposed 750-MW/230-kV Transmission Line (2.6 Miles On-site, 7.7 Miles Off-site) — T-Line 100 foot ROW (93 acres, Off-site) — Proposed Waterline (3.8 Miles On-site, 8 Miles Off-site) — Waterline 10 foot ROW (10 acres Off-site) — Union Pacific Railroad & San Diego Metropolitan Transit System — Project Roads (3 acres Off-site) ● Existing Water Supply Well ▭ Seeley Waste Water Reclamation Plant <p>*Plants are labelled with count if greater than 1. Total counts are in parenthesis after species name.</p>
--	--	---

	<p>SOURCES: Stantec 30% Design (project boundary, N.A.P., laydown areas, existing SDGE substation, proposed 750-MW substation, main services complex, project roads, phase 1&2 boundaries, Feb. 2009). Existing T-line (Platts, 2009). Aerial Imagery (NAIP, 2005). Proposed T-line (RMT, 1/26/10). Waterline (Nolte 1/2010). Private Land (BLM, 2008). U.P. Railroad (TIGER, 2008). Roads (ESRI, 2009). Seely Water Plant (Dudek, 2010). URS (botany surveys, 2010)</p>	<p>CNPS LIST 4 "WATCH LIST PLANT SPECIES" RECORDED IN EARLY AND LATE SPRING SURVEYS 2010 IMPERIAL VALLEY SOLAR</p>	
	<p>0.5 0 0.5 1 Miles</p> <p>SCALE: 1" = 1 Mile (1:63,360) SCALE CORRECT WHEN PRINTED AT 11X17</p>	<p>CREATED BY: CL</p> <p>PM: AL</p>	<p>DATE: 5-07-10</p> <p>PROJ. NO: 27657103.00100</p>

APPENDIX A

Michelle Balk

Botanist

SUMMARY

Ms. Balk has over eight years of experience as a biological consultant in California. Project experience includes general and sensitive floral and wildlife surveys, vegetation mapping, wetlands delineation and permitting, mitigation monitoring, construction monitoring, and environmental document preparation. She has also participated in the development of habitat conservation plans pursuant to Section 10 of the Federal Endangered Species Act, and frequently teaches botany classes and workshops for the California Native Plant Society and Rancho Santa Ana Botanic Gardens.

EDUCATION

- M.S., Biology with Ecology and Evolution emphasis, University of Akron (1999)
- B.S., Zoology, Iowa State University (1997)

CERTIFICATIONS

- CDFG Rare, Threatened, and Endangered Plant Voucher Collection Permit
- Balk Biological Consulting has been certified as a Small Business Enterprise through the Coalition of Southern California Public Agencies and as a Small Business/Microbusiness through the State of California Department of General Services. The company is also registered in the U.S. Government's Central Contractor Registration (CCR) database as a Small Business and a Woman-Owned business.

SELECT RELEVANT PROJECT EXPERIENCE

Project Biologist/Botanist, State Route 79 Realignment Project, Riverside County Transportation Commission, Cities of Hemet and San Jacinto, CA; and County of Riverside, CA. March – September 2006. Performed wetlands delineations and surveyed for rare upland and wetland sensitive plant species along alternatives for proposed roadway realignment through the cities of Hemet and San Jacinto, CA.

Project Botanist, Mid-County Parkway, County of Riverside (Lake Mathews-Estelle Mountain Reserve and adjacent privately-owned lands), California. February – May 2005. Served as team leader for sensitive plant surveys on publicly- and privately-owned parcels within potential roadway alignment. Verified/updated vegetation mapping for project site.

Project Biologist, Pole Maintenance Project/Bark Beetle Project, Southern California Edison, San Bernardino and San Jacinto Mountains, San Bernardino and Riverside Counties, California. 2003 – 2006. Conducted botanical surveys and habitat assessments for sensitive plants at pole replacement locations and along electric lines at numerous locations in the San Bernardino and San Jacinto Mountains and the Mojave Desert. Coordinated with tree removal contractors regarding least biologically impactful methods of tree removal.

Project Botanist, Murrieta Hills Project, Riverside County, California. Spring - Summer 2008. Performed rare plant surveys for Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Criteria Area Species Survey Area (CASSA) and Narrow-endemic Plant Species Survey Area (NEPSSA) species and other sensitive species across a 1,280-acre survey area.

Project Botanist, Wild Rose Reservoir II Project, Lee Lake Water District, County of Riverside near City of Corona, California. November - December 2004. Prepared biological technical reports, including vegetation mapping and assessment of habitat for rare plants, for California Environmental Quality Act documentation.

Project Botanist, Parcel D Project, Otay Land Company, County of San Diego, California. 2009. Performed surveys for a variety of rare plant species on mitigation site in the foothills of the Cuyamaca Mountains.

Project Biologist/Botanist, Fanita Ranch Project, Santee, California, Barratt American, Inc. 2004-2006. Performed vegetation mapping, wetlands delineation, rare plant surveys, and Quino checkerspot butterfly surveys on 2,000 acre property and potential mitigation site.

Project Biologist, Villages of San Jacinto Project, D.R. Horton, San Jacinto, California. March – June 2005. Performed vegetation mapping, wetlands delineation, and rare plant surveys on 475-acre property. Prepared biological technical report for California Environmental Quality Act documentation.

Project Botanist, Marine Corps Base Camp Pendleton, County of San Diego, California. 2005. Conducted rare plant surveys for Pendleton button celery (*Eryngium pendletonensis*) on 246 acres.

Project Botanist, St. Jerome's Church Project, Catholic Diocese, City of San Diego, California. 2001-2005. Performed floristic surveys of vernal pools for approximately 18-acre proposed church site.

Project Biologist/Botanist, State Route 125 South, California Department of Transportation, City of San Diego, California. 2004. Conducted rare plant surveys and Quino checkerspot butterfly surveys for mitigation site alternatives.

Project Biologist/Botanist, Village 3 Project, Otay Ranch Company, City of Chula Vista, California. 2003. Conducted vernal pool floristic surveys and rare plant surveys, including focused surveys for the federally-listed threatened and state-listed endangered Otay tarplant, on 263 acre site.

Project Botanist, Sorrento-Miramar Curve Realignment and Second Main Track Project, North County Transit District, City of San Diego, California. 2001. Conducted a focused plant survey for the CNPS List 1B Palmer's grapplinghook along the approximately 180-acre linear rail corridor.

Project Botanist, Nickel Creek Project, Ramona, California. 2004. Performed rare plant mapping for the CNPS List 1B smooth tarplant for 14-acre multi-family residential development on the Santa Maria River.

Project Biologist/Botanist, High Meadow Ranch Residential Development Project, Vicar Ventures, LLC, Community of Lakeside, County of San Diego, California. 2004 – 2006. Performed wetlands delineation and prepared wetlands permit applications, including conceptual mitigation plan, for 800-acre residential development project. Coordinated and negotiated with wetlands resource agencies and the U.S. Fish and Wildlife Service regarding sensitive species issues onsite.

CalNev Pipeline Expansion Project, Kinder Morgan Energy Partners, San Bernardino County, California, June – July 2009. Surveyed approximately 17 miles of proposed and existing petroleum pipeline alignment for late-blooming sensitive plants. Project site included sensitive areas of western San Bernardino County from the Cajon Pass in the north, along the Cajon Creek Wash in the San Bernardino National Forest, to approximately the City of Devore in the south. Project included visiting of reference populations of rare plants and coordinating with Forest Service staff.

Project Botanist, Trilobite Solar Energy Generating Project, Pacific Gas and Electric Company, San Bernardino County, California. March – June 2009. Served as crew leader in the performance of rare plant surveys and vegetation characterization for approximately 6,400-acre proposed solar energy generating site in the central Mojave Desert. Prepared botanical survey report describing results for inclusion into Application for Certification by the California Energy Commission.

Project Botanist, Ausra Carrizo Plain Solar Farm Project, San Luis Obispo County, California; Sterling Energy Solutions Solar 1, 2, 3, and 6 Projects; San Bernardino and Imperial Counties, California. March – June 2008. Performed rare plant surveys for proposed solar farm projects totaling approximately 40,000 acres. Project sites were located on the Carrizo Plains of San Luis Obispo County, west of the City of El Centro in Imperial County, and east of Barstow in San Bernardino County, California.

Project Botanist, Tejon Mountain Village Project, Kern and Los Angeles Counties, California. February – September 2007. Mapped vegetation and served as team leader for rare plant surveys on 28,000-acre proposed housing development project located in the Tehachapi Mountains of southern Kern and northern Los Angeles Counties.

OTHER RELEVANT EXPERIENCE

Co-instructor, “Rare Plants of Western San Diego County”, February 2008; “Survey of the Sunflower Family (Asteraceae): Introduction to the Fall Bloomers”, October 2005 and October 2006; “Survey of the Sunflower Family (Asteraceae): Introduction to the Spring Bloomers”, March 2007; “Southern California Winter Plant Identification For Field Biologists”, February 2006”, Rare Plant Identification and Survey Techniques for Southern California”, March 2006.

Participant, California Native Plant Society (CNPS) workshops: “Vegetation Mapping”, October 13-15, 2009, and “Cyperaceae”, July 22-24, 2008; Jepson Herbarium workshops: “Poaceae (Grass family)” May 7-8, 2005; “Spring Flora across Kern County” May 6-9, 2004; “Summer Annuals and Fall-Blooming Shrubs of the Eastern Mojave Desert” September 2003; “Morphology and Identification of Flowering Plants” March, 2003.

Participant, “Basic Wetland Delineation” presented by the Wetland Training Institute, Inc. August 2-6, 2004.



Jessica Birnbaum

Biologist/Environmental Planner

Areas of Expertise

- Biological Assessments
- Protocol Surveys for Special-Status Plant and Wildlife Species
- Habitat Restoration
- Environmental Planning/Permitting
- Vegetation/Rare Plant Surveys
- Environmental Compliance
- Water Quality Sampling
- Endangered Species Surveys and Habitat Assessment
- Environmental Impact/Technical Reports
- Level II Blunt-Nosed Leopard Lizard Surveyor
- Wetland Delineation
- Construction Compliance and Monitoring
- GPS and GIS mapping

Years of Experience

With URS: 2 Years

With Other Firms: 3 Years

Education

MS/Natural Resources: Planning and Interpretation/2007/
Humboldt State University
BS/Biology/2002/Trinity College

Registration/Certification

CDFG Scientific
Collecting Permit: SC-801043-02
Level II Surveyor: Blunt-nosed leopard lizard survey protocol.

Overview

Mrs. Birnbaum is a Biologist and Environmental Planner for URS' Santa Barbara office. Mrs. Birnbaum's position at URS involves botanical and wildlife surveys, endangered species habitat assessment, vegetation and stream monitoring, and habitat restoration.

Botanical Project Experience

Vegetation Restoration Monitoring, Santa Barbara, CA. Santa Barbara Airport Wetland Restoration Project, City of Santa Barbara, June 2008-Present: Assisted in restoration for 65 acres of wetland, coastal sage scrub, and riparian habitats. Monitoring program consisting of point-intercept transect and quadrat data collection and maintenance monitoring. Participates in native seed collection. Supports the production of annual reports detailing restoration success.

California Valley Solar Ranch Project, Carrizo Plain, San Luis

Obispo County, March – September 2009: Led crew of 3-6 biologists surveying for special-status plant species on approximately 3,000 acre site and mapped vegetation communities. Personally authored the botanical survey report for submittal to SunPower and the County.

Nextlight's Antelope Valley Solar Ranch One Project EIR, Los Angeles County, CA, November 2008-Present:

Drafted Biological Resources section of an EIR for a proposed PV solar generating facility in Antelope Valley, California. Key issues of concern included loss of wildflower field habitat, loss of foraging habitat for sensitive grassland birds, and the potential impact upon horned lizards, an endangered species. URS submitted the biota report, which contained botanical survey results, to County SEATAC. Assisted with botanical surveys and responding to comments (RTC) from SEATAC and LA County on Biota Report and EIR.

Urban Levee Geotechnical Evaluation Program in Woodland, CA, DWR, March 2008 – June 2008:

DWR's geotechnical exploration, includes testing and analysis of state and federal levees. Mrs. Birnbaum monitored the drill crews to ensure that no sensitive biological resources are compromised. Survey efforts concentrate upon monitoring for giant garter snake as the levee area is considered ideal habitat for the species, as well as valley elderberry beetle through surveying elderberry shrubs, riparian brush rabbit, tri-colored blackbird, bank swallows and San Joaquin kit foxes.

California Emergency Levee Erosion Repair, Stockton and Sacramento, CA, for California Department of Water Resources, 2007 – 2008:

Mrs. Birnbaum conducted biological field surveys, including for kit foxes and elderberry shrubs, for the Sacramento and American



Rivers in the central valley region. As part of this work, she located and protected sensitive species and habitats within levee reconstruction areas.

Professional Societies/Affiliates

California Botanical Society
California Native Plant Society

Specialized Training

2009: Blunt-Nosed Leopard Lizard Identification Workshop, Wildlife Society, Bakersfield, Ca
2009: Introduction to the Second Edition of the Manual of California Vegetation Workshop, CNPS, John Sawyer, Tod Keeler-Wolf, and Julie Evans, Yolo, Ca
2009: Measuring and Monitoring Plant Populations and Vegetation Workshop, California Native Plant Society 2009 Conservation Conference, John Willoughby, Sacramento, Ca
2008: Clean Water Act Regulatory Updates, presented by the Association of Environmental Professionals, Ventura, Ca

Languages

Basic conversational/written proficiency in French and Spanish.

Chronology

6/08- Present: **URS Corporation, Santa Barbara, CA.**
11/07 – 6/08: **URS Corporation, Sacramento, CA.**
01/05 – 08/07: **Masters of Science study, Humboldt State University.**
06/04 – 11/04: **Biological Technician, USDA Forest Service – Sierra Nevada Research Center, Quincy, CA:**
Conducted forest management research on the mixed conifer forests in Plumas National Forest of the Sierra Nevada Range. Researched the effects of fuels reduction and timber production on plant communities, performed tree and seedling measurements to quantify regeneration requirements, and conducted environmental assessments of forest stands. Delineated plant community locations and diversity.
06/03 – 10/03: Team Leader, Student Conservation Association – Seeds of Success, Prineville, Oregon:
Supervised a field biology crew in collecting native plant seeds. She determined which sites to visit to collect certain species, using global positioning system (GPS) technology for navigation. She coordinated collection efforts with the Bureau of Land Management (BLM).

Contact Information

130 Robin Hill Road, Suite 100
Santa Barbara, CA 93117
805-964-6010 ext. 421 phone
805-964-0259 fax
Jessica_birnbaum@urscorp.com

CAESARA BRUNGRABER

Independent Contractor for Botany and Environmental Surveys

858-220-5674

San Diego, CA

Chezziabr@gmail.com

EXPERIENCE SUMMARY

Mrs. Brungraber is a botanist and wildlife biologist with over 10 years of experience in native and non-native plant identification, habitat restoration, landscape design, and wildlife monitoring in several US states and two countries. She has more than three years of experience in wetland delineations, vernal pool vegetation assessments, vegetation mapping and plant community characterization, rapid assessment of plant populations, threatened and endangered plant surveys, rare plant surveys, biological statistics and analyses, animal identification, endangered and threatened (animal) species protocol surveys, and avian surveys. Most of her work focus is in southern California, but her world experience now includes Nepal.

Mrs. Brungraber has seven years of previous botanical experience working for her own company, Caesara Botanical Consulting, which she founded in 2002 as a sole proprietorship (under the name Caesara LLC in Connecticut). She has served not only as the operating manager of the company but also as the lead botanist for numerous projects, many of which followed a strict survey protocol. She has also been working closely with Camp Pendleton and contacts at the FWS to determine a possible new species or hybrid of the *Brodiaea* genus, which she found in May 2008. She has experience with jurisdictional wetlands and MS4 drainages, including field protocol (and the Arid West supplement) and JDR and EA document preparation.

Her knowledge of flora has allowed her to lead several projects, including wetland restoration for bioremediation and erosion control purposes, rare plant surveys, endangered species surveys (both coastal and desert flora), wetland delineations, the founding of her own company, and self funded travel to floral hot spots around the world. Mrs. Brungraber has a strong background in biological statistical analyses, experimental design, and environmental data collection techniques. These strengths allow for accurate and very thorough data collection, analysis, and reporting.

EDUCATION

M.S., 2007	University of California, Davis, CA; Major: Environmental Horticulture
B.S., B.A., 2004	Bucknell University, Lewisberg, PA; Major: Biology, Economics
Completed	Fairfield University, Fairfield, CT; focus: 1 year of physics
Completed	Boston University, School for Field Studies, Kenya, Africa; focus: wildlife management and socioeconomics

ADDITIONAL TRAINING AND CERTIFICATIONS

2008	California Fairy Shrimp – Permit in progress
2008	California gnatcatcher – Permit in progress
2008	Range safety officer, Camp Pendleton, CA
Current	RapidGate Access, Camp Pendleton, CA (registered company)

REPRESENTATIVE PROJECTS

Botany Work

Flora of Nepal, 2009. Assisted Tribhuvan University, Kathmandu, Nepal as a volunteer by documenting and collecting over 300 plant species in the Nepali Himalayan Mountains, from 2,000 to 17,775' feet in elevation. These photographs and my list will contribute to the Flora of Nepal publication. Future work on this project is expected.

CAESARA BRUNGRABER

Independent Contractor for Botany and Environmental Surveys

858-220-5674

San Diego, CA

Chezziebr@gmail.com

Flowers of Nantucket, 2009-current. Beginning to compile photographs of all species on Nantucket, MA, to write a much needed comprehensive *Flowers* (non-key) of the island. This work will be done in conjunction with several non-profit agencies on the island.

Floral inventory of *Amelanchier nantucketensis* study site, Nantucket, MA, 2009. Walked transects as a solo volunteer through several acres of a designated study site for federally endangered *Amelanchier nantucketensis* and catalogued all flora found. This work contributes to the management plan for this area, run by the Nantucket Conservation Foundation.

Floral Inventory of Eel Point Conservation Area, Nantucket, MA, 2009. As a volunteer compiled a comprehensive floral inventory of a large coastal dune and salt marsh conservation area. This list included several locally endemic species as well as sensitive species *Polygonum glaucum*.

Coastal sage scrub restoration site evaluation for California gnatcatcher, 2009. Performed floral surveys, including transect lines and point data where necessary, in spring and fall on Camp Pendleton. Both a reference site and restoration site were surveyed, and invasive species removal at the restoration site was assessed. The restoration site is intended for California gnatcatcher habitat.

***Brodiaea filifolia* Inventory Project, Camp Pendleton, CA, 2009.** In spring 2009 acted as lead botanist for protocol surveys in search of the federally endangered plant *Brodiaea filifolia* in an 800 acre area of Camp Pendleton. Trained employees in the field on characteristics of the plant as well as habitat type and blooming season.

***Brodiaea filifolia* Clearance Project, Camp Pendleton, CA, 2009.** Acted as lead botanist for protocol surveys in search of the federally endangered plant *Brodiaea filifolia* in areas that are to be cleared for construction. Trained employees in the field on characteristics of the plant as well as habitat type and blooming season.

***Brodiaea filifolia* Study, Camp Pendleton, CA, 2009.** Acted as lead botanist for protocol surveys in search of the federally endangered plant *Brodiaea filifolia* to compare the effects of fire verses no fire in two locations.

***Eryngium pendletonensis* surveys, Camp Pendleton, CA, 2009.** Participated in protocol surveys in search of the endemic plant *Eryngium pendletonensis* in areas of appropriate habitat and soil type.

Rare plant surveys, Camp Pendleton, CA, 2009. Served as lead botanist for rare plant surveys in three training areas of Camp Pendleton in an area that burned recently. Assist in choosing the best areas to survey as well as identifying every plant encountered and collecting voucher specimens when necessary.

Rare plant surveys, Blythe and Palin, CA, private client, 2009. Served as a member of a botany team performing rare plant surveys in desert areas to be cleared for a potential project. Identified numerous plants for the team and took vouchers to the San Diego Museum of Natural History when necessary.

Vegetation mapping, Camp Pendleton, CA, 2009. Served as botanist team member for vegetation mapping surveys.

Vegetation Rapid Assessment, California Native Plant Society, San Diego, CA. Performed vegetation community rapid assessments of coastal flora as a volunteer. Helped key out several species of plants unknown to our group of botanists.

***Brodiaea filifolia* and Rare Plant Surveys, Camp Pendleton, CA, 2008.** Served as a botanist for large-scale plant surveys for Camp Pendleton's Grow the Force project, in which over 300 miles of new road, telephone lines, and other utilities will be upgraded or installed. Learned and photo-documented over 400 species of plants in two months.

Vernal Pool Floral Assessments, Camp Pendleton, CA, 2008. Assisted another botanist to compile a comprehensive floral inventory of over 900 vernal pools, including rare and endangered plants.

Native Plant Landscape Design, San Diego, CA, 2005-current. Own and manage a landscaping design company focused on installation and maintenance of California native plants. We promote healthier landscapes, reduce water, and eliminate the use of fertilizers.

Wetlands

CAESARA BRUNGRABER

Independent Contractor for Botany and Environmental Surveys

858-220-5674

San Diego, CA

Chezziebr@gmail.com

Wetland Delineations, Camp Pendleton, CA, 2008. Assisted a wetland scientist as the lead botanist for jurisdictional wetland delineations on Camp Pendleton for Grow the Force. Over 50 sites were delineated, with almost half of them being completed solely by Mrs. Brungraber, who also helped compose data for, create tables for, and write the corresponding JDR.

Wetland restoration, Lakeside Riverpark Conservancy, Lakeside, CA, 2007. Served as sole vegetation designer for a constructed wetlands at the confluence of the Los Coches and San Diego Rivers. The wetland was designed for bioremediation and erosion control.

Wildlife

California gnatcatcher surveys, San Diego, CA, 2009/2010. Assisting a permitted individual in protocol surveys for the federally threatened California coastal gnatcatcher.

Quino Checkerspot Butterfly Surveys, Sunrise Powerlink, San Diego County, CA, 2008. Assisted in protocol surveys for the federally endangered Quino checkerspot butterflies along the right of way for a new powerline proposed to connect coastal San Diego to sources in the desert.

Andrews' Dune Scarab Beetle surveys, Algodones Dunes, Imperial County, CA, 2008. Assisted in sunset surveys for the endemic Andrews' dune scarab beetle. Over 20 individuals were observed and recorded.

Avian surveys, Imperial County, CA, 2008. Assisted in avian surveys as part of the Imperial Irrigation District Baseline survey project.

Avian surveys, Kenya, Africa, 2003. Assisted in bird surveys, flushings, tracking, and banding at several sites over four months in Kenya.

Wildlife monitoring, Kenya, Africa, 2003. Spent several months tracking and recording various animals and populations in Kenya as part of a larger group.

SKILLS AND ACTIVITIES

Skills: Rare plant surveys, herbaceous and woody plant identification, tree identification, tree counts and DBH measurements, vegetation mapping, vegetation rapid assessment, vernal pool floral inventory, wetland delineation, various GIS applications, preparing and presenting professional reports and papers, good oral communication skills, wildlife survey techniques, bird and mammal identification, restoration site design and monitoring, wilderness survival, photography, stick shift operation.

Software: I am proficient in the following: Microsoft Excel, Power Point, and Word, ArcView/ArcGIS (GIS), Mac systems, Adobe Dreamweaver, Photoshop, and Acrobat.

Activities: I live for being outdoors, and spend much of my free time botanizing in local spots or traveling to exotic destinations to teach myself about the flora. I also enjoy surfing, ultimate Frisbee, tennis, sailing, horseback riding, hiking, camping, skiing, and convertible rides. I am a California Native Plant Society active member and volunteer my time when possible.

MARK K. FOGIEL

Senior Botanist, Wetlands Ecologist

EDUCATION/TRAINING

2007	Master's Degree, Ecology and Systematic Biology San Francisco State University
1991	Bachelor's Degree, Biology/Botany San Francisco State University
2000	Wetland Delineation Training, UC Berkeley Extension
2001	Wetland Restoration, The Restoration Trust
2006	CNPS Vegetation Rapid Assessment

PROFESSIONAL EXPERIENCE

2008-present	Independent Biological Consultant, Nevada City.
2000-2008	Environmental Science Associates. Oakland. Senior Biologist.
1998-2000	Independent Biological Consultant. Oakland/Andresy, France.
1993-1997	San Francisco State University/Wildlife Conservation Society (New York)/ECOFAC (Brussels). Tropical Ecologist, Teaching Assistant, Instructor.
1992	Biosystems. Santa Cruz. Biologist.
1989-1992	Botanical Research Group. Berkeley. Botanist.
1989	Zentner and Zentner. Oakland. Botanist.

Mr. Fogiel is a botanist and ecologist with over 19 years experience, including 15 years of biological resource consulting in California. He has expertise in numerous areas, including rare plant surveys and habitat analysis, CEQA and NEPA biological analyses, wetland delineation, restoration and habitat management planning, Clean Water Act permitting, and construction compliance monitoring. His experience is wide-ranging, having assisted numerous clients in the water resources, community development, energy, telecommunications, solid waste and other sectors.

Throughout his career as a biological consultant, Mr. Fogiel has conducted numerous botanical surveys in California, in a total of 18 counties representative of all major floristic regions of the state. He has also conducted botanical surveys in Nevada, in addition to doing a comprehensive survey of arborescent flora in a 25 square kilometer area in the semi-deciduous rainforest region on southern central Cameroon in which he identified and catalogued over 300 tree species.

Mr. Fogiel has substantial experience in California deserts, particularly in the western Mojave where he has conducted numerous studies, mostly comprising botanical surveys and wetland delineations. For the LACSD Palmdale Water Reclamation Plant Project, Mr. Fogiel surveyed and mapped vegetation types and evaluated habitat quality over an 86 square mile area east of Palmdale and Lancaster. Vegetation included extensive areas of Creosote Brush Scrub and Joshua Tree Woodland. The resulting GIS map he creating was instrumental in consideration of facilities location, evaluation of biological impacts, and communication of overall impacts in public meetings for the project.

Mr. Fogiel oversaw the development of the California Department of Fish and Game Fremont Valley Ecological Reserve Management Plan. Located in the northwestern Mojave Desert in eastern Kern County, the Fremont Valley Ecological Reserve provides important habitat for the threatened desert tortoise and potential habitat for the Mojave ground squirrel and other sensitive species.

NEAL KRAMER, M.S.

Botanist/Ecologist, Certified Arborist

EDUCATION/TRAINING

1981	BA Botany University of California, Berkeley
1984	MS Forest Ecology University of Idaho, Moscow
1996-2007	30 different floristic workshops (including Eastern Mojave Desert Flora) University of California, Jepson Herbarium
2006	Basic Wetland Delineation Certification , Wetland Training Institute
2007	Arborist Certification , International Society of Arborists

PROFESSIONAL EXPERIENCE

1995- present	Botanical/Ecological Consulting, Kramer Botanical, Montara CA
1985-2005	Nursery Management, Nurserymen's Exchange, Half Moon Bay CA
1982-1984	Graduate Research/Teaching Assistant, Moscow ID Published " <i>Mature forest seed banks of three habitat types in central Idaho</i> ", Canadian Journal of Botany, Vol. 65, 1987
1975-1979	Wildfire Suppression/Helicopter Forman, USFS & BLM, Calif. & Wyoming

Mr. Kramer has experience with native flora and plant communities in 28 different California counties, in Arizona, Idaho, Nevada and Oregon, and internationally in the countries of Honduras, Ecuador and Peru. His experience includes plant inventories, rare plant surveys, tree surveys, invasive plant survey and eradication work, wetland delineations and revegetation projects for a wide variety of habitats. Rare plant surveys have included more than a dozen different San Francisco Bay Area sites, vernal pools in Fresno and Madera Counties and Delta marshland in Sacramento County. Neal is experienced in wetland delineation for a variety of wetland types including vernal pools. He has extensive experience using GPS systems for the purpose of mapping rare plants, invasive weeds and wetland delineations.

Mr. Kramer has 20 years of management experience with Nurserymen's Exchange in Half Moon Bay, Ca. where he was directly responsible for potted plant production on 35 acres of greenhouses and fields with a full time staff of 130 and up to 300 additional seasonal employees.

Neal is an experienced photographer with more than 1100 digital images posted on the Calphotos website. His photos can be found on the California Native Plant Society's online Inventory of Rare and Endangered Plants, and have been used in publications by the Peninsula Open Space Trust, Oregon State University Extension, UC Santa Barbara Department of Geology, and PG&E. In 2008, Mr. Kramer participated in multi-season floristic surveys across the Mojave Desert for the CalNev pipeline project between Las Vegas and San Bernardino.

EDUCATION/TRAINING

1974	Bachelor of Arts, Botany University of California, Berkeley
1982	Master of Science, Ecology University of California, Davis
1998	U.S. Army Corps of Engineers Wetland Delineation Course University of California, Berkeley, Extension
2001-7	Jepson Herbarium Weekend Workshops, Sedges, Bryophytes, Willows

PROFESSIONAL EXPERIENCE

1986-present	Independent Biological Consultant, Orinda, CA
1980-1986	California Land Steward, The Nature Conservancy, San Francisco, CA
1975-1980	Biologist, Pacific Gas and Electric Company, San Ramon, CA

Ms. Leitner has 35 years' experience performing field investigations of plants and plant communities throughout California. Her primary areas of expertise are special-status plant surveys, vegetation mapping, revegetation planning and monitoring, natural lands management, CEQA impact analysis, and endangered species permitting. She has extensive knowledge of biological resource issues related to natural lands management, geothermal resource development, and linear features (transmission line and pipeline), water supply, and has more than 20 year's experience in desert ecosystems.

From 1986 to 2008, Ms. Leitner was the principal plant ecologist for the Coso Geothermal Power Plant in Inyo and Kern Counties, California. She prepared permitting documents for the 115 kV transmission line, three power plant sites and all associated wellfield developments. She also prepared a conceptual revegetation plan for the Coso development as a whole, and then monitored revegetation and erosion control conditions for six years. She also prepared resource inventory documents for some 14,000 acres within the Coso Known Geothermal Resource Area under consideration for development.

One special aspect of the Coso Geothermal project work was a mitigation and monitoring program for the California-threatened Mohave ground squirrel. In this program, livestock were excluded from 60,000 acres of the China Lake Naval Air Weapons Center, and Mohave ground squirrel populations were monitored within and outside of the grazing enclosure. Ms. Leitner's primary responsibility was characterizing shrub and herbaceous vegetation, and analyzing food habits of the Mohave squirrel and the other principal vertebrate herbivores.

Ms. Leitner has prepared resource inventory and analysis for more than 50 CEQA and NEPA documents, many for geothermal developments in the Mojave Desert (Inyo and Kern counties), Medicine Lake Highlands (Modoc and Siskiyou counties), and The Geysers (Lake and Sonoma counties); for Hetch Hetchy water supply infrastructure (San Joaquin, Alameda and San Mateo counties); for Caltrans highway improvements projects (Lake and Fresno counties), and airport improvement projects (Monterey and Kern counties). She has prepared 10 Biological Assessments for listed species in Monterey, Kern, San Mateo, and Modoc counties; and alternatives analyses for pipeline projects in San Bernardino, Kern, and Inyo counties.

Ms. Leitner's natural lands management and revegetation experience includes developing and implementing preserve design and preserve management plans for California Nature Conservancy preserves, including inventory, livestock leases, fire management, weed management, and public access. More recently, she has prepared management plans for the California Department of Fish and Game's Semitropic Ridge (Southern San Joaquin Valley) and Fremont Valley (western Mojave Desert) Reserves. In addition to Coso work, she has prepared revegetation plans in the Inner and Outer Coast Ranges and the southern San Joaquin Valley, and has supervised and monitored plans at several sites.

EDUCATION/TRAINING

- 2002 Master's Degree, Natural Resources/Forestry/Botany
Humboldt State University, Arcata.
- 1991 Bachelor's Degree, Environmental Studies
Evergreen State College, Olympia, Washington.
- Coursework Plants of the Southwest Deserts - University of Las Vegas, Nevada
Wetland Plants – San Francisco State University
Successful CEQA Compliance – Univ. Calif. Davis Extension
Land Conservation: Trends, Techniques and Opportunities – UCD Extension
Habitat Restoration – UCD Extension

PROFESSIONAL EXPERIENCE

- 1996-present Independent Biological Consultant, Fairfax, California.
- 1995 Field Botanist, University of Nevada, Reno
- 1992-1993 Field Biologist, Environmental Solutions, Las Vegas, Nevada

Ms. Lonner Egert has 18 years working in the environmental field as a field biologist, botanist, forester, author, and project manager. She has performed botanical studies in the Great Basin and Mojave Desert, and central and northern California. She has excellent knowledge of botany, forestry and ecology, extensive understanding of diverse environmental issues ranging from fieldwork to policy making, and field experience with floristic surveys and special status plant species and communities. Experience with CEQA processes. Familiarity and experience with desert flora. Field and management experience in environmental restoration.

Conducted botanical surveys and vegetation monitoring with emphasis on medicinal plants and economic development. Directed community workshops on medicinal plant harvest and preparation. Trained local community to identify, harvest and use local medicinal plants. As an ethnobotanist working in Kosovo, Ms. Lonner Egert researched sustainable harvest methods, harvester demographics, the Balkans herb sector, standards and guidelines and pertinent legislation. She authored *A harvester's handbook to the sustainable wild collection of medicinal plants in Kosovo*, translated into Albanian and Serbian, and developed and organized Kosovo Medicinal Plant Producers and Processors Workshop

In Accra, Ghana, Ms. Lonner Egert Worked with Portal Timber Company to develop a sustainable forestry plan highlighting conservation strategies and development of medicinal and aromatic plants. She authored *Preliminary Management Plan for the Sustainable Development of the Ankasaho Forest Resource Management Area*,

Ms. Lonner Egert is a talented team leader with over ten years experience as a project manager for national, international and community-based organizations. She has a long track record of producing solid deliverables on time and within budget and is skilled at creating public awareness of, and support for programs. She is a seasoned and effective Organizer, with 20 years of demonstrated success in building alliances, networks and campaigns, working to secure cooperation and support in diverse populations and environments.



Julie Love

Biologist and Restoration Ecologist

Areas of Expertise

- Restoration Planning, Implementation, and Monitoring (Coastal sage scrub, Riparian, Wetland, Grassland, Bioswales)
- Wetland Delineations and Jurisdictional Determinations
- Vegetation Surveys and Mapping
- Special-Status Wildlife Surveys
- Stream Monitoring (Algae and Water Quality)
- Fish Relocation

Years of Experience

With URS: 3 Years

With Other Firms: 4 Years

Education

Master of Environmental Science and Management/2003/University of California, Santa Barbara

Bachelor of Science/Marine Biology/2000/University of California, Los Angeles

Overview

Ms. Love's combined work experience and education provide a wide range of ecological training. She has over seven years of experience working in the fields of habitat restoration, botany, stream and algae monitoring, marine biology, terrestrial wildlife, maintenance/construction, and ecosystem inventory, assessment, and monitoring. Ms. Love's position at URS involves habitat restoration and monitoring, wetland delineations and jurisdictional determinations, vegetation surveys and mapping, habitat assessment, stream and algae monitoring, special-status wildlife surveys, fish relocation, and database management.

URS Specific Experience

Special-Status Wildlife Surveys

Desert Tortoise Survey, Mojave Desert, CA. 40 hours. Performed meandering transect desert tortoise surveys. Performed survey to assess habitat quality for desert tortoise. Mapped, photographed, and cataloged habitat suitability and vegetation types. Mapped jurisdictional drainages. April 2007.

Desert Tortoise Survey, Johnson Valley, CA. 45 hours. Performed USFWS protocol 100% coverage desert tortoise surveys on a 9,315 acre site. Performed survey to assess habitat quality for desert tortoise. Mapped, photographed, and cataloged habitat suitability and vegetation types. April - May 2008.

Blunt-Nosed Leopard Lizard Survey, California Valley, CA.

24 hours. Performed protocol survey to assess habitat quality for blunt-nosed leopard lizard. June 2007.

Wetland Delineations and Jurisdictional Determinations

Jurisdictional Determination, California Valley, CA. Performed jurisdictional determination for a 4,575 acre site. Lead author for the technical report. July 2008 and March 2009.

Jurisdictional Determination, Antelope Valley, CA. Performed jurisdictional determination mapping for a 2,000 acre site. Lead author for the technical report. January 2009.

Jurisdictional Determination Mapping, Johnson Valley, CA. Performed jurisdictional determination mapping for a 9,315 acre site. April - May 2008.

Vegetation Surveys and Mapping

Botanical Survey, Johnson Valley, CA. Performed botanical surveys for a 9,315 acre site. Identified and cataloged plants found on-site. March - May 2008.



Permits

- California Department of Fish and Game Scientific Collecting Permit 2008 -2010

Specialized Training

- San Luis Obispo County Workshop for Biologists, December 2008
- Basic Wetland Delineation Training (40-hour), Wetland Training Institute, 2008
- Riparian Mapping and Species Identification Workshop, California Native Plant Society, 2007
- Using Native Grasses and Graminoids in Restoration and Revegetation, California Native Grasslands Association Workshop, May 2007
- Noxious Weed Seminar, Agricultural Commissioner's Office, June 2005
- American Red Cross First Aid and CPR

Contact Information

URS Corporation
130 Robin Hill Road, Suite 100
Santa Barbara, CA 93117
Tel: 805.964.6010 ext. 367
Cell: 805.252.5135
Fax: 805.964.0259
Julie_Love@urscorp.com

EDUCATION/TRAINING

2001 Master's Degree, School of Forestry and Environmental Studies, Yale University
1998 Bachelor's Degree, Biology, Chemistry, Philosophy, University of Wisconsin
1998 Student Conservation Association Associate, USFS, Kamas, UT
1998 Firefighter's Red Card, USFS
2002 Post graduate Fulbright Scholar, Agricultural University of Wroclaw, Poland
2007 CNPS Releve and Rapid Assessment Workshop, California Native Plant Society

PROFESSIONAL EXPERIENCE

2006-Present Director, Golden Hour Restoration Institute, Berkeley, CA
2006-Present Conservation Analyst, East Bay CNPS, Walnut Creek, CA
2006-Present Independent Biological Consultant
2005-2006 Biological Technician and Restoration Coordinator, USARC – Fort Hunter Liggett, CA
2003-2005 Biological Technician, Restoration Technician, BLM – Fort Ord, CA

Mr. Naumovich has 8 years of experience performing field-based surveys for plants, vegetation types, and habitat types. His projects are mostly centered in the Bay Area of California, but he has performed surveys throughout California, notably California deserts, Northern California, the Sierra Nevada, and the Central Coast. His primary expertise is in the field of botany and ecology surveys and then subsequent descriptions of properties and areas for biological conservation, development, and other related activities. Mr. Naumovich is well versed in the CDFG requirements for rare plant surveys and proper reporting methodology in CEQA and NEPA documents. Mr. Naumovich is familiar with laws and regulations pertaining to California's Endangered Species Act as well as the Federal ESA.

Mr. Naumovich has worked with a wide variety of personnel varying from consultants to agency employees to non-profits to land trusts and developers. He has many years experience on federal lands including USFS, BLM, and NPS. He is familiar with operating policies and procedures including JSA's and Hazard Analysis. Mr. Naumovich has experience and training in working in extreme environments for prolonged periods, including desert and alpine areas. In 2008, Mr. Naumovich participated in multi-season floristic surveys across the Mojave Desert for the CalNev pipeline project between Las Vegas and San Bernardino.

EDUCATION/TRAINING

2006	M.S., Environmental Sciences and Policy Northern Arizona University, Flagstaff.
2001	M.A., Political Science, Policy Analysis Northeastern University, Boston.
1997	B.A., History/Political Science Colorado College, Colorado Springs.
2006	Wildland Weeds Field Course, Cal-IPC, Workshop Participant
2006	Biology and Management of the California Red-Legged Frog, Workshop Participant
2006	Biology and Management of the Alameda Whipsnake, Workshop Participant

PROFESSIONAL EXPERIENCE

2006-present	Biologist, Mosaic Associates LLC, Pinole.
2005-2006	Crew Leader, Diablo Trust Inventory and Monitoring for Sustainability, Arizona.
2005-2006	Teaching Assistant, Northern Arizona University.
2003-2005	Research Assistant, Northern Arizona University.
1987-1989	Independent Biological Consultant, San Francisco.
1986-1989	Research Assistant, Instructor. San Francisco State University.

Ms. Ritchie has eight years of experience conducting biological and ecological studies and analyses. She is well-versed in the performance of floristic surveys, habitat assessments for wildlife, the design and implement riparian and wetland mitigation monitoring plans and habitat restoration plans, performing impact assessments, and regulatory permitting. She has conducted botanical surveys and soil data collection in the Mojave and Sonoran Deserts in south and southwest Arizona, in the Great Basin of Utah (Grand Staircase/Escalante), and in the high elevation dry grasslands on the Colorado Plateau. She is skilled in use of botanical keys, including the Jepson Manual (Hickman), the Jepson Desert Manual (Wetherwax), and the Arizona Flora (Kearney and Peebles). She is familiar with several plant monitoring techniques, including point-intercept, Daubenmire, and several US Forest Service protocols. During her work for the Diablo Trust, she planned and executed field data collection for monitoring vegetation and soil and mapped exotic vegetation in 400,000 acres of arid grassland using GIS. Ms. Ritchie has competent bird identification skills and is able to hike long distances in adverse weather conditions and terrain

CECILE SHOHET

Botanist, Terrestrial Plant Ecologist

EDUCATION/TRAINING

- 1999 M.S., Botany, Arizona State University.
- 1989 Biology, Queens College of the City University of New York
Post Graduate Work, lichens and bryophytes, Southern Oregon University

PROFESSIONAL EXPERIENCE

- 2008-present Public Education Coordinator, Jepson Herbarium, Berkeley.
- 2008 Consulting Botanist, Rogue River/Siskiyou National Forest, Medford, Oregon.
- 2007-2008 Consulting Botanist, Roseburg Bureau of Land Management, Roseburg, Oregon.
- 2005-2007 Consulting Botanist, Plumas National Forest, Northern Sierra Nevada, California.
- 2005-2007 Special Project Botanist (GS-11), Rogue River-Siskiyou National Forest, Medford, Oregon.
- 2005-2006 Botanist (GS-11), Columbia River Gorge National Scenic Area, Hood River, Oregon.
- 2005 Botanist (GS-11), Stanislaus National Forest, Sonora, California
- 2005-2006 Consulting Botanist, Illinois Valley Community Response Team, Cave Junction, Oregon.
- 200-2004 District Botanist (GS-9), Illinois Valley and Galice Ranger Districts, Rogue River-Siskiyou National Forest, Oregon.

Ms. Shohet has over ten years of experience in botanical resource management, education, ecological research, and field inventory/survey work. Worked extensively with the vegetation of Northern California, Southern Oregon, and Arizona; both for the federal government and in the private sector as sole proprietor of Calypso Consulting. Currently works for the Jepson Herbarium at the University of California at Berkeley, creating and implementing educational programming for botanical professionals and enthusiasts. She has been awarded multiple federal and local government contracts to conduct rare plant surveys, including surveys of non-vascular species, on thousands of acres of federal lands in northern California (Sierra) and southern Oregon. She has six years of experience as a botanist for regions 5 and 6, U. S. Forest Service, Lassen and Rogue River-Siskiyou National Forests. As District Botanist for the Illinois Valley and Galice Ranger Districts, Ms. Shohet developed and implemented a complex botanical management program encompassing 500,000 acres of floristically diverse federal lands rich in serpentine endemic species. The program included extensive inventory and survey work of both vascular and non-vascular species of concern; supervision of seasonal field crews; resource management of timber, mining, engineering, recreation, and fuel reduction projects; grant writing (received over \$150,000 in grant funding) and subsequent project implementation.

Ms. Shohet implemented and supervised a noxious weed program with \$50,000 annual budget. As part of the program, supervised crews and volunteers; development of an off-road vehicle management plan for the Eight Dollar and Days Gulch botanical areas. She managed ArcGIS based databases of rare species and noxious weeds, and has prepared numerous NEPA documents, including Environmental Impact Statements (EIS) and Environmental Assessments (EA).

Through her graduate work at Arizona State University, Ms. Shohet gained strong familiarity with the Sonoran Desert flora.

CHRISTOPHER THAYER

Botanist, Wetlands Specialist

EDUCATION/TRAINING

- | | |
|------|---|
| 1999 | USACE Wetland Delineation and Management Training Certification Program, San Francisco, California |
| 1974 | Humboldt State University, Arcata, California. Botany and Natural Resources Conservation; undergraduate studies |

PROFESSIONAL EXPERIENCE

- | | |
|--------------|---|
| 2007-present | Independent Biological Consultant, Lafayette |
| 1998-2007 | Sycamore Associates LLC, Walnut Creek. |
| 1997 | Freelance Botanical Consultant, Orinda |
| 1992-1996 | Volunteer Botanist, East Bay Municipal Utility District |

Chris Thayer is a highly regarded, field-oriented biologist with more than ten years of professional experience throughout the Bay Area and greater California. Although his emphasis has been in Alameda and Contra Costa counties, his work has taken him north as far as Humboldt and Mendocino counties on the coast, and south to Fresno and Kern counties on the interior. Past duties have included the coordination, scheduling and participation in numerous wetland delineations, biological assessments, vegetation and wildlife habitat assessments, and multiple-season focused botanical surveys for special-status plants and natural communities. He has compiled many comprehensive wetland and terrestrial plant species inventories, performed qualitative and quantitative vegetation assessments and vegetation mapping, analyzed impacts to biological resources, developed mitigation and restoration plans and strategies, and conducted construction monitoring in sensitive habitats. He has overseen and contributed to the preparation of text for hundreds of technical reports, memoranda, letters, and other supporting documents for Environmental Impact Reports, Negative Declarations, and CEQA compliance. In 2008, Mr. Thayer participated in multi-season floristic surveys across the Mojave Desert for the CalNev pipeline project between Las Vegas and San Bernardino.

In addition to his far-reaching experience with special-status plant species, including their identification, rarity, distribution, and soil and habitat preferences, Mr. Thayer has extensive knowledge and experience as a field biologist with a number of sensitive wildlife species. These include aquatic species such as California red-legged frog, California tiger salamander, and western pond turtle, as well as terrestrial species such as silvery legless lizard, San Francisco dusky-footed wood rat, Alameda whipsnake, San Joaquin kit fox, Valley elderberry longhorn beetle, Callippe silverspot butterfly, and Coast Range shoulderband snail, among others. Considerable experience with burrowing owl has included numerous habitat assessments and subsequent protocol monitoring of occupied burrows and nesting pairs.

Through his work he has developed a thorough knowledge and familiarity with procedures relating to the California Environmental Quality Act, California Endangered Species Act, Federal Endangered Species Act, Clean Water Act, National Environmental Policy Act, and other relevant local, state, and federal environmental legislation and policies. In his biological consulting capacity, Mr. Thayer has worked with a wide variety of representatives of local municipalities, special districts, Caltrans, private landowners, and residential and commercial developers, as well as various regulatory agencies including U.S. Army Corps of Engineers, California Department of Fish and Game, Regional Water Quality Control Board, U.S. Environmental Protection Agency, and U.S. Fish and Wildlife Service.

EDUCATION/TRAINING

1989	Master's Degree, Ecology and Systematic Biology San Francisco State University.
1981	Bachelor's Degree, Ornamental Horticulture California Polytechnic State University, San Luis Obispo.
1990	Basic Wetland Delineation Training, Wetland Training Institute
1990	OSHA Hazardous Materials Worker 40-hour training
1994	Advanced Wetland Delineation, Wetland Training Institute

PROFESSIONAL EXPERIENCE

2001-present	Independent Biological Consultant, Walnut Creek.
1998-2001	Sycamore Associates LLC. Walnut Creek. Owner/Principal.
1992-1998	Independent Biological Consultant, San Francisco.
1989-1992	Ogden Environmental and Energy Services, San Diego and San Francisco.
1987-1989	Independent Biological Consultant, San Francisco.
1986-1989	Research Assistant, Instructor. San Francisco State University.

Mr. Wood has 20 years of experience performing field-intensive evaluations of wetland and upland habitats throughout California. His primary expertise lies in the fields of botany, wetland ecology and habitat restoration, performing and supervising botanical and wildlife surveys and wetland delineations, conducting impact assessments, developing, implementing and monitoring habitat restoration programs, and resource conservation planning.

Mr. Wood brings to his projects a wide range of expertise in vegetation ecology, soils and geology, fire ecology, wetland ecology, environmental policy and permitting, as well as experience conducting pre-Phase 1 hazardous site assessments. He has successfully assisted residential and commercial developers, federal, state and local governmental agencies, planners, and non-profit organizations in understanding and managing the constraints and opportunities posed by regulated biological resources. His strong technical background enables him to be an effective member within interdisciplinary teams.

Mr. Wood was a co-owner of a dynamic environmental consulting company in the East Bay. As a principal, Mr. Wood participated in all aspects of day-to-day business operations, including client relations, marketing, technical oversight, quality control, agency negotiation, hiring and training, and supervising a staff of 20 employees and numerous subconsultants.

Mr. Wood has worked throughout California, Oregon, Hawaii, and Guam. He is also familiar with the vegetation and wildlife of western Europe, East Africa, Australia, Mexico, Argentina, and the Malaysian peninsula. He is fluent in German and has a working knowledge of Spanish. Mr. Wood is the developer of CalBiota, the first comprehensive electronic database of California's plants, wildlife, insects, lichens, and fungi developed specifically for use by biological consultants.

Mr. Wood regularly teams with associates providing specialized expertise in environmental permitting and regulatory compliance, mitigation, CEQA/NEPA, endangered and other special-status wildlife species, anadromous fish and aquatic resources, entomology, construction and long-term monitoring, and arboriculture. Mr. Wood has extensive experience conducting botanical surveys in the California deserts. Including studies for transmission lines, military base studies, and solar power generation facilities. In 2008, he participated in multi-season floristic surveys across the Mojave Desert for the CalNev pipeline project between Las Vegas and San Bernardino.



**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
IMPERIAL VALLEY SOLAR PROJECT**
(formerly known as SES Solar Two Project)
IMPERIAL VALLEY SOLAR, LLC

**Docket No. 08-AFC-5
PROOF OF SERVICE**
(Revised 5/10/10)

APPLICANT

Richard Knox
Project Manager
SES Solar Two, LLC
4800 N Scottsdale Road.,
Suite 5500
Scottsdale, AZ 85251
richard.knox@tesseractosolar.com

CONSULTANT

Angela Leiba, Sr. Project
Manager URS Corporation
1615 Murray Canyon Rd.,
Suite 1000
San Diego, CA 92108
Angela_Leiba@urscorp.com

APPLICANT'S COUNSEL

Allan J. Thompson
Attorney at Law
21 C Orinda Way #314
Orinda, CA 94563
allanori@comcast.net

Ella Foley Gannon, Partner
Bingham McCutchen, LLP
Three Embarcadero Center
San Francisco, CA 94111
ella.gannon@bingham.com

INTERESTED AGENCIES

California ISO
e-recipient@caiso.com

Daniel Steward, Project Lead
BLM – El Centro Office
1661 S. 4th Street
El Centro, CA 92243
daniel_steward@ca.blm.gov

Jim Stobaugh,
Project Manager &
National Project Manager
Bureau of Land Management
BLM Nevada State Office
P.O. Box 12000
Reno, NV 89520-0006
jim_stobaugh@blm.gov

INTERVENORS

California Unions for Reliable
Energy (CURE)
c/o Tanya A. Gulesserian
Loulena Miles, Marc D. Joseph
Adams Broadwell Joseph &
Cardozo
601 Gateway Blvd., Ste. 1000
South San Francisco, CA 94080
tgulesserian@adamsbroadwell.com
lmiles@adamsbroadwell.com

Tom Budlong
3216 Mandeville Canyon Road
Los Angeles, CA 90049-1016
TomBudlong@RoadRunner.com

Hossein Alimamaghani
4716 White Oak Place
Encino, CA 91316
almamaghani@aol.com

***California Native Plant Society**
Tom Beltran
P.O. Box 501671
San Diego, CA 92150
cnpsd@nyms.net

California Native Plant Society
Greg Suba & Tara Hansen
2707 K Street, Suite 1
Sacramento, CA 5816-5113
gsuba@cnps.org

ENERGY COMMISSION

JEFFREY D. BYRON
Commissioner and Presiding
Member
jbyron@energy.state.ca.us

ANTHONY EGGERT
Commissioner and Associate
Member
aeggert@energy.state.ca.us

Raoul Renaud
Hearing Officer
rrenaud@energy.state.ca.us

Kristy Chew,
Adviser to Commissioner Byron
e-mail service preferred
kchew@energy.state.ca.us

Caryn Holmes, Staff Counsel
Christine Hammond,
Co-Staff Counsel
cholmes@energy.state.ca.us
chammond@energy.state.ca.us

Christopher Meyer
Project Manager
cmeyer@energy.state.ca.us

Jennifer Jennings
Public Adviser
publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, Corinne Lytle, declare that on June 11, 2010, I served and filed copies of the attached, Applicant's Late Spring Botany Report. The original documents, filed with the Docket Unit, are 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/solartwo/index.html>]

The documents have 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:

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

by personal delivery;

by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses **NOT** marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

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-5
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, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

Original Signed By
Corinne Lytle