



May 2, 2012

Geary Hund
United States Fish and Wildlife Service
Carlsbad Field Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92009

Re: Post Survey Notification of Focused Survey Results for the Mountain Plover on the Campo Verde Solar Energy Project

Dear Geary,

This letter summarizes the results of the 2012 winter surveys for Mountain Plover (*Charadrius montanus*) conducted within the Campo Verde Solar Project survey area. The Campo Verde Solar Project is a proposed 1,990 acre solar photovoltaic (PV) energy-generating facility (solar energy facility site) located in Imperial County approximately 7 miles southwest of the community of El Centro, California. The Project will be interconnected to the regional transmission system via a new gen-tie line constructed to the Imperial Valley Substation. This interconnection will be accomplished via one of three potential options – two requiring rights-of-way across federal lands managed by the Bureau of Land Management (BLM) and one located entirely on private lands (**Figure 1**).

The BLM El Centro Field Office suggested that First Solar conduct protocol Mountain Plover surveys to provide baseline data to be used in BLM's Section 7 consultation with the U.S. Fish and Wildlife Service (Service) in case the species is proposed for listing prior to project initiation. The survey guidance (USFWS 2011) was developed by the Service's Carlsbad Field Office and provided to Heritage Environmental Consultants by the BLM.

Methods

Mountain Plovers are known to winter in the Imperial Valley, commonly foraging and roosting in agricultural fields in different stages of cropping cycles. They prefer alfalfa fields (less than 9.84 inches in height, or mowed); Bermuda grass (less than 9.84 inches in height, dormant, mowed, or burned); actively grazed fields; fallow fields; and bare fields (tilled, plowed, or furrowed; Andres and Stone 2009).

Qualified biologists experienced in the identification of North American birds by sight and sound, including Mountain Plover detection and identification, performed the winter surveys. Suitable habitat was identified in the survey area by driving to each field and assessing vegetation height. Observation points were set up so that each field could be



sufficiently observed from one point (**Figure 2**). A total of 18 observation points were established. Two observers were typically present at each observation point; one biologist observed a single field (never more than 100 acres; typically ranging from 40-80 acres) while the other biologist observed the opposite field. Spotting scopes and binoculars were used to scan each field for a minimum of 20 minutes and up to 45 minutes per field per observer per field visit.

A total of three surveys were conducted during February 2012, separated by a minimum of five days. Surveys were conducted between the hours of 8 a.m. and 4 p.m. and avoided periods of excessive or abnormal heat, wind, rain, fog, or other inclement weather. Surveys were not conducted if winds exceeded 15 miles per hour. No more than 600 acres were surveyed per biologist per day.

Existing Conditions

The entire survey area (approximately 1,990 acres) is agricultural land consisting of alfalfa, Bermuda grass, Sudan grass and tilled fields in various stages. The fields surveyed ranged in size from 20 acres to 200+ acres (larger fields were subdivided into smaller observation blocks for the survey; see Table 1).

Survey Results

Survey events occurred on three separate occasions in February (surveys were performed on February 7 and 8, February 15, 16 and 17, and February 21, 22 and 23, 2012). A total of 18 observation points were sampled (sometimes less if habitat became unsuitable between survey events). Weather was generally conducive to Mountain Plover surveys. **Table 1 – Mountain Plover Winter Survey Results** provides general survey information.



Table 1 – Mountain Plover Winter Survey Results

Date	Observation Point	Field Surveyed	Field Size (Acres)	Habitat	Start/Stop Time ¹	Temp (°F)	Wind Speed (mph)	Sky	MOPL
Survey Number 1									
02/07/12	M01	M01 East	80	Alfalfa (15-20") UNSUITABLE	N/S	64	0	Cloudy	n/a
		M01 West	40	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
	M02	M02 East	80	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
		M02 West	40	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
	M03	M03 West	70	Alfalfa (20-25") UNSUITABLE	N/S	-	-	-	n/a
	M04	M04 East	80	Bermuda (3-5")	1310/1355	-	-	-	None
	M05	M05 South	80	Bermuda (3-5")	1400/1445	-	-	-	None
		M05 Northeast	60	Bermuda (3-5")	1400/1445	-	-	-	None
	M06	M06 East	70	Alfalfa (10-15") UNSUITABLE	N/S	-	-	-	n/a
		M06 West	100	Sudan/Bermuda (0-7")	1455/1540	-	-	-	None
Acres Surveyed (per biologist): 240/260 Acres Surveyed (per hour/per biologist): 96/104									



02/08/12	M07	M07 East	80	Sudan (5-10")	741/826	55	<5	Mostly Cloudy	None
		M07 West	20	Bermuda (3-15")	741/826	-	-	-	None
	M08	M08 East	50	Alfalfa (10-25") UNSUITABLE	N/S	-	-	-	n/a
		M08 West	50	Alfalfa (10-20") UNSUITABLE	N/S	-	-	-	n/a
	M09	M09 East	40	Bermuda (burned; 0-3")	837/922	60	<5	Partly Cloudy	None
		M09 West	40	Alfalfa (10-20") UNSUITABLE	N/S	-	-	-	n/a
	M10	M10 East	40	Alfalfa (10-20") UNSUITABLE	N/S	-	-	-	n/a
		M10 West	60	Alfalfa (10-20") UNSUITABLE	N/S	-	-	-	n/a
	M11	M11 East	80	Sudan (8-10")	936/1021	-	-	-	None
	M12	M12 East	80	Sudan (8-10")	936/1021	-	-	-	None
	M13	M13 East	80	Sudan (8-10")	837/922	-	-	-	None
		M13 Northwest	40	Sudan (36-48") UNSUITABLE	N/S	-	-	-	n/a
	M14	M14 East	80	Fallow/Bermuda (0-10")	1028/1113	-	-	-	None
		M14 West	80	Fallow (0")	1028/1113	-	-	-	None
	M15	M15 North	80	Sudan (8-10")	1155/1240	69	<5	Mostly Clear	None
		M15 South	80	Sudan (8-10")	1155/1240	-	-	-	None
	M16	M16 East	20	Fallow (0")	1244/1329	-	-	-	None
		M16 West	60	Sudan (8-10")	1244/1329	-	-	-	None
	M17	M17 East	60	Fallow (0")	1332/1417	-	-	-	None
		M17 West	60	Sudan (8-10")	1332/1417	-	-	-	None
M18	M18 East	60	Sudan (8-10")	1419/1504	72	<5	Clear	None	
	M18 West	40	Sudan (8-10")	1419/1504	-	-	-	None	
Acres Surveyed (per biologist): 480/520 Acres Surveyed (per hour/per biologist): 64/69									



Survey Number 2									
02/15/12	M01	M01 East	80	Alfalfa (15-20") UNSUITABLE	N/S	67	10	Clear	n/a
		M01 West	40	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
	M02	M02 East	80	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
		M02 West	40	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
	M03	M03 West	70	Alfalfa (20-25") UNSUITABLE	N/S	-	10-20	-	n/a
Acres Surveyed (per biologist): 0 Acres Surveyed (per hour/per biologist): 0									
02/16/12	M04	M04 South	80	Bermuda (3-5")	1255/1355	65	10-15	Mostly Clear	None
	M05	M05 Northeast	60	Bermuda (3-5")	1330/1405	-	-	-	None
		M05 South	80	Bermuda (3-5")	1330/1405	-	-	-	None
	M06	M06 East	70	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
		M06 West	100	Sudan/Bermuda (0-7 burned/10-15)	1410/1440	-	-	-	None
	M07	M07 West	20	Bermuda (3-5")	1445/1515	-	-	-	None
		M07 East	80	Sudan (5-10")	1445/1515	-	-	-	None
	M08	M08 East	50	Alfalfa (10-25") UNSUITABLE	N/S	-	-	-	n/a
		M08 West	50	Alfalfa (10-20") UNSUITABLE	N/S	-	-	-	n/a
	M09	M09 West	40	Alfalfa (10-20") UNSUITABLE	N/S	-	-	-	n/a
M09 East		40	Bermuda (burned; 0-3")	1524/1555	-	-	-	None	
M10	M10 West	60	Alfalfa (10-20") UNSUITABLE	N/S	-	-	-	n/a	
	M10 East	40	Alfalfa (3-7")	1524/1555	63	5-15	Partly Cloudy	None	
Acres Surveyed (per biologist): 320/360 Acres Surveyed (per hour/per biologist): 107/120									



2/17/12	M11	M11 East	80	Sudan (8-10")	810/855	52	<5	Clear	None
	M12	M12 East	80	Sudan (8-10")	810/155	-	-	-	None
	M13	M13 Northwest	40	Sudan (36-48") UNSUITABLE	N/S	-	-	-	n/a
		M13 East	80	Sudan (8-10")	901/932	-	-	-	None
	M14	M14 East	80	Fallow/Sudan (0-10")	937/1022	-	-	-	None
		M14 West	80	Fallow/Burned (0")	937/1022	-	-	-	None
	M15	M15 North	80	Sudan (8-10")	1025/1110	-	-	-	None
		M15 South	80	Sudan (8-10")	1025/1110	68	5	Clear	None
	M16	M16 East	20	Fallow (0")	1158/1243	72	5	Clear	73 MOPL on 2/16
		M16 West	60	Sudan (8-10")	1158/1243	-	-	-	None
	M17	M17 East	60	Sudan (8-10")	1245/1330	-	-	-	None
		M17 West	60	Sudan (8-10")	1245/1330	-	-	-	None
	M18	M18 East	60	Sudan (8-10")	1332/1417	-	-	-	None
M18 West		40	Sudan (8-10")	1332/1417	73	5	Clear	None	
Acres Surveyed (per biologist): 460/480 Acres Surveyed (per hour/per biologist): 77/80									
Survey Number 3									
02/21/12	M03	M3 West	70	Alfalfa (12-20") UNSUITABLE	N/S	73	0-5	Clear	n/a
	M04	M4 South	80	Bermuda (6")	1255/1344	-	-	-	None
	M05	M5 Northeast	60	Bermuda (3-10")	1355/1440	-	-	-	None
		M5 South	80	Bermuda (6-8")	1355/1440	-	-	-	None
	M06	M6 West	100	Alfalfa (burned, 0-8")	1452/1537	-	-	-	None
		M6 East	70	Alfalfa (10-15") UNSUITABLE	N/S	-	-	-	n/a
Acres Surveyed (per biologist): 240/260 Acres Surveyed (per hour/per biologist): 87/94									



02/22/11	M01	M1 East	80	Alfalfa (cut)	753/838	53	0	Clear	None
	M02	M2 East	80	Alfalfa (cut)	754/839	-	-	-	None
	M07	M7 East	80	Sudan (6-12")	851/936	-	-	-	None
		M7 West	20	Bermuda (3-15")	851/936	-	-	-	None
	M08	M8 West	50	Alfalfa (20-24") UNSUITABLE	N/S	-	-	-	n/a
		M8 East	50	Alfalfa (12-36") UNSUITABLE	N/S	-	-	-	n/a
	M09	M09 West	40	Alfalfa (10-16") UNSUITABLE	N/S	-	-	-	n/a
		M09 East	40	Alfalfa (3-6")	953/1038	-	-	-	None
	M10	M10 East	40	Alfalfa (12-24") UNSUITABLE	N/S	-	-	-	n/a
		M10 West	60	Alfalfa (12-24") UNSUITABLE	N/S	-	-	-	n/a
	M11	M11 East	80	Sudan (5-10")	1103/1148	-	-	-	None
	M12	M12 East	80	Sudan (10-12")	1104/1149	-	-	-	None
	M13	M13 Northwest	40	Sudan (36-48") UNSUITABLE	N/S	-	-	-	n/a
		M13 East	80	Sudan (8-10")	1252/1337	-	-	-	None
	M14	M14 East	80	Fallow (0-4")	1417/1502	-	-	-	None
M14 West		80	Fallow/Burned (<3")	1417/1502	-	-	-	None	
M15	M15 North	80	Sudan (6-10")	1510/1555	-	-	-	None	
	M15 South	80	Sudan (6-10")	1510/1555	83	5	Clear	None	
Acres Surveyed (per biologist): 460/520									
Acres Surveyed (per hour/per biologist): 58/65									
2/23/12	M02	M02 West	40	Alfalfa (cut)	804/850	55	0	Clear	None
	M01	M01 West	40	Alfalfa (cut)	802/847	-	-	-	None
	M16	M16 West	60	Sudan (6-12")	904/949	-	-	-	None
		M16 East	20	Fallow (0")	904/949	-	-	-	None
	M17	M17 West	60	Sudan (6-12")	953/1038	-	-	-	None
		M17 East	60	Sudan (6-12")	953/1058	-	-	-	None
	M18	M18 West	40	Sudan (6-12")	1046/1131	-	-	-	None
		M18 East	60	Sudan (6-12")	1046/1131	-	-	-	None
Acres Surveyed (per biologist): 180/200									
Acres Surveyed (per hour/per biologist): 51/57									



Survey Totals	
Average Acres Surveyed (per biologist/2 or 3 day survey): 750-930	
Average Acres Surveyed (per hour/per biologist): 65-90	
Total Acres Surveyed per Survey: 1,500-1,860	

¹ N/S = Not surveyed due to unsuitable habitat.



The majority of the survey area represented suitable Mountain Plover habitat during the surveys; fields that did not represent suitable habitat throughout the survey included M03 East, M06 East, M08 East, M08 West, M09 West, M10 West and M13 Northwest. Fields M01 East, M01 West, M02 East, M02 West, and M10 East were unsuitable during at least one (but not all) survey events. Fields M11 East, M12 East, M13 East, M14 East, M15 North, M15 South, M16 West, M17 East, M17 West, M18 East, and M18 West all represented very marginal habitat but were surveyed to be conservative.

Mountain Plovers were observed once during the survey; approximately 73 were observed foraging in field M16 East on February 15, 2012. This field was fallow (no vegetation) at the time of this observation. Mountain Plovers have also been observed in and adjacent to the project area during other survey efforts on several occasions (e.g. Avian Use and Abundance Surveys). On January 24, 2012, approximately 100 Mountain Plovers were observed outside of the project area in the field immediately north of M06E; on the same date, 282 were observed in the field immediately south of M06E.

If you have any questions concerning the contents of this notification letter, please contact me.

Sincerely,

A handwritten signature in blue ink that reads "Patrick F. Golden".

Patrick Golden
Senior Biologist, Principal

cc: James Cook, First Solar
Kim Marzden, BLM, Renewable Energy Coordination Office
Sharon Tyson, BLM, El Centro Field Office
Magdalena Rodriguez, California Department of Fish and Game

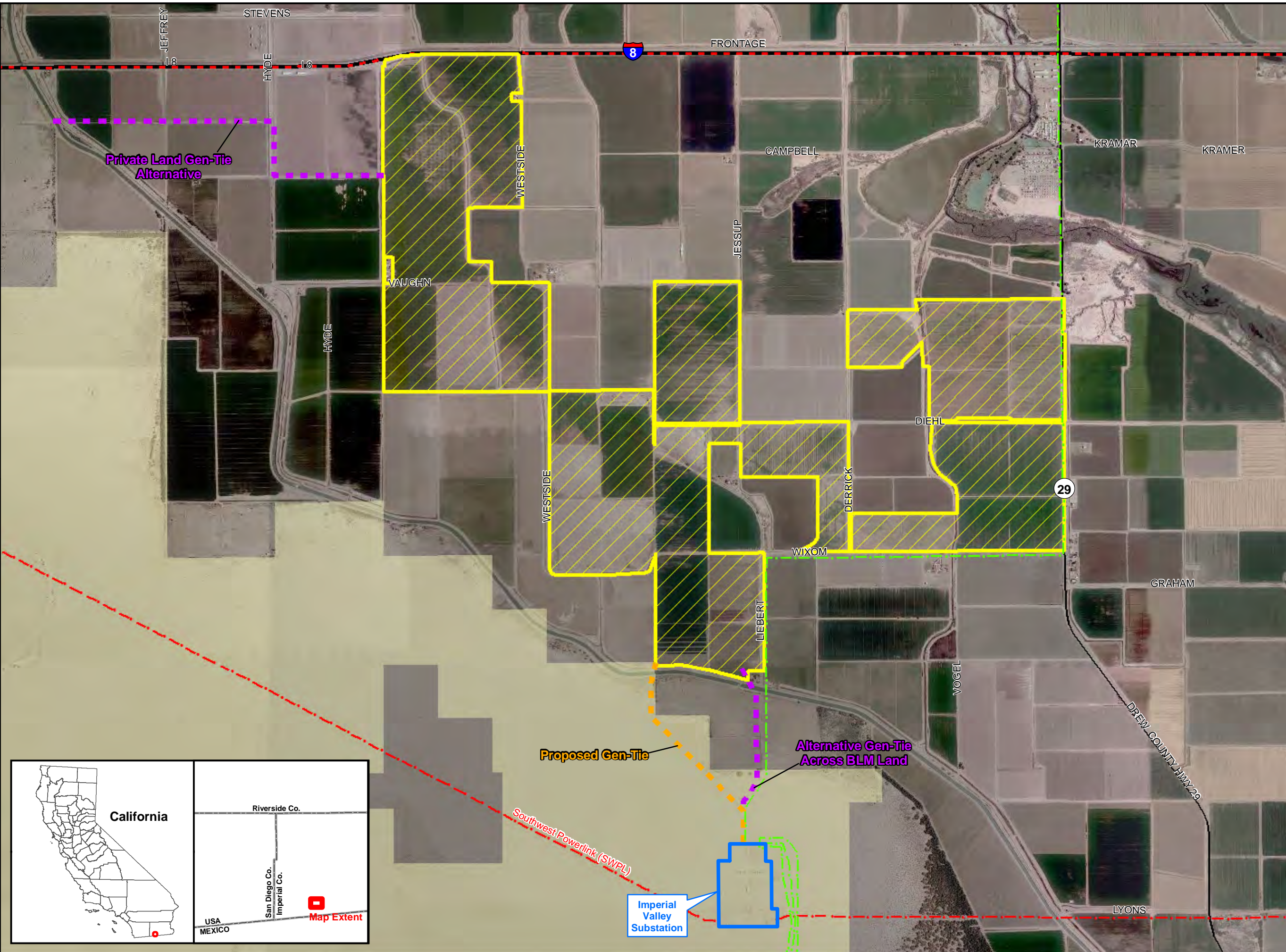
Attachments



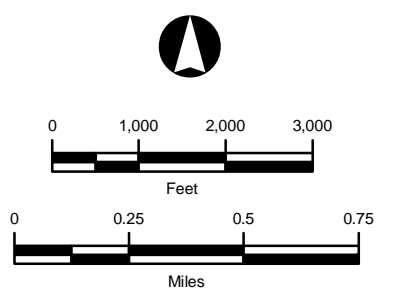
References Cited

Andres, B.A. and K.L. Stone. 2009. Conservation Plan for the Mountain Plover (*Charadrius montanus*), Version 1.0. Manomet Center for Conservation Sciences, Manomet, Massachusetts.

U.S. Fish and Wildlife Service. 2011. Interim Survey Guidance for Wintering Mountain Plover (*Charadrius montanus*) in the Imperial Valley. Unpublished guidance. 1 page.



- Legend**
- - - Existing 500 kV Transmission Line
 - - - Existing 230 kV Transmission Line
 - - - Proposed Gen-Tie
 - - - Gen-Tie Alternative
 - - - Interstate
 - Major Road
 - - - County Boundary
 - Campo Verde Solar Site
- Jurisdictional Land Ownership
- Bureau of Land Management Land



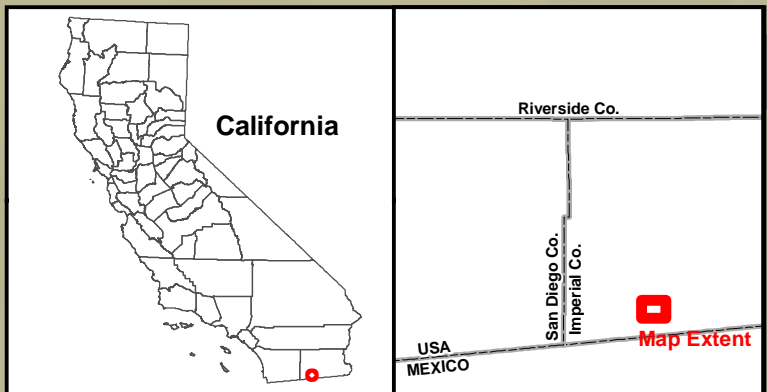
State Plane Coordinate System
 California Zone 6, NAD 83
 Lambert Conformal Conic Projection
 1983 North American Datum
 Linear Unit: Foot US

CAMPO VERDE SOLAR PROJECT

FIGURE 1 - PROJECT LOCATION

Map Extent: Imperial County, California

Date: 04.25.12 Author: djb
 ...Maps\Avian and Mountain Plover Report Figure 1_Project Location



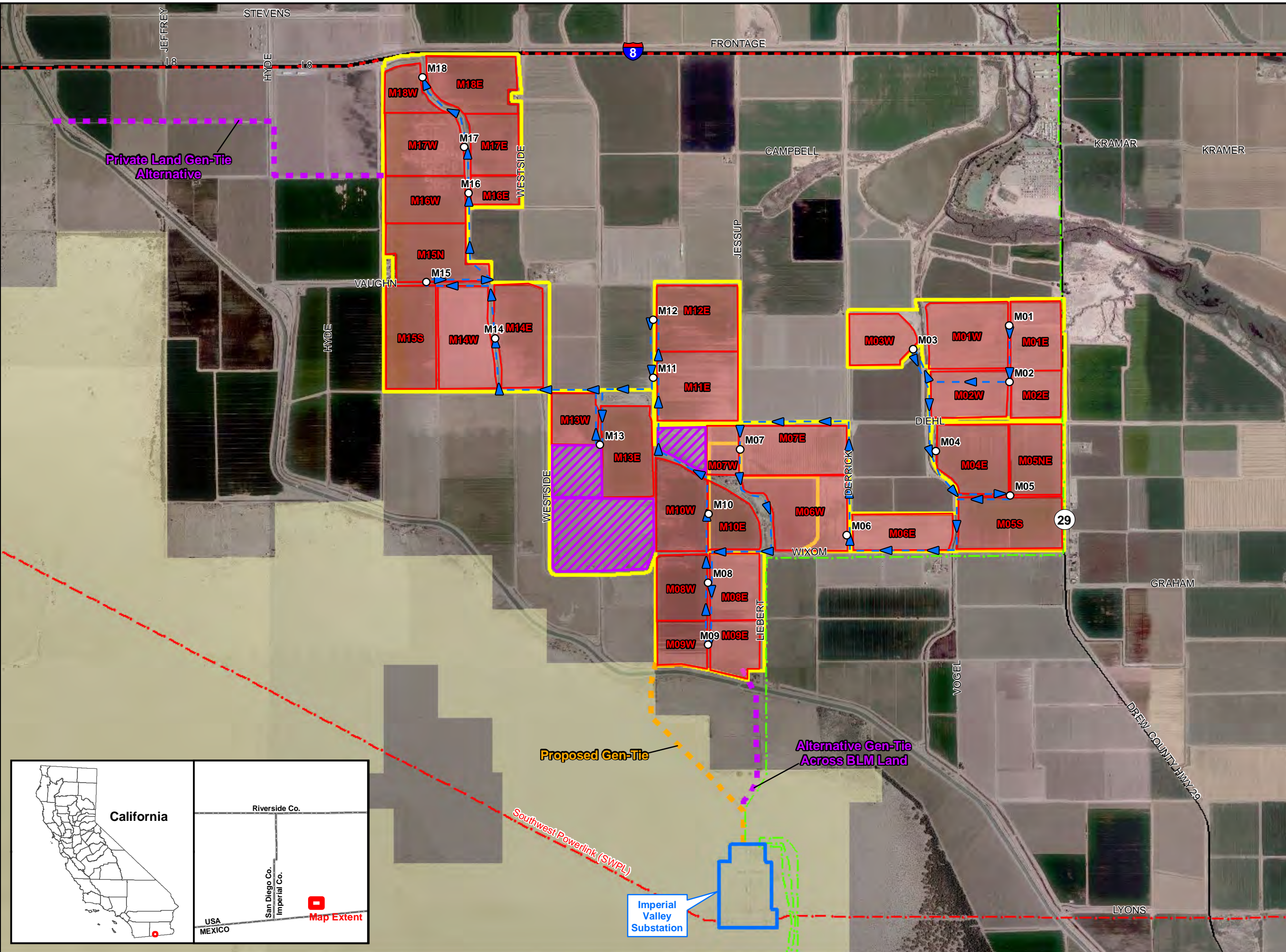
Imperial Valley Substation

Southwest Powerlink (SWPL)

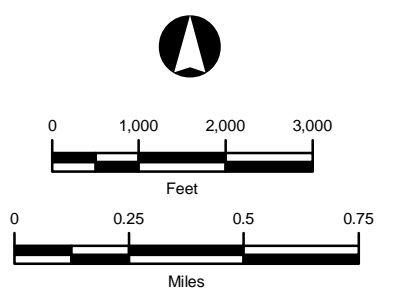
Proposed Gen-Tie

Alternative Gen-Tie Across BLM Land

Private Land Gen-Tie Alternative



- Legend**
- Mountain Plover Survey Point
 - - - Mountain Plover Survey Route
 - . - . Existing 500 kV Transmission Line
 - . - . Existing 230 kV Transmission Line
 - - - Proposed Gen-Tie
 - - - Gen-Tie Alternative
 - - - Interstate
 - - - Major Road
 - - - County Boundary
 - Mountain Plover Field Survey Area
 - Unsuitable Habitat
 - Campo Verde Solar Site
 - Jurisdictional Land Ownership
 - Bureau of Land Management Land



State Plane Coordinate System
 California Zone 6, NAD 83
 Lambert Conformal Conic Projection
 1983 North American Datum
 Linear Unit: Foot US

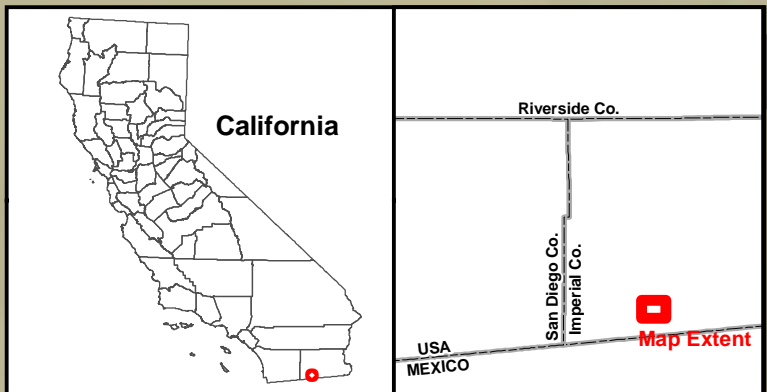
CAMPO VERDE SOLAR PROJECT

FIGURE 2 - MOUNTAIN PLOVER SURVEY POINTS

Map Extent: Imperial County, California

Date: 04.25.12 Author: djb

...Maps\Avian Survey Report Figure 2



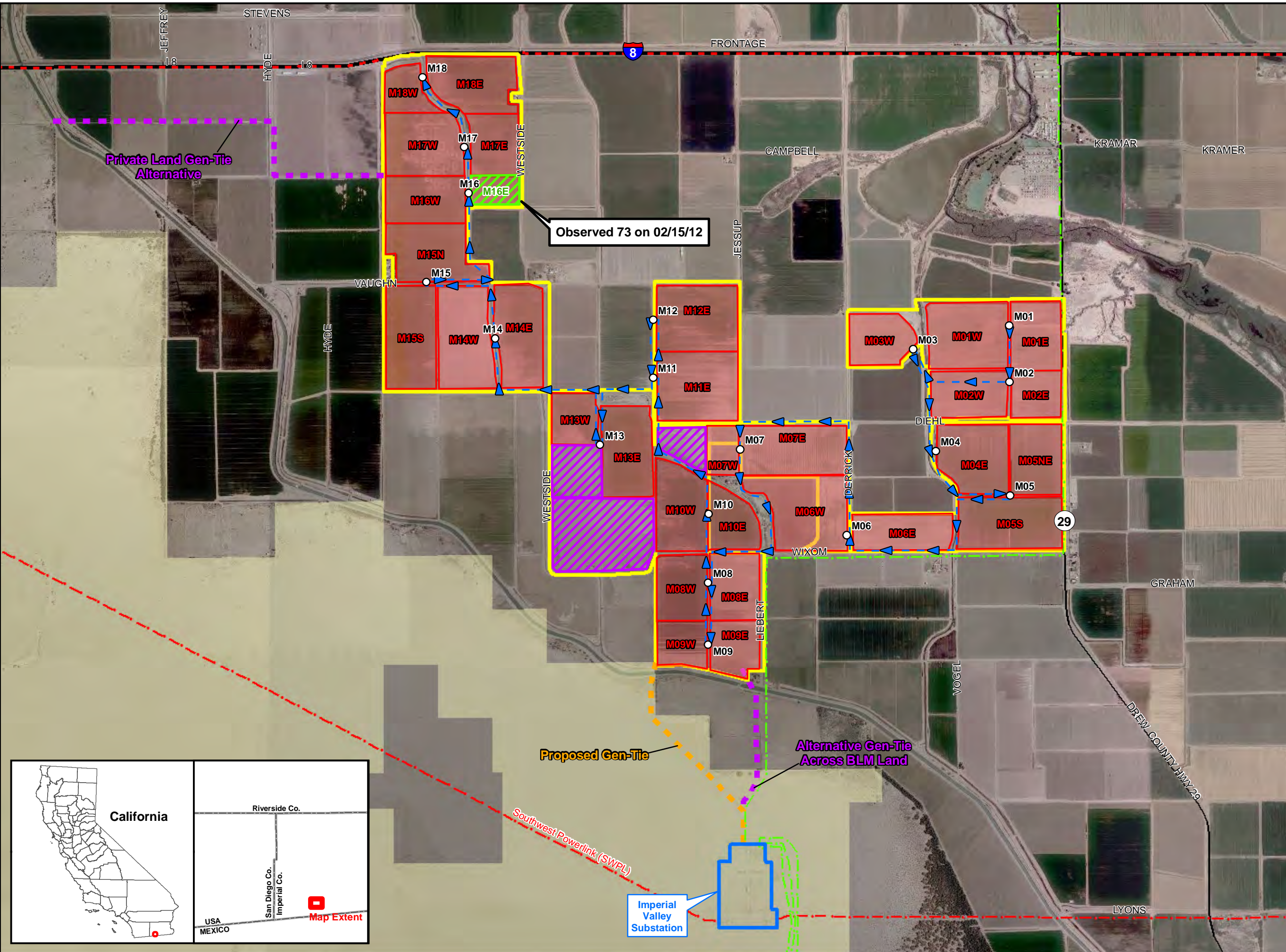
Imperial Valley Substation

Southwest Powerlink (SWPL)

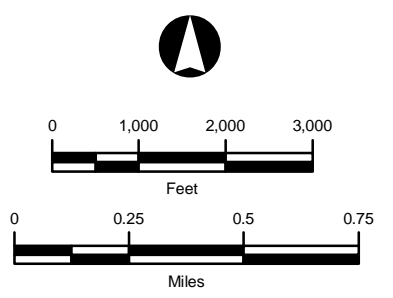
Alternative Gen-Tie Across BLM Land

Proposed Gen-Tie

Private Land Gen-Tie Alternative



- Legend**
- Mountain Plover Survey Point
 - - - Mountain Plover Survey Route
 - · - · Existing 500 kV Transmission Line
 - · - · Existing 230 kV Transmission Line
 - - - Proposed Gen-Tie
 - · - · Gen-Tie Alternative
 - - - Interstate
 - - - Major Road
 - - - County Boundary
 - Mountain Plover Field Survey Area
 - Mountain Plover Field Survey Area With Detections
 - Unsuitable Habitat
 - Campo Verde Solar Site
- Jurisdictional Land Ownership
- Bureau of Land Management Land



State Plane Coordinate System
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 1983 North American Datum
 Linear Unit: Foot US

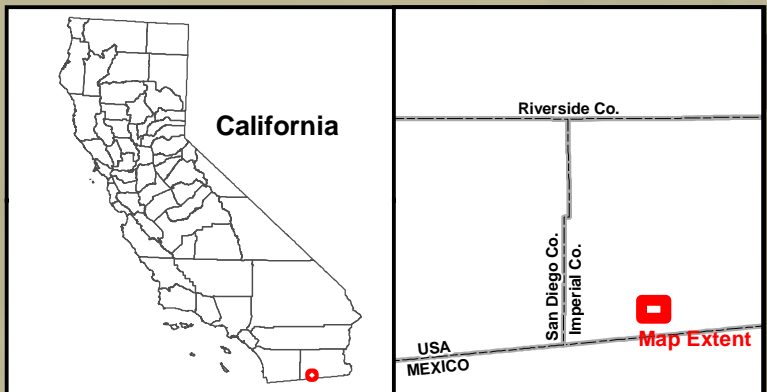
CAMPO VERDE SOLAR PROJECT

FIGURE 3 - MOUNTAIN PLOVER OBSERVATIONS

Map Extent: Imperial County, California

Date: 04.25.12 Author: djb

...Maps\Avian Survey Report Figure 2



Proposed Gen-Tie

Alternative Gen-Tie Across BLM Land

Imperial Valley Substation

Southwest Powerlink (SWPL)