

<b>Table 4. Previously Recorded Cultural Resources within One Mile</b>					
<b>Site Number</b>	<b>Type</b>	<b>Age</b>	<b>Location</b>	<b>NRHP Eligibility</b>	<b>Comment</b>
CA-IMP-11497	Lithic Scatter & Ceramic Scatter	Prehistoric	One-Mile Buffer	Recommended Eligible (Zepeda-Herman et al. 2011)	
CA-IMP-11498	Lithic Scatter	Prehistoric	One-Mile Buffer	Recommended Eligible (Zepeda-Herman et al. 2011)	
CA-IMP-11499	Lithic Scatter & Ceramic Scatter	Prehistoric	One-Mile Buffer	Recommended Eligible (Zepeda-Herman et al. 2011)	
CA-IMP-11500	Lithic Scatter & Ceramic Scatter	Prehistoric	One-Mile Buffer	Recommended Eligible (Zepeda-Herman et al. 2011)	
CA-IMP-11501	Ceramic Scatter	Prehistoric	One-Mile Buffer	Recommended Not Eligible (Zepeda-Herman et al. 2011)	
CA-IMP-11502	Lithic Scatter	Prehistoric	One-Mile Buffer	Recommended Eligible (Zepeda-Herman et al. 2011)	
P-13-001402	Isolate Pottery Sherds	Prehistoric	One-Mile Buffer	Not Eligible	Not relocated in 2010 (Zepeda-Herman et al. 2011)
P-13-001403	Isolate Pottery Sherds	Prehistoric	One-Mile Buffer	Not Eligible	Not relocated in 2010 (Zepeda-Herman et al. 2011) or 2011 (Mitchell 2011)
P-13-003792	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-004245	Historic Dumpsite	Historic	One-Mile Buffer	Insufficient Data	
P-13-004355	Isolate - Two Brown Chalcedony Flakes	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-004511	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-004512	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-004516	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	Not relocated in 2010 (Zepeda-Herman et al. 2011)
P-13-004517	Isolate - Chalcedony Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-005297	Isolate Flakes	Prehistoric	One-Mile Buffer	Not Eligible	Collected (Apple et al. 1982)

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P-13-005298	Isolate Bifacial Mano	Prehistoric	One-Mile Buffer	Not Eligible	Collected (Apple et al. 1982)
P-13-005585	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	Collected (Foster and Greenwood 1983)
P-13-005586	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	Not relocated in 2010 (Zepeda-Herman et al. 2011)
P-13-005587	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	Not relocated in 2010 (Zepeda-Herman et al. 2011)
P-13-005588	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	Not relocated in 2010 (Zepeda-Herman et al. 2011)
P-13-005648	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	Collected (Gallegos 1984)
P-13-006683	Isolate Scraping Tool	Prehistoric	One-Mile Buffer	Not Eligible	Collected (Gallegos 1984)
P-13-006684	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	Collected (Gallegos 1984)
P-13-009541	Isolate Debitage	Prehistoric	One-Mile Buffer	Not Eligible	Not relocated in 2010 (Bowden-Renna 2010)
P-13-009542	Isolate Debitage	Prehistoric	One-Mile Buffer	Not Eligible	Not relocated in 2010 (Bowden-Renna 2010)
P-13-009543	Isolate Debitage	Prehistoric	One-Mile Buffer	Not Eligible	Not relocated in 2010 (Bowden-Renna 2010)
P-13-009726	Isolate Pottery Sherd	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-009843	Isolate Debitage	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-009861	Isolate Mano Fragment	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-012688	Dixie Drain Circle Culvert	Historic	One-Mile Buffer	Recommended Not Eligible (URS 2009)	Part of the All-American Canal System
P-13-012689	Portion of Fern Canal and Fern Drain	Historic	Proposed Project APE	Recommended Not Eligible (URS 2009)	Part of the All-American Canal System
P-13-012690	Portion of Forget-Me-Not Canal	Historic	Non-BLM option	Recommended Not Eligible (URS 2009)	Part of the All-American Canal System
P-13-012691	Portion of Salt Creek Drain 2	Historic	One-Mile Buffer	Recommended Not Eligible (URS 2009)	Part of the All-American Canal System

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P-13-012692	Fern Check of the Westside Main Canal	Historic	Proposed Project APE	Recommended Not Eligible (URS 2009)	Part of the All-American Canal System
P-13-012693	Portion of the Fig Canal	Historic	Proposed Project APE	Recommended Not Eligible (URS 2009)	Part of the All-American Canal System
P-13-012696	Isolate Sherds	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013099	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013100	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013104	Isolate Can	Historic	One-Mile Buffer	Not Eligible	
P-13-013105	Isolate Glass Shard	Historic	One-Mile Buffer	Not Eligible	
P-13-013106	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013107	Isolate Flakes	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013112	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013113	Isolate Can	Historic	One-Mile Buffer	Not Eligible	
P-13-013114	Isolate Bottle	Historic	One-Mile Buffer	Not Eligible	
P-13-013115	Isolate - Amber Glass Shards from a bottle	Historic	One-Mile Buffer	Not Eligible	
P-13-013116	Isolate Flakes	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013117	Isolate Flakes	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013197	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013203	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013204	Isolate Metate Fragment	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013205	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013206	Isolate Pottery Sherds	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013207	Isolate Core	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013208	Isolate Mano	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013209	Isolate Core	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013210	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013211	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013213	Isolate Core	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013214	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013215	Isolate Assay Cobble	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013216	Isolate Core Tool	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013217	Isolate Core	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013218	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013219	Isolate Core	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013229	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013230	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	

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P-13-013242	Isolate Assay Cobble and Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013243	Isolate Assay Cobble	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013244	Isolate Bifacial Assay Cobble	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013247	Isolate Pottery Sherd	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013248	Isolate Flakes	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013249	Pot Drop	Prehistoric	One-Mile Buffer	Insufficient Data	
P-13-013250	Isolate Pottery Sherd	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013255	Isolate Pottery Sherd	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013256	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013269	Isolate Core	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013274	Isolate Pottery Sherds & FAR	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013275	Isolate Cores & FAR	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013277	Isolate Core	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013278	Isolate Core	Prehistoric	One-Mile Buffer	Not Eligible	
P-13-013279	Isolate Flake	Prehistoric	One-Mile Buffer	Not Eligible	

## 4. RESEARCH DESIGN

The goal of this Class III archaeological inventory is to provide the County of Imperial and the Applicant with sufficient data to assess potential impacts to CRHR and NRHP eligible sites that would be affected by construction of the proposed Project. It is also to present the information as supporting technical documentation as part of the process for compliance with the NHPA.

This research design is to identify the distribution of cultural resources within the area of the Project, and to analyze their placement within the established cultural chronologies and contextual settings for the Colorado Desert study region. The cultural setting for the region has been presented in the previous section and will be applied comparatively to understand the relationship(s) in terms of chronology and/or context of the cultural resources identified within the vicinity of the Project survey area.

Additional research questions that can be addressed include those regarding chronology, subsistence, land-use patterns, contact and interaction between Native Americans and Europeans and Euroamericans, and historical-period occupation as provided below.

### **Chronology**

Chronology is a key component in understanding the processes of cultural change. Sites located in the western Colorado Desert study region are primarily surface sites. Prehistoric residential sites do, however, have the potential for subsurface cultural deposits. Chronology in this area is a major research issue for the Colorado River drainage system and sites along the Ancient Lake Cahuilla shoreline. Short of reliable absolute dates from well-understood contexts, archaeologists in the past have been forced to rely heavily on artifact cross dating. Therefore, knowledge of the chronology of cultures in the region continues to change, and comprehension of regional cultural processes remains a work in progress. Key research questions are presented below.

### Research Questions

- Can the sites yield information relating to established regional lithic and ceramic typologies?
- Can the ceramic chronology be further refined?
- Are there variations in the temporal framework in Yuman manifestations in relationship to the distance from the Colorado River area?

### Data Requirements

In most areas of the western Colorado Desert, addressing issues of chronology requires samples suitable for absolute-dating analysis. Sample materials include botanical and faunal remains for radiocarbon dating, burned clay associated with cultural features for archaeomagnetic dating, and wood samples from specific species for tree-ring dating. Other, less-precise absolute-dating

methods include thermoluminescence and obsidian hydration analyses. Sites that can provide the kind of samples described above in interpretable contexts are rare in the archaeological record of the Colorado River area.

### **Subsistence**

The western Colorado Desert is in a region of alternating mountains and plains, with major washes that were often the lifelines of the Yuman people; however, the Colorado River and Ancient Lake Cahuilla provided the most reliable source of water and subsistence during certain periods of time.

Paleoindian and Archaic foraging strategies changed to hunting and gathering cultures bound to floodplain resources, and progressed to floodplain-based, logistically organized horticultural societies that continued to exploit wild riparian and desert resources. For the horticulturalists, using wild resources minimized risk imposed by an agricultural adaptation. The degree of organizational complexity needed to be responsive to a variety of environmental factors. As a result, household size, composition, and organization; the size of local population aggregates; the mix of resources used (cultigens or wild plants, riverine or desert resources) varied based on the distribution and availability of resources.

### Research Questions

- What mix of resources did the Archaic people and the River Yumans use?
- If the resource mix changed through time, do these changes correlate with increasing population density, environmental fluctuations, or both?
- Are ethnographic models representative of prehistoric and/or protohistoric periods?

### Data Requirements

Data required to answer these questions consist of faunal and floral remains from use contexts in Archaic, Late Prehistoric Period, and protohistoric residential sites. Macrofloral and palynological samples from sealed cultural contexts (features) and from an array of plant and animal food-processing equipment are important components in defining the resource mix, and immunoassay residue analysis on lithic tools recovered from cultural contexts could potentially provide information on patterns of animal exploitation. As with chronological needs, contexts that can provide these data are rare.

### **Land-Use Patterns**

Land-use patterns form an important part of a culture's adaptation to its surrounding environment, and its strategy characterizes and describes the ways in which a culture interacts with and exploits its natural resources. The organization of land-use strategies is patterned and is reflected in the set of functional site types embedded in the land-use system.

Analysis of land-use systems provides considerable insights into interactions between economic adaptations and changing environmental and social circumstances, and like subsistence systems,

they operate in an ecological context and are, therefore, responsive to fluctuations in environmental conditions. Essentially land-use systems influence, and are influenced by a myriad of extant social conditions, such as organizational complexity, labor organization and scheduling, ritual and ceremonial activities, and interrelations with neighboring communities, among other factors.

#### Research Questions

- Did Yuman site locations co-vary with environmental factors? If so, what factors appear to have been the most significant?
- How do site location and site type relate to the spatial distribution of raw-material sources in the region?
- Did site complexity influence the direction of trade relations with the River tribes versus the Kumeyaay?

#### Data Requirements

By obtaining information about residential, subsistence, and functional site-type patterning, we can reconstruct land-use strategies. Using subsistence, spatial, and chronological information obtained from residential sites, nonresidential site types, and land-use systems, the entire system can be defined. Elements comprising land-use systems (including issues of economy and seasonality) must be discerned from subsistence-related data recovered from each class of sites.

#### **Contact and Interaction between Native Americans and Europeans and Euroamericans**

Historical-period accounts of the primary Native American groups in the subject area of the Imperial Valley, the Yuman, exist from the mid eighteenth and mid-nineteenth centuries. The first written account of Yuman lifeways was first recorded by Anza in the mid-eighteenth century. Archaeological information to support or augment ethnohistoric data is largely lacking. Important questions about protohistoric and historical-period Yuman subsistence and settlement systems remain.

#### Research Questions

- To what degree were protohistoric and historical-period Yuman Tribes integrated into the local Euroamerican economy?
- To what degree, if at all, did these Native American groups rely on wild botanical and faunal resources during the mid eighteenth and early nineteenth centuries?
- Are ethnohistoric data representative of Yuman subsistence and land use patterns? What resource mix did they rely on during the early historical period?
- How well, if at all, were European-introduced domesticated plants and animals incorporated into the Yuman resource mix?

#### Data Requirements

Data required to answer these questions can best be obtained from one or more eighteenth to nineteenth century Yuman residential sites. If the sites have stratigraphic depth, they may include

sealed features that contain data that inform on subsistence, economic, social, and ritual aspects of past lifeways.

### **Historical-Period Occupation**

The eighteenth and nineteenth century occupation of western Colorado Desert had a significant impact on the lives of the Native American people of the area. While changes were already underway in the subject area of the Imperial Valley when the Europeans first encountered the area, more drastic changes followed. During the protohistoric and historic periods the Native Americans returned to a more intensive agricultural practice with the addition of non-native crops, animals, trade goods, religion, and culture.

### Research Questions

- How did the establishment of missions and presidios, as well as the introduction of new crops and livestock, affect settlement pattern, subsistence strategies and cultural traditions?
- Can the study of historic archaeological sites, in conjunction with archival research, tell about the lives of the Spanish, Mexican, and Euroamerican soldiers and settlers in the Yuman area?
- How did agriculture in the Imperial Valley affect patterns of settlement and rural economies? Despite the first 20-40 cm of disturbance from the plow zone, are we still able to retrieve viable research data within areas with potential for buried deposits (e.g. historical flood zones)?

### Data Requirements

While few historic resources have been previously recorded in the vicinity of the Project Area, there is potential for further research into the lives of migrants into the area. Excavation of historic archaeological sites, as well as ethnohistoric data and sources can reveal information that may provide insight into the social fabric of the lives of the migrants into the area and the effects of those cultures on the Native culture.

In order to effectively determine how the establishment of the agriculture in the Imperial Valley has affected our ability to read settlement pattern, subsistence strategies and cultural traditions in the Imperial Valley we need to take into consideration the surrounding cultural resources. Much of the damage to cultural resource sites appears to have occurred during the early to mid-20<sup>th</sup> century within the Project Area, so taking a broader view of cultural sites in the surrounding area will potentially give a better picture of what the prehistoric landscape may have contained.



## 5. METHODS

This chapter discusses the survey design and field methods for the current archaeological project.

### Survey Design

The Secretary of the Interior has issued standards and guidelines for the identification and evaluation of historic properties (*The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* [48 FR 44720–44726]), which are used to ensure that the procedures are adequate and appropriate. The identification and evaluation of historic properties are dependent upon the relationship of individual properties to other similar properties (NPS and ACHP 1998:18-20). Information about properties regarding their prehistory, history, architecture, and other aspects of culture must be collected and organized to define these relationships (NPS 2009), which is the intent of this survey.

Survey techniques are loosely grouped into two categories, reconnaissance and intensive (BLM 2004b; NPS 2009). The choice of survey category depends on the level of effort required for a particular project, which can vary depending on the nature of the properties or property types, the possible adverse effects on such properties, and agency requirements (NPS and ACHP 1998:18).

For the Project, an intensive survey was conducted in order to adequately identify and describe specific cultural resources in the survey corridor. Intensive surveys are used to precisely document the cultural resources within a given area or when information is needed for particular properties for later evaluation and treatment decisions. Such surveys include the documentation of the types of properties that are present, the precise locations and boundaries of all identified properties, the method of survey (including the extent of survey coverage), and data on the appearance, significance, and integrity of each property (NPS 2009). For this project, full coverage (100 percent), systematic surveys with transect intervals no greater than 15 m was performed.

The survey area has been defined above as encompassing (a) a minimum of 300 feet (150 feet on each side of centerline for the right-of-way) in areas where transmission lines are proposed; and (b) the footprints around all project infrastructure not previously surveyed by EPG (Rowe 2008).

### Field Methods

The portion of the Project area that was not covered by the previous EPG survey (Rowe 2008) was subject to a Class III Inventory, a full-coverage pedestrian survey conducted at 15-m transect intervals. The survey was performed July 7-21, 2011 and November 3-4, 2011. The survey crew consisted of a field director/crew chief plus one crew member. In walking the systematic 15-m transects, field personnel were allowed to interrupt the transect in order to perform judgmental inspections of locations such as potential rock features within the survey corridor, but then returned to the 15-m transects in order to maintain systematic coverage. The

survey was generally conducted from north to south, in so far as topography and access permitted doing so.

Daily survey notes on the progress, condition, and findings of the survey were taken. This included a description of vegetation cover, as well as estimates of ground surface visibility, rated as poor (0-25 percent), fair (26-50 percent), good (51-75 percent), or excellent (76-100 percent).

Evidence for buried cultural deposits was opportunistically sought through inspection of natural or artificial erosional exposures and the spoils from rodent burrows. In the daily survey notes, the field director and/or crew chief assessed the potential for buried sites on the basis of sub-regional geomorphology. For instance, the potential would be rated as high in large alluvial valleys, and as low in areas with shallow bedrock.

Standard global positioning systems (GPS) aided in navigation. Together with hard-copy field maps, GPS was used to keep the field crew aware of the limits of the survey corridor, the areas previously covered by the EPG survey, and areas of different land ownership. GPS was also used to record the datum of cultural resources encountered during the survey, to the sub-meter level of accuracy. All isolates, site features, site boundaries, loci and important diagnostic artifacts was also mapped with a Trimble unit at the sub-meter accuracy level. KPE's Geographical Information System specialist created digital maps to accompany the report.

This survey was a non-collection survey. Archaeologists recorded artifacts in the field to facilitate interpretations of site character. All new prehistoric and historic sites were recorded, and records for previously recorded sites in the survey area was updated, confirming or correcting information on their locations, spatial extent, general characteristics, and likely eligibility status. Sites were defined as any concentration of three or more artifacts in a 25-m<sup>2</sup> area. Site boundaries were defined when over 50 m of open space separates cultural materials. Isolated artifacts were defined as two or fewer artifacts in a 25-m<sup>2</sup> area. Field personnel assigned a temporary site number to all cultural resources that meet the definition of an archaeological site. Site recording included definition of site boundaries, features, and formed artifacts. Detailed sketch maps demonstrated the relationship of the location of each site to topographic features and other landmarks. Digital photographs documented the environmental associations and the specific features of all sites, as well as the general character of the survey area. If a site extended beyond the survey corridor limits, and if access to the area beyond the survey corridor was available, the whole site was documented until it is terminated by the end of the cultural deposit or by a natural feature, such as a drainage.

### **Site Classifications**

The primary objective of the survey was to provide descriptive information on the resources present. Eligibility recommendations based on the surface manifestations of resource material and available data was also conducted. The use of a basic typological framework to characterize the sites may help in efficient management of the diverse resources that were present.

Prehistoric site types would include:

- **Habitation Sites.** These are relatively substantial deposits, typically including at least three different types of cultural evidence, such as flaked lithics, ground stone, ceramics, faunal remains, features, and midden. They are likely to represent overnight occupations by a social unit larger than an individual or a small task group, probably over an extended period or on repeated occasions.
- **Bedrock Milling Sites.** These are sites that consist primarily or exclusively of bedrock milling features (mortars, basins, and/or slicks). They are interpreted as work stations used to process materials, probably in most cases hard plant food resources such as seeds or acorns.
- **Lithic Scatters.** These consist primarily or exclusively of flaked lithic materials, such as debitage, cores, and tools. They represent areas where tools were manufactured or reworked, ranging from heavily used workshops to flaking stations where activity was more casual and transient.
- **Lithic Quarries.** Areas where lithic raw materials were procured may be marked by test blocks, cores, hammerstones, and extensive scatters of primary debitage, as well as by the geological occurrence of unworked lithic raw material.
- **Ground Stone Scatters.** These consist primarily or exclusively of portable ground stone artifacts, such as manos, metates, mortars, and pestles. Their functions are likely to have been similar to those of bedrock milling sites.
- **Ceramic Scatters.** These consist primarily or exclusively of ceramic potsherds. They may range of potdrops, where pieces from a single vessel were discarded, to extensive, multiple-vessel scatters that may represent habitation, resource processing, or pottery manufacturing.
- **Faunal Middens.** Sites consisting primarily of invertebrate and/or vertebrate faunal remains, such as the shell middens, are common along the coast. Such sites are not highly likely in the present project area, but they may occur.
- **Cremations.** Human cremations may occur either in isolation from other remains or as elements within other site types, such as habitation sites. In either case, their sensitivity for contemporary Native Americans merits particular attention.
- **Rock Art, Geoglyph, Cupule, and Yoni Sites.** Sites containing other nonutilitarian features, such as pictographs, petroglyphs, geoglyphs (ground figures, intaglios), cupules (small circular depressions manufactured in the bedrock), and yonis (vulviform bedrock features), merit particular attention. These features may occur exclusively at some sites, or they may occur in conjunction with other remains, such as habitation deposits, lithic scatters, etc.
- **Rock Features.** Rock rings, cleared circles, cairns, and roasting pits may occur in isolation from other remains, or they may be found as elements within other site types, such as habitation sites.

- Trails. Segments of trails are most likely to be observable in the eastern extreme of the project area. They occur as linear areas within desert pavements that are largely cleared of larger rocks through repetitive trampling. Trails may be associated with other remains, such as potdrops or small lithic scatters, and they may cross more substantial habitation sites or work areas.
- Isolates. Occurrences of two or fewer prehistoric artifacts within a 25-m<sup>2</sup> area are classified as isolates. As a rule, such remains do not require formal recordation beyond primary recordation or further consideration within the planning process.

Historic-period sites are likely to be both functionally more diverse and more readily interpretable. Among the types that may occur in the study area are residential sites, commercial sites, temporary camps, refuse scatters, transportation routes and facilities, water facilities, areas of military activity, mining sites, agricultural and ranching features, and historic isolates. Remains that are not recognizably more than 45 years old were not treated as cultural resources.

## **Reports**

Documentation of sites in this inventory report are consistent with the reporting specifications in the BLM 8100 Manual (BLM 2004b), and to every reasonable extent with the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44740), as well as the California Office of Historic Preservation Planning Bulletin Number 4(a), December 1989, *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format (ARMR Guidelines) for the Preparation and Review of Archaeological Reports*. All prehistoric and historic sites and isolates identified during this inventory were recorded on California Department of Parks and Recreation Form DPR 523 (Series 1/95), using the *Instructions for Recording Historical Resources* (Office of Historic Preservation 1995).

The results of the identification protocol are reported in a format that summarizes the design and methods of the survey and provided a basis for others to review the results (NPS 2009). The report includes: (1) the statement of objectives that were prepared prior to the survey; (2) the research design; (3) a complete description of the identification efforts, including areas surveyed and intensity of coverage; (4) descriptions of identified sites and the current condition of each site; (5) an assessment of how well the survey results met the objectives; (6) preliminary site eligibility assessment; and (7) recommendations based on that analysis, including the assessment of potential needs for further evaluation of site eligibility for appropriate state and federal inventories, a recommendation about the effects of the undertaking on identified properties, and suggestions for avoidance or, where avoidance is not practicable, of further treatment for assessing the significance of potentially eligible properties.

## **Native American Participation**

The NAHC was contacted by KPE on June 29, 2011 about any issues of cultural concern regarding the Project Area. In particular, we inquired if there were any Traditional Cultural

Properties, Sacred Sites, resource collecting areas, or any other areas of concern. The NAHC conducted a Sacred Lands File search of the project area of potential effect (APE) and found Native American cultural resources were not identified within their inventory; however, they were aware of recorded archaeological sites and Native American cultural resources in close proximity to the APE. The NAHC urged KPE to consult with the tribes and interested Native Americans they provided in their June 29, 2011 correspondence.

On August 3, 2011 KPE contacted (by email – except Ms. Lucas) the following tribes and Native Americans as recommended by the NAHC:

- Gwendolyn Parada - Chairperson, La Posta Band of Mission Indians
- Leroy J. Elliott – Chairperson, Manzanita Band of Kumeyaay Nation
- Monique LaChappa – Chairperson, Campo Kumeyaay Nation
- Carmen Lucas (letter sent), Kwaaymii Band of Mission Indians
- Keeny Escalanti, Sr. - President, Fort Yuma Quechan Tribe
- Will Micklin – Executive Director, Ewiiapaayp Band of Kumeyaay Indians
- Michael Garcia – Vice Chairman, Ewiiapaayp Band of Kumeyaay Indians
- Jill McCormick – Tribal Archaeologist, Cocopah Indian Tribe
- Bridget Nash-Chrabasz – THPO, Fort Yuma Quechan Tribe
- Preston J. Arrow-Weed, Ah-Mut-Pipa Foundation
- Bernice Paipa – Vice Spokesperson, Kumeyaay Cultural Repatriation Committee

In addition KPE reached out to Tribal leaders on behalf of First Solar, Inc. on October 26, 2011, November 3 and 4, 2011 to request a meeting to introduce the Project and discuss any concerns they may have. Ms. Lucas has requested a site visit. KPE arranged a site visit with Ms. Lucas with hopes that other interested Tribal leaders and interested Native Americans can also attend. Ms. Lucas and Ms. Jill McCormick, Cultural Resources Manager with the Cocopah Indian Tribe attended the site visit on December 6, 2011. A tentative date for another site visit with the Fort Yuman Quechan Historic Preservation Officer and the Cultural Committee has been arranged for January 5, 2012. Native American correspondence is provided in Appendix D (Confidential Appendix).

### **Management and Treatment of Human Remains**

At the survey level, it is typically not possible to identify surface bone as human; however, in the event probably human bones are encountered in the field the following protocol will be implemented. When surface bones are discovered, field staff will record the presence of the bones and made a tentative, unofficial assessment of the likelihood of them being human. The KPE Principal Investigator, Patricia Mitchell will notify the County Coroner as per Health and Safety Code Section 7050.5.

## 6. RESULTS OF INVENTORY

### 6.1 KPE Survey Area

Archaeological inventory of the KPE survey area involved a 100 percent survey of approximately 1,015 acres. Fourteen cultural resources (five sites and nine isolates) were newly recorded within the project APE (Table 5, Figure 6 – Confidential Appendix C). Seven previously recorded sites were also updated. State of California DPR Primary record forms were prepared for the newly recorded resources and submitted to the SCIC for archiving and issuance of record numbers for newly recorded resources. Updated forms were prepared for the previously recorded sites and also submitted to the SCIC. Forms for this inventory are also provided in Appendix E (Confidential – bound separately). Site photos are provided in Appendix F (Confidential – bound separately).

Site Number	Site Type	Age	Eligibility (NRHP/CRHR)
CA-IMP-7834	Westside Main Canal	Historic	Recommended Eligible: A/1 (Davis et al. 2011)
CA-IMP-8821	Foxglove Canal	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-008983	Wormwood Canal	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-012688	Dixie Drains 2, 3, & 4, Dixie Lateral 1 (portions)	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-012689	Fern Canal and Fern Drain	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-012690	Forget-Me-Not Canal	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-012693	Fig Canal	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-013747	Diehl Drain	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-013748	Fig Drain	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-013760	Westside Drain	Historic	Recommended Eligible: A/1 (Davis et al. 2011)
P-13-013761	Wixom Drain	Historic	Recommended Eligible: A/1 (Davis et al. 2011)
P-13-013749	Isolate bottle base and nail	Historic	Recommended Not Eligible
P-13-013750	Isolate bottle base	Historic	Recommended Not Eligible
P-13-013751	Isolate whiteware ceramic fragment	Historic	Recommended Not Eligible
P-13-013752	Isolate whiteware ceramic fragment	Historic	Recommended Not Eligible
P-13-013753	Isolate glass fragments: 1 purple dating to 1890-1920; and 1 clear 1935-1964	Historic	Recommended Not Eligible
CA-IMP-11758	Historic refuse scatter; 19 <sup>th</sup> century kaolinite pipestem fragment & 3 prehistoric pottery fragments also found within the trash scatter	Historic	Insufficient Data – likely a secondary deposit, greatly disturbed.
P-13-013755	Isolate “SMIRNOFF” bottle dating to 1932-1964.	Historic	Recommended Not Eligible
P-13-013756	Isolate 1911 Liberty Head nickel	Historic	Recommended Not Eligible
P-13-013757	Isolate green/black bottle glass fragment	Historic	Recommended Not Eligible
P-13-013759	Isolate purple glass	Historic	Recommended Not Eligible

In addition to the archaeological sites, one recent cultural feature was encountered and documented with the Project APE. It was not recorded as an archaeological or historical site because it was established post-2010. The cultural feature is a memorial for an individual named Margarito Hernandez. There is a wooden cross with offerings, as well as a newer granite memorial with offerings that is inscribed with the following text:

**Margarito Hernandez**

**03-12-37 – 10-18 10**

Al paraiso te lleven los angeles a tu llegada te reciban los martires y te introduzcan en la ciudad  
Santa de Jerusalén.

El coro de los angeles te resiba y junto con lázaro, pobre en esta vida, tengas descanso eterno

Below is the English translation (with some poetic license from this author):

**Margarito Hernandez**

**03-12-37 – 10-18 10**

The angels will take you to paradise and upon your arrival the martyrs will receive you as you  
enter into the Holy City of Jerusalem.

The chorus of angels receives you and as with Lazarus, poor in this life, you have eternal rest.

It appears to be a place where people intended to celebrate or honor the memory of Margarito Hernandez (Figure 7, Appendix A).

### **Newly Recorded Resources**

P-13-013747 also known as Diehl Drain consists of an earthen irrigation drainage ditch. The ditch is basically trapezoidal in shape with earthen banks and levees on either side that provide vehicular access along the length of the canal. The open drains collect tailwater and tilewater from area farms, as well as operational discharge water from the IID's irrigation system. Tilewater is subsurface drainage water generated primarily through salt-leaching operations performed by farmers. Tailwater is applied irrigation water that does not percolate into the soil, thereby exiting at the lower end of the field, into an IID drain. Diehl Drain drains into Fig Drain which in turn empties in the New River and ultimately empties into the Salton Sea. When the All American Canal was completed in 1941, improvements were made to existing canal systems, drain ditches in particular. This drain is associated with the Westside Main and ultimately the All American Canal.

P-13-013748 also known as Fig Drain consists of an earthen irrigation drainage ditch. The ditch is trapezoidal in shape with earthen banks and levees on either side that provide vehicular access along the length of the canal. The open drains collect tailwater and tilewater from area farms, as well as operational discharge water from the IID's irrigation system. Tilewater is subsurface drainage water generated primarily through salt-leaching operations performed by farmers. Tail water is applied irrigation water that does not percolate into the soil, thereby exiting at the lower end of the field, into and IID drain. Fig Drain drains into the New River 728-meters north of the project area, which ultimately empties into the Salton Sea. Concrete wing walled culverts channel water flow below surface streets and dirt access roads. Like Diehl Drain when the All American Canal was completed in 1941, improvements were made to existing canal systems, drain ditches in particular. This drain is associated with the Westside Main and ultimately the All American Canal.

P-13-013760 also known as Westside Drain consists of an earthen irrigation drainage ditch. The ditch is basically trapezoidal in shape with earthen banks and levees on either side that provide vehicular access along the length of the canal. The open drains collect tailwater and tilewater from area farms, as well as operational discharge water from the IID's irrigation system. Tilewater is subsurface drainage water generated primarily through salt-leaching operations performed by farmers. Tailwater is applied irrigation water that does not percolate into the soil, thereby exiting at the lower end of the field, into an IID drain. Westside Drain drains into Dixie Drain 3 which in turn empties in Salt Creek which ultimately empties into the Salton Sea. Like the Diehl and Fig Drains when the All American Canal was completed in 1941, improvements were made to existing canal systems, drain ditches in particular. This drain is associated with the Westside Main and ultimately the All American Canal.

P-13-013761 also known as Wixom Drain consists of an earthen irrigation drainage ditch. The ditch is basically trapezoidal in shape with earthen banks. The open drain collects tailwater and tilewater from area farms, as well as operational discharge water from the IID's irrigation system. Tilewater is subsurface drainage water generated primarily through salt-leaching operations performed by farmers. Tailwater is applied irrigation water that does not percolate into the soil, thereby exiting at the lower end of the field, into an IID drain. Wixom Drain drains into the New River, which ultimately empties into the Salton Sea. Like the Diehl, Fig, and Westside Drains when the All American Canal was completed in 1941, improvements were made to existing canal systems, drain ditches in particular. This drain is associated with the Westside Main and ultimately the All American Canal.

P-13-013749 is a historic bottle base fragment and a large nail. The bottle base is clear glass with the text [BISH\_\_\_] embossed on it. Situated 63' north of the glass artifact, is a large nail. The nail is approximately six inches long and is highly corroded. The isolated artifacts were found at the northwestern corner of an agricultural field, which was fallow at this time of the survey. The field has been under agriculture for many years and is highly disturbed.



P-13-013750 consists of a fragment of clear glass bottle base. There is no identifying trademark visible. The isolate was found in a fallow agricultural field that is highly disturbed.

P-13-013751 consists of a single historic whiteware ceramic fragment. The isolate was found at the western edge of an agricultural field. The area has been under cultivation for many years and is highly disturbed. Although nothing remains today, there are two nearby structures depicted on the 1957 USGS 7.5 Seeley, Calif. quadrangle. One was situated approximately 1092' to the north of the artifact, and the other was 1285' to the east.

P-13-013752 consists of a single historic whiteware ceramic fragment. The isolate was found at the northern edge of an agricultural field. The area has been under cultivation for many years and is highly disturbed. Although nothing remains today, a structure is depicted on the 1957 USGS 7.5, Seeley, California quadrangle. It was located approximately 50' south of the artifact.

P-13-013753 consists of two historic glass fragments. One fragment is a clear piece of glass from the body of a bottle. Embossed on the bottle is the text [.....BIDS\_\_SAL\_\_BOT.....]. This artifact has a date range of 1935-1964. The other piece of glass is a fragment of solarized purple glass. Embossed on the glass is the letter E and the letter S. It has a date range from 1890-1920. The artifacts were found at the northern edge of a highly disturbed agricultural field that is currently under cultivation and has been for many years.

CA-IMP-11758 is a historic refuse scatter situated on the west bank of Fig Drain and spread over an area 205' north to south by 73' east to west. The main concentration is on the east facing slope of the bank. There are several large piles of large broken chunks of concrete and metal debris that has been dumped along the upper, bank to the north. Several additional historic artifacts were found widely dispersed throughout these piles. Artifacts identified in the main concentration consist of several black/green bottles, a 19<sup>th</sup> century ball clay (kaolinite) pipe stem (Seth Mallios Ph.D. personal communication 7/19/2011), a *Bos taurus* (cow) metacarpal diaphysis, and three prehistoric ceramic sherds. The bottles are broken and several were found sitting upright. Due to the presence of broken clay targets, it is likely that they were used for target practice. Five bases and two neck and finish portions were present. The bases were all kick up, with a pontil mark present on one and the number 8 embossed on another. Two neck portions were also present, one with an applied finish. The prehistoric ceramics were buffware, all from the same vessel. Wipe marks were visible and one exhibited possible red painted decoration. The northernmost artifact is a fragment of historic yellow ceramic. The piece has a yellow glaze and a portion of some type of handle is present. Also found was a single can with an external friction lid, a piece of cut bone (possibly pig), a fragment of brown glass bottle base which exhibits an Owens suction scar and kurling around the edge of the bottle base. Additionally, there was a metal hinge, a piece of milled lumber, a light green colored bottle fragment, and a ceramic fragment with white glaze.

The site is located within a very disturbed area, bounded by agricultural fields to the west and north and by a large earthen ditch to the east. It is likely that this is a secondary deposit and the result of illegal trash dumping.

P-13-013755 is a single clear glass screw-top bottle. The text FEDERAL LAW FORBIDS RESALE OR REUSE OF THIS BOTTLE, the figure of a crown and the words \_ \_ \_ \_ \_ SMIRNOFF are embossed on the front of the bottle. The date range for the bottle is 1932-1964.

P-13-013756 is a 1911 Liberty Head nickel. It was found on the east bank of Fig Drain, at the edge of a dirt road that is used to access the agricultural fields that are adjacent. There is a small amount of modern refuse located several meters down-slope of the coin.

P-13-013757 consists of two fragments of green/black bottle glass. Both the pieces are from the body portion of a single bottle and no diagnostic attributes are present. The isolate was discovered on the east bank of Fig Drain adjacent to an active agricultural field.

P-13-013759 is a historic fragment of solarized glass. It was located on the east levee of Forget-Me-Not Drain.

### **Updated Sites**

CA-IMP-7834 is the West Side Main Canal, an irrigation feature. The canal was first recorded in 1999 by Jill Hupp who conducted extensive background research documenting the history of the Westside Main Canal. This resource has been recorded, evaluated, re-recorded, updated and re-evaluated seven times since it was first recorded in 1999. Each time only the portion of the canal within the project right-of-way was documented and ultimately evaluated for significance:

1. May 24, 1999 - Jill Hupp, Caltrans Environmental Program - The project APE was the area where State Route 98 crosses the Westside Canal; *The Westside Main Canal appears to possess significance under criteria A and C for its association with the development of irrigated commercial agriculture in the Imperial Valley west of New River in the early 1900's and as a good example of an early large scale irrigation canal system... The segment within the project vicinity does not appear to possess sufficient integrity of workmanship, design, setting, feeling, and association to represent the canals significance in itself or as a contributor to a larger property.*
2. June 2000 - N. Harris and Michael Oberndorfg, HDR Engineering - The project APE was located approximately 1300' south of Dixieland at the ROW of the San Diego and Eastern Railroad; *As part of the All American Canal System, this canal is eligible for NRHP inclusion.*
3. February 28, 2007 - Jeanette A. McKenna; McKenna updated the site record at this time stating that the canal was considered a significant resource and as part of the All American Canal System, was recommended eligible for inclusion on the National Register of Historic Places.

4. April 19, 2007 - SWCA Environmental Consultants - SWCA examined a 300-foot long segment of the canal during survey activities conducted for alternatives related to the Sunrise Powerlink Project; *The Westside Main Canal has not been altered or modified since its last update 1999 (Jill Hupp), when it was found not eligible for listing in the National Register (NHRP) as a separate property or as a contributor to a district. However in 2001 the Bureau of Reclamation and California State Historic Preservation Officer concurred that the All American Canal is ELIGIBLE for the NRHP; by extension the Westside Main Canal is now recommended ELIGIBLE for NRHP and California Register of Historic Resources (CRHR) under Criterion A/1 for its significance in association of the Imperial Valley.*
5. December 12, 2007 – EPG - Robert A. Rowe evaluated a portion of the canal located within the APE of the Mount Signal Solar Hybrid Plant; *EPG determined that the Westside Main canal is eligible under Criterion A, for its potential to provide information about the settlement and economic development in the area and thus the transition of desert lands into irrigated area, thus affecting the local economy and subsistence.*
6. December 2009 - URS Corporation – for a proposed solar project; *the portion of the Westside Main Canal within the historic architecture APE does not appear to be individually eligible for listing to the NRHP, CRHR, or considered a historical resource for purposes of CEQA, and does not appear to be a contributing element or significant related feature/component to the larger linear Westside Main Canal system (if it is determined that such a resource exists).*
7. January, 2010 - C. Bowden-Renna - IID Dixieland 230 kV Transmission Line and Substation Expansion Project; *While the canal has been recommended eligible for the National Register of Historic Places (NRHP), the portion of the canal within the proposed project area was examined in 1997 and 1998 and was recommended not eligible for the NRHP due to lack of integrity (Hupp 1999). Caltrans also evaluated a portion of the canal as it crosses under I-8. Caltrans determined that, under California Environmental Quality Act (CEQA), the portion of the canal under I-8 is not a historic resource and therefore is not eligible for the NRHP (Hupp 1999”).*

For the KPE survey, an approximately 341’ section of the canal falls within the survey area. The section of canal inspected consists of an earthen, unlined canal. In addition, a turnout with concrete wing walls provides water to a large concrete block reservoir, which in turn flows into a lateral canal located west of the Westside Main. This lateral, the reservoir and the remains of an electrical panel and tin shed roof appear abandoned and no longer in use.

The Westside Main Canal joins the All-American Canal near the western edge of the Imperial Valley and serves the western part of the IID water service area. Water is released from the Westside Main canal into the heading of each lateral canal. From the lateral canals, zanjeros measure and divert the required amount of water from the lateral canal through individual customer delivery gates.

The All American Canal is eligible for State inclusion on the NRHP and by extension, the Westside Main Canal as well. The portion of Westside Main Canal inspected during the current survey found the resource appeared to retain sufficient historic integrity aspects of location and materials.

CA-IMP-8821 is the Foxglove Canal and was first recorded by SWCA archaeologists in April 2007. There is no firm date for the construction of the Foxglove Canal; however, it does appear on maps as early as 1912 (Hollins 2009 – URS 2009 site record). SWCA's evaluation of the 300' section of the Foxglove Canal concurred with the SHPO's finding that the canal as part of the Westside Main Canal system is recommended eligible for the NHRP and CRHR under criterion A/1 for its significance in association with development of the Imperial Valley. URS conducted another study of the Foxglove Canal where it crosses Evan Hewes Highway and found that the portion of the Foxglove Canal at the crossing of Evan Hewes Highway does not appear to be individually eligible for listing to the NRHP, CRHR, or considered a historical resource for purposes of CEQA, and does not appear to be contributing element or significant related feature/component to the larger linear Westside Main Canal system (if it is determined that such a resource exists).

The current survey conducted by KPE encountered small segments of the Foxglove Canal. This includes: a section located south of Interstate 8 that is situated between Dixie Drain 4 and the Westside Main Canal; a check structure and small length of canal located at the western end of Vaughn Road. This is also the heading for the Forget-Me-Not Canal, which is fed by the Foxglove Canal.

P-13-008983 is the Wormwood Canal and was first recorded by Hupp in 1999. A bridge crossing over SR98 was recorded during this survey and inspection of the canal was limited to the portion adjacent to the bridge. In July 1997 and April 1998, segments of other canals within the IID system were examined and found ineligible because of loss of integrity. The section of Wormwood Canal within their current project area also appears to lack integrity to be individually eligible for the NRHP or to be a contributing element of the canal, as a whole, should the canal constitute an eligible property. There was no evidence of a possible historic district or historic landscape which might include this segment of the canal as a contributing element. Likewise, Caltrans had evaluated the resource in accordance with Section 15064.5 (a)(2)-(3) of the CEQA Guidelines, using criteria outlined in Section 5024.1 of the California Public Resources Code, and determined that the canal was not a historical resource for the purposes of CEQA.

The site record was updated in December 2010 by archaeologists with Laguna Mountain Environmental. Two previously unrecorded segments of the Wormwood Canal were documented at this time. These segments are located to the south of the current project area.

An additional 2272' segment of canal was recently documented by KPE archaeologists. The segment identified is situated on the west side of and runs parallel to Drew Road, north of the intersection with West Diehl Road. The Wormwood Canal is channeled beneath Drew Road from the east to a check. A check is a structure built to regulate or raise the water level and in this case, combines the functions of both a check and a drop: the water level may be raised upstream of a gate and is dropped on the downstream side. Gate 88 is also located here and this supplies water to the Wormwood Lateral 7 which is adjacent to the west and to the south. The segment inspected, begins 617' north of West Diehl, and ends 2.19 miles south at the intersection of Drew Road and West Wixom Road. There are several gates, associated with these canals. These include Gate 94 a turnout to ag fields to the west and a check gate about half way up the portion of the lateral within the project area on Wormwood Lateral 7 and on the Wormwood Canal, Gate 88 located at the southern end, is situated at the intersection of Wormwood and Drew, and 90, 90A and 90B are at a check in the north. Wormwood Lateral 7 turns into a ditch and terminates just south of this spot. There are also several concrete irrigation canals and ditches located around the perimeters of the agricultural fields to the west. Wormwood Lateral 7 has a date stamp of 1954 with the initials JP next to the date in the south and a date of 1950 with the initial P next to the date in the north. Wormwood Canal has a date stamp of 1984 as well as a stamp with the text, Rykerson and the date 1984.

P-33-012688 is an irrigation feature, the Dixie Drain 3. In May of 2009, URS recorded a portion of this drainage feature at the crossing of Evan Hewes Highway. Dixie Drain 3, as a whole, is associated with the Westside Main Canal system and reflects the development associated with the construction and operation of the All-American Canal between 1941 and 1950, which is primarily when the system was widened, shortened (portions in Mexico were removed from service), and modernized (Hollins 2009 – URS 2009 site record).

URS found that the portion of Dixie Drain 3 at the crossing of Evan Hewes Highway does not appear to be individually eligible for listing to the NRHP, CRHR, or considered a historical resource for purposes of CEQA, and does not appear to be a contributing element or significant related feature/component to the larger linear All-American or Westside Main Canal system (if it is determined that such a resource exists) (Hollins 2009 – URS 2009 site record).

During a recent survey conducted by KPE, an additional segment of Dixie Drain 3, and sections of related features were documented. These include Dixie Lateral 1, Dixie Drain 2, Dixie Drain 3, and Dixie Drain 4.

Dixie Lateral 1 consists of an unlined dirt channel with an average depth of 7 feet. The portion of Dixie Lateral 1 identified during the survey effort consists of an east/west segment approximately 3983' in length. An approximately 909' section in the western portion has been rerouted sometime after 1979.

Dixie Drain 2 is also an unlined dirt channel. Only the very northern end of this feature was located within the survey area.

Dixie Drain 3 is an unlined, dirt channel with an average depth of 8-11 feet. The segment inspected is approximately 1.7 miles in length, beginning just south of Interstate 8 and ending at the point where Dixie Drain 3 and Dixie Lateral 1 meet. West Diehl Road is adjacent to the east at the southern end. Extending out of the project area to the north and south, Dixie Drain 3 is channeled below several roads by way of culverts with concrete winged walls. In addition, there are several marked tailwater and tile lines along the length of the surveyed portion of the drain. An approximately 1123' section of the drain has been rerouted sometime after 1979.

Dixie Drain 4 is another unlined dirt channel. A segment approximately 422' in length is located within the survey area. Vegetation in each of the drains consists of invasive species such as saltgrass, salt bush, Bermuda grass, common reed, and salt cedar.

P-33-012689 consists of irrigation features, Fern Canal and Fern Drain. In May of 2009, URS recorded a portion of these drainage features at the Evan Hewes Highway, which are part of the larger Fern Canal drainage system. The Fern Canal, as a whole, is associated with the Westside Main Canal system and reflects the development associated with the construction and operation of the All-American Canal between 1941 and 1950, which is primarily when the system was widened, shortened (portions in Mexico were removed from service), and modernized (Hollins 2009 – URS 2009 site record). The Fern Drain, although associated with the Westside Main Canal system, does not appear to reflect the development associated with the construction and operation of the All-American Canal between 1941 and 1950 (Hollins 2009 – URS 2009 site record).

URS concluded that the portions of Fern Canal and Drain at Evan Hewes Highway do not appear to be individually eligible for listing to the NRHP, CRHR, or considered historical resources for purposes of CEQA, and do not appear to be a contributing element or significant related feature/component to the larger linear All-American Canal or Westside Main Canal system (if it is determined that such a resource exists) (Hollins 2009 – URS 2009 site record).

During KPE's survey, additional features associated with this system were identified and subsequently documented. One of these features is a segment of concrete canal, Fern Lateral 3. This 961' segment is located just south of I-8 and runs parallel to Westside Drive on the west side of the road. At the northern end within the project area is gate 26 which opens to the north and gate 27 which is a turnout for irrigation water for a small irrigation canal to the west, used to irrigate adjacent fields. In front of the residence located at 1651 Westside Road, are a check with two turnout gates and gate 25 that allows water to pass under the road and turns the canal to the east and out of the project area. There is a stamp in the concrete near gates 26 and 27 which indicate 1966 as the year of manufacture for this particular segment.

Another feature, Fern Check was identified at the intersection of Liebert Road and Wixom Road. A date stamp of 1974 was found stamped in the concrete, indicating that this feature has been modified within the last 35 years and is not historic.

P-13-012690 consists of irrigation feature Forget-Me-Not Canal. In May of 2009, URS recorded a portion of this irrigation feature at the Evan Hewes Highway. There is no firm date for the construction of the Forget-Me-Not Canal; however, it does appear on maps as early as 1912 (Hollins 2009 – URS 2009 site record). The Forget-Me-Not Canal, as a whole, is associated with the Westside Main Canal system and reflects the development associated with the construction and operation of the All-American Canal between 1941 and 1950, which is primarily when the system was widened, shortened (portions in Mexico were removed from service), and modernized (Hollins 2009 – URS 2009 site record). URS concluded that the portion of the Forget-Me-Not Canal at the crossing of Evan Hewes Highway does not appear to be individually eligible for listing to the NRHP, CRHR, or considered a historical resource for purposes of CEQA, and does not appear to be a contributing element or significant related feature/component to the larger linear All-American Canal or Westside Main Canal system (if it is determined that such a resource exists) (Hollins 2009 – URS 2009 site record).

During KPE's survey additional features associated with this canal system were identified and subsequently documented. One of these features is a segment of the main Forget-Me-Not Canal. The 4057' segment inspected begins 1099' south of I-8 and runs parallel to Hyde Road on the east side of the road, terminating at the corner of Hyde and Vaughn Roads in the south. Along the canal are several features such as culverts and gates. At the corner of Hyde and Hardy, a concrete culvert allows water to flow north beneath a dirt field access road. Directly north of this, a drop gate allows water to flow into East-west aligned Lateral 1. There is a 1999 date stamp in the concrete of the wing wall indicating year of manufacture. Lateral 1 canal, has a 1994 date stamp indicating there has been some modifications to this system. A few yards north of Lateral 1, gate structure 7 provides water to another smaller concrete irrigation canal to the east. This canal in turn, provides irrigation water to the fields to the east. Although there is no indication of when the smaller canal was constructed, the turnout has a date stamp of 1955. Directly north of these two gates is a check structure which can be adjusted to raise or lower the water level in the Forget-Me-Not and provide water to these smaller irrigation canals. There is one structure, Turnout 2, which has square wing walls and appears to be very recent.

In addition, a 1428' segment of Forget-Me-Not Drain is situated on the opposite side of Hyde Road and runs perpendicular to the canal. The drain has an inflow Tailwater Pipe and Seep Pipe. This is a dirt ditch approximately 30' wide that collects excess surface flow (tailwater) from agricultural fields, and operational discharge from canals and laterals.

P-33-012693 is an irrigation feature, named Fig Canal. In May of 2009, URS recorded a portion of this canal near Evan Hewes Highway. The Fig Canal appears to terminate to the north at Fern Canal and to the south at the Westside Main Canal. The Fig Canal as a whole, is associated with

the Westside Main Canal system and reflects the development associated with the construction and operation of the All-American Canal between 1941 and 1950, which is primarily when the system was widened, shortened (portions in Mexico were removed from service), and modernized (Hollins 2009 – URS 2009 site record). URS concluded that the portion of the Fig Canal near Evan Hewes Highway does not appear to be individually eligible for listing to the NRHP, CRHR, or considered a historical resource for purposes of CEQA, and does not appear to be a contributing element or significant related feature/component to the larger linear All-American Canal or Westside Main Canal system (if it is determined that such a resource exists) (Hollins 2009 – URS 2009 site record).

During KPE's survey an additional segment of this canal as well as additional features related to this resource were documented. These consist of Fig Heading and a 1264' segment of Fig Canal and Levee. Fig Heading is situated at the intersection of Liebert Road and Wixom Road. The heading receives water from Fern Check/Canal adjacent to the west. As the water level rises, it is released into the lateral canal (Fig Canal) to the east and flows through several delivery gates (Gate 3) to be used for irrigation of crops located in fields to the north.

## **6.2 EPG Survey Area**

Archaeological inventory of the EPG survey area involved a 100 percent survey of approximately 975 acres in December 2007. No new sites or isolates were identified. EPG archaeologists revisited the locations of five previously recorded sites within their survey area (Table 6, Figure 6 - Confidential Appendix C). These included CA-IMP-1403, CA-IMP-3176, CA-IMP-5297, CA-IMP-5298, and CA-IMP-7834.

CA-IMP-1403 is reported to be a small site consisting of two ceramic sherds identified as Yuman, and was originally recorded is located in a dunal depositional area south of the Westside Main Canal. The area is currently within an existing access road along the southern edge of an agricultural field. The site was recorded prior to agricultural activities on this particular plot and it is likely that the subsequent disturbance has removed the artifacts from their recorded location. The site was not relocated (Rowe 2008).

CA-IMP-3176 is a small site that consists of a small scatter of ceramics and lithics identified as temporary camp, possibly from the Yuman III Phase (Post A.D. 1500), and was originally recorded is located in a dunal depositional area south of the Westside Main Canal. The site was recorded prior to agricultural activities on this particular plot and it is likely that the subsequent disturbance has removed the artifacts from their recorded location. The site was not relocated (Rowe 2008). In 2010 Bowden-Renna relocated some of the lithics from site CA-IMP-3176 at its originally mapped location; however, this site location is outside the current Non-BLM option solar footprint.



CA-IMP-5297 was originally recorded as an isolated feature, and consists two porphyritic flakes in an area measuring 1 by 1 meter. The artifacts were collected during the original site recordation activities. CA-IMP-5297 was not relocated (Rowe 2008).

CA-IMP-5298 was originally recorded as an isolated feature, and consist a single mano in an area measuring 1 by 1 meter. The artifact was collected during the original site recordation activities. CA-IMP-5298 was not relocated (Rowe 2008).

CA-IMP-7834 is identified as the Westside Main Canal. EPG identified and recorded several related features (e.g., Fig Canal, Fern Canal, Wixom Drain, Diehl Drain, Fern Side Drain, Fig Drain, Dixie Drain Number 3, Dixie Drain Number 3-A, and Dixie Drain Number 3-C, as well as smaller concrete laterals and spiles), which are contributing elements associated with the Westside Main Canal (Rowe 2008).

KPE has addressed CA-IMP-7834 and EPG’s assessment of CA-IMP-7834 above in subsection 6.1.

<b>Table 6. EPG Class III Survey Results</b>			
<b>Site Number</b>	<b>Site Type</b>	<b>Age</b>	<b>Eligibility (NRHP/CRHR)</b>
CA-IMP-1403	Isolate Pottery Sherds – Not relocated	Prehistoric	Recommended Not Eligible
CA-IMP-3176	Ceramic and Lithic Scatter	Prehistoric	Insufficient Data
CA-IMP-5297	Isolate Flakes – Collected	Prehistoric	Recommended Not Eligible
CA-IMP-5298	Isolate Mano - Collected	Prehistoric	Recommended Not Eligible
CA-IMP-7834	Westside Main Canal	Historic	Recommended Eligible: A/1 (Davis et al. 2011)

## 7. ELIGIBILITY ANALYSIS

The Proposed Project was surveyed by EPG in 2007 (Rowe 2008) and KPE in 2011. Twenty-five cultural resources were identified from the Project surveys (Table 7). Of the 25 resources, 21 are within the Project APE (Figure 6, Confidential Appendix C). Three isolates (CA-IMP-1403, -5297, and -5298) were not relocated, and one site (CA-IMP-3176) is no longer within the Non-BLM option APE. The eligibility recommendations for the remaining 21 resources are discussed below.

### Newly Recorded Resources

Nine isolated artifacts were newly recorded within the Proposed Project APE (P-13-013749, P-13-013750, P-13-013751, P-13-013752, P-13-013753, P-13-013755, P-13-013756, P-13-013757, and P-13-013759). However, isolated archaeological occurrences are generally considered to be not NRHP eligible, and in order for it to be CRHR eligible it must be of exceptional importance. P-13-013749, P-13-013750, P-13-013751, P-13-013752, P-13-013753, P-13-013755, P-13-013756, P-13-013757, and P-13-013759 are recommended not eligible for listing on the NRHP or CRHR.

Site CA-IMP-11758 is a historic refuse scatter situated on the west bank of Fig Drain and spread over an area 205' north to south by 73' east to west. Diagnostic artifacts identified in the main concentration consist of several black/green bottles, a 19<sup>th</sup> century ball clay (kaolinite) pipe stem (Seth Mallios Ph.D. personal communication 7/19/2011), a *Bos taurus* (cow) metacarpal diaphysis, and three prehistoric ceramic sherds. The bottles are broken and several were found sitting upright. Due to the presence of broken clay targets, it is likely that they were used for target practice. The site is located within a very disturbed area, bounded by agricultural fields to the west and north and by a large earthen ditch to the east. It is likely that this is a secondary deposit and the result of illegal trash dumping. If the site cannot be avoided through project design additional study is necessary at CA-IMP-11758 to determine its ability to provide any additional information other than what has already been documented.

Diehl Drain (P-13-013747), Fig Drain (P-13-013748), and Wixom Drain (P-13-013761) are earthen irrigation drainage ditches. Diehl Drain drains into Fig Drain, which in turn empties in the New River and ultimately empties into the Salton Sea. Wixom Drain drains directly into the New River. When the All American Canal was completed in 1941, improvements were made to existing canal systems, drain ditches in particular. These drains are associated with the Westside Main Canal and ultimately the All American Canal. All three sites were evaluated for this project by ASM Affiliates and found to be not eligible for listing on the NRHP or CRHR (Davis et al. 2011).

Table 7. Summary of EPG and KPE Survey Results			
Site Number	Site Type	Age	Eligibility (NRHP/CRHR)
CA-IMP-1403	Isolate Pottery Sherds	Prehistoric	N/A– Not relocated
CA-IMP-3176	Ceramic and Lithic Scatter	Prehistoric	N/A– Not in Non-BLM option APE
CA-IMP-5297	Isolate Flakes	Prehistoric	N/A – Collected
CA-IMP-5298	Isolate Mano	Prehistoric	N/A – Collected
CA-IMP-7834	Westside Main Canal	Historic	Recommended Eligible: A/1 (Davis et al. 2011)
CA-IMP-8821	Foxglove Canal	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-008983	Wormwood Canal	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-012688	Dixie Drains 2, 3, & 4, Dixie Lateral 1 (portions)	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-012689	Fern Canal and Fern Drain	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-012690	Forget-Me-Not Canal	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-012693	Fig Canal	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-013747	Diehl Drain	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-013748	Fig Drain	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-013760	Westside Drain	Historic	Recommended Eligible: A/1 (Davis et al. 2011)
P-13-013761	Wixom Drain	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-013749	Isolate bottle base and nail	Historic	Recommended Not Eligible
P-13-013750	Isolate bottle base	Historic	Recommended Not Eligible
P-13-013751	Isolate whiteware ceramic fragment	Historic	Recommended Not Eligible
P-13-013752	Isolate whiteware ceramic fragment	Historic	Recommended Not Eligible
P-13-013753	Isolate glass fragments: 1 purple dating to 1890-1920; and 1 clear 1935-1964	Historic	Recommended Not Eligible
CA-IMP-11758	Historic refuse scatter; 19 <sup>th</sup> century kaolinite pipestem fragment & 3 prehistoric pottery fragments also found within the trash scatter	Historic	Insufficient Data – likely a secondary deposit, greatly disturbed.
P-13-013755	Isolate “SMIRNOFF” bottle dating to 1932-1964.	Historic	Recommended Not Eligible
P-13-013756	Isolate 1911 Liberty Head nickel	Historic	Recommended Not Eligible
P-13-013757	Isolate green/black bottle glass fragment	Historic	Recommended Not Eligible
P-13-013759	Isolate purple glass	Historic	Recommended Not Eligible

Westside Drain (P-13-013760) is an earthen drainage feature. Westside Drain drains into Dixie Drain 3, which in turn empties in Salt Creek which ultimately empties into the Salton Sea. Like the Diehl, Fig, and Wixom Drains when the All American Canal was completed in 1941 improvements were made to existing canal systems, drain ditches in particular. This drain is also associated with the Westside Main and ultimately the All American Canal. This site was evaluated for this project by ASM Affiliates and is recommended eligible for listing on the NRHP under Criterion A and the CRHR under Criterion 1. It is associated with events that have

made a significant contribution to the broad patterns of our history / for its significance in the development of the Imperial Valley history (Davis et al. 2011).

### Updated Sites

CA-IMP-7834 is the West Side Main Canal, an irrigation feature that has been recorded, evaluated, re-recorded, updated and re-evaluated seven times since it was first recorded in 1999. For the KPE survey, an approximately 341' section of the canal falls within the survey area, and approximately 2500' section within the EPG survey area. The section of canal inspected consists of an earthen, unlined canal. In addition, a turnout with concrete wing walls provides water to a large concrete block reservoir, which in turn flows into a lateral canal located west of the Westside Main. This lateral, the reservoir and the remains of an electrical panel and tin shed roof appear abandoned and no longer in use.

The Westside Main Canal joins the All-American Canal near the western edge of the Imperial Valley and serves the western part of the IID water service area. Water is released from the Westside Main canal into the heading of each lateral canal. From the lateral canals, zanjeros measure and divert the required amount of water from the lateral canal through individual customer delivery gates. The All American Canal is eligible for State inclusion on the NRHP and by extension, the Westside Main Canal as well. The portion of Westside Main Canal inspected during the current survey found the resource appeared to retain sufficient historic integrity aspects of location and materials.

This site was also evaluated for this project by ASM Affiliates and is recommended eligible for listing on the NRHP under Criterion A and the CRHR under Criterion 1. It is associated with events that have made a significant contribution to the broad patterns of our history / for its significance in the development of the Imperial Valley history (Davis et al. 2011).

Six previously recorded irrigation features as a whole, are associated with the Westside Main Canal system and reflects the development associated with the construction and operation of the All-American Canal; however, ASM Affiliates evaluated them for this project and found that they lacked integrity and did not convey the theme of the early irrigation system of the Imperial Valley as well as other similar examples. ASM Affiliates recommended them not eligible for listing in the NRHP or CRHR (Davis et al. 2011). These irrigation features include CA-IMP-8821 (Foxglove Canal), P-13-008983 (Wormwood Canal), P-13-012688 (portions of Dixie Drains 2, 3, & 4, Dixie Lateral 1), P-13-012689 (Fern Canal and Fern Drain), P-13-012690 (Forget-Me-Not Canal), P-13-012693 (Fig Canal).

## **8. DISCUSSION**

The inventory report focused on identifying all cultural resources within the Project Area that are greater than 45 years in age. Recommendations regarding their potential eligibility for the NRHP or the CRHR, consistent with applicable federal and state legal requirements, are included. One of the crucial elements in evaluating many cultural resources for eligibility for the NRHP or the CRHR is the determination of whether they contain significant research or Native American heritage value. The importance of data potentially available from sites is measured against a set of research issues presented in Section 4.

This chapter provides a discussion of site function and irrigation technology. A summary of site significance evaluations is presented along with a summary and discussion of the site types encountered during the current study: historic irrigation features, historic trash scatters, and isolates. Only identified previously recorded sites and newly documented sites are addressed in this discussion. The historic isolates that have been identified are used as an indication of general historic presence in the study region. They may indicate possible buried or masked cultural resource deposits within the APE. Isolates alone are generally not considered eligible for nomination to the National Register and no further work is recommended or required for these resources.

### **Significance Criteria**

Cultural resources studies for the Project was carried out in compliance with Section 106 of the NHPA, CEQA, and other applicable federal, state, or local laws, ordinances, rules, regulations, and policies. Section 106 is applicable to federal undertakings, including projects financed or permitted by federal agencies, regardless of whether the activities occur on land that is managed by federal agencies, other governmental agencies, or private landowners. In practice, the NRHP criteria for significance applied under Section 106 are generally in conformity with CRHR criteria, with some slight variances. Therefore, all cultural resources within the survey corridor were evaluated for eligibility to be listed on the NRHP, as well as the CRHR.

### **Significance Evaluation during the Present Study**

Preliminary assessments of the significance of cultural resources identified during the present study were included as part of this inventory to the extent possible, in order to provide recommendations for avoidance of project impacts to resources that were likely to be significant.

The majority of cultural resources encountered within the Project Area was historic and included irrigation-related sites, historic trash scatter, and isolates (12 sites; 9 isolates). One trash scatter site (CA-IMP-11758) also contained prehistoric pottery fragments. As stated above isolates alone are generally not considered eligible for nomination to the NRHP and no further work is recommended. Table 8 and the following text present the recommended NRHP eligibility where possible for the historic cultural resources encountered within the Project Area.

## **Irrigation Features**

Irrigation feature sites may contain information that is relevant to several regional research questions, especially those pertaining to the development of irrigated commercial agriculture in the Imperial Valley. They might be eligible for listing in the NRHP/CRHR (under 36 CFR §60.4d and Pub. Res. Code §15064.5(a)(3)(D), respectively).

Site CA-IMP-7834 is determined eligible, and under the themes of agriculture and economic development, ASM Affiliates has recommended that this section of the Westside Main Canal (CA-IMP-7834) is eligible for the NRHP and CRHR on the local and state levels under criterion A/1 for its significance in association with development of the Imperial Valley (Davis et al. 2011). From a management standpoint CA-IMP-7834 is eligible for the NRHP and CRHR until it is demonstrated that it is not.

Site P-13-013760 (Westside Drain) is also associated with the Westside Main Canal and ultimately the All American Canal. ASM Affiliates has recommended that this section of the Westside Main Canal, including the associated Westside Drain, is eligible for the NRHP and CRHR on the local and state levels under criterion A/1 for its significance in association with development of the Imperial Valley (Davis et al. 2011). From a management standpoint P-13-013760 is eligible for the NRHP and CRHR until it is demonstrated that it is not.

Sites CA-IMP-8821 (Foxglove Canal), P-13-008983 (Wormwood Canal), P-13-012688 (portions of Dixie Drains 2, 3, & 4, Dixie Lateral 1), P-13-012689 (Fern Canal and Fern Drain), P-13-012690 (Forget-Me-Not Canal), P-13-012693 (Fig Canal), P-13-013747 (Diehl Drain), P-13-013748 (Fig Drain), and P-13-013761 (Wixom Drain) were evaluated by ASM Affiliates for this project and found to be not eligible for the NRHP and CRHR. Although these features are associated with the early irrigation system of the Imperial Valley, and the important local theme of agricultural development, these particular waterways do not convey that theme as well as other similar resources such as the Westside Main and the All-American canals, in part due to their loss of integrity (Davis et al. 2011). From a management standpoint these segments of CA-IMP-8821 (Foxglove Canal), P-13-008983 (Wormwood Canal), P-13-012688 (portions of Dixie Drains 2, 3, & 4, Dixie Lateral 1), P-13-012689 (Fern Canal and Fern Drain), P-13-012690 (Forget-Me-Not Canal), P-13-012693 (Fig Canal), P-13-013747 (Diehl Drain), P-13-013748 (Fig Drain), and P-13-013761 (Wixom Drain) are not eligible for the NRHP and CRHR.

## **Trash Scatters**

Trash scatter sites may contain information that is relevant to several regional research questions, especially those pertaining to chronology and settlement systems, and technology. They might be eligible for listing in the NRHP/CRHR (under 36 CFR §60.4d and Pub. Res. Code §15064.5(a)(3)(D), respectively) for their data content; however, site CA-IMP-11758 has been recommended as not eligible for listing in the NRHP based on preliminary evaluation. The site is

<b>Table 8. Project Site Eligibility</b>			
<b>Site Number</b>	<b>Site Type</b>	<b>Age</b>	<b>Eligibility (NRHP/CRHR)</b>
CA-IMP-7834	Westside Main Canal	Historic	Recommended Eligible: A/1 (Davis et al. 2011)
CA-IMP-8821	Foxglove Canal	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-008983	Wormwood Canal	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-012688	Dixie Drains 2, 3, & 4, Dixie Lateral 1 (portions)	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-012689	Fern Canal and Fern Drain	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-012690	Forget-Me-Not Canal	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-012693	Fig Canal	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-013747	Diehl Drain	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-013748	Fig Drain	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-013760	Westside Drain	Historic	Recommended Eligible: A/1 (Davis et al. 2011)
P-13-013761	Wixom Drain	Historic	Recommended Not Eligible (Davis et al. 2011)
P-13-013749	Isolate bottle base and nail	Historic	Recommended Not Eligible
P-13-013750	Isolate bottle base	Historic	Recommended Not Eligible
P-13-013751	Isolate whiteware ceramic fragment	Historic	Recommended Not Eligible
P-13-013752	Isolate whiteware ceramic fragment	Historic	Recommended Not Eligible
P-13-013753	Isolate glass fragments: 1 purple dating to 1890-1920; and 1 clear 1935-1964	Historic	Recommended Not Eligible
CA-IMP-11758	Historic refuse scatter; 19 <sup>th</sup> century kaolinite pipestem fragment & 3 prehistoric pottery fragments also found within the trash scatter	Historic	Insufficient Data – likely a secondary deposit, greatly disturbed.
P-13-013755	Isolate “SMIRNOFF” bottle dating to 1932-1964.	Historic	Recommended Not Eligible
P-13-013756	Isolate 1911 Liberty Head nickel	Historic	Recommended Not Eligible
P-13-013757	Isolate green/black bottle glass fragment	Historic	Recommended Not Eligible
P-13-013759	Isolate purple glass	Historic	Recommended Not Eligible

located within a very disturbed area, and some of the artifacts have been used for gun target practice. It is also likely that this is a secondary deposit and the result of illegal trash dumping.

Despite the secondary deposit, amid the disturbed trash deposit are several interesting artifacts that may be significant under CEQA. Three prehistoric buffware pottery fragments were identified, as well as a 19<sup>th</sup> century kaolinite pipestem fragment. The buffware pottery fragments are representative of the local area and along the Colorado River. The 19<sup>th</sup> century kaolinite pipestem fragment is a useful artifact when encountered at historical archaeological sites. Their short use-life and easily recognizable stylistic evolution provide valuable dating ranges (Noël Hume 1969; Oswald 1951). Clay pipes were first developed in the early 17<sup>th</sup> century and were in use into the late 19<sup>th</sup> century. According to an article by Maj. Robert J. Dalessandro (1995), pipe stems were the "17th, 18th, and 19th century equivalent of the cigarette butt". Clay pipes had very long stems and as the stems became clogged, the ends would be broken off and discarded. It's not uncommon to find these discarded pipe stems, but it wasn't until excavations at Jamestown in the early 1950s that archaeologists began realizing that these discarded stems could help them date a site. J.C. Harrington, a National Park Service archaeologist, studied hundreds of dated pipes and realized that the stem's bore diameters directly related to certain time periods (Harrington 1954). These are the guidelines Harrington determined:

<u>Bore</u>	<u>Date</u>
9/64"	= 1590-1620
8/64"	= 1620-1650
7/64"	= 1650-1680
6/64"	= 1680-1710
5/64"	= 1710-1750
4/64"	= 1750-1800

Seth Mallios, Ph.D. from San Diego State University Department of Anthropology concurred that this was a kaolinite pipestem fragment, and that the diameter of the bore hole looked small (4/6<sup>ths</sup> of an inch), making it 19<sup>th</sup> century (Binford 1962; Deetz 1987; Munroe et al. 2004).

From a management standpoint CA-IMP-11758 is not eligible for the NRHP, but may be still eligible for the CRHR if it has the potential to contain additional unique artifacts. There is currently insufficient data regarding the CA-IMP-11758 to recommend CRHR eligibility at the survey level. If CA-IMP-11758 cannot be avoided through project design additional research would be required to determine CRHR eligibility.

### **Isolates**

Isolated archaeological occurrences are generally considered to be not NRHP-eligible, and no management recommendations are made. These artifacts can; however, provide some important indications of the overall use of an area or the apparent density of occupation or continuous use of an area. More importantly, while individual artifacts may not contribute greatly to the



archaeological record they are often viewed as evidence of potential archaeological site presence or as markers for areas that may require close monitoring or have a higher potential for masked or buried deposits.

## **Summary**

Table 9 provides a summary of potential site impact based on the inventories generated from the KPE July 2011 survey and the EPG 2007 survey (Rowe 2008).

Based on the inventory results, 12 sites and 9 isolates are recorded within the Proposed Project Area or project components. Nine isolates and nine irrigation sites are recommended not eligible for the NRHP/CRHR. Even though the nine irrigation sites are recommended not eligible no impacts to drains or canals are expected. Some may be spanned by transmission lines, but are not expected to be affected, and they would continue to operate.

## **Proposed Project**

The Westside Main Canal (CA-IMP-7834) and Westside Drain (P-13-013760) are recommended eligible for the NRHP/CRHR under Criteria A/1 (Davis et al. 2011); however, no impacts to drains or canals are expected. Some may be spanned by transmission lines, but are not expected to be affected, and they would continue to operate.

If it cannot be avoided through project design, historic trash scatter site CA-IMP-11758 requires additional analysis to determine CRHR eligibility. CA-IMP-11758 is located within the Project APE.

In addition, there is also one non-archaeological cultural feature present within the exterior boundaries of Proposed Campo Verde Solar Project area. The memorial for Margarito Hernandez is not a recorded archaeological or historic site; however, it is a modern cultural feature. If this feature might be impacted by the Project, management will be coordinating with the landowner for the appropriate treatment for the memorial.

## **Non-BLM Gen-Tie Alternative**

The Westside Main Canal (CA-IMP-7834) and Westside Drain (P-13-013760) are recommended eligible for the NRHP/CRHR under Criteria A/1 (Davis et al. 2011); however, no impacts to drains or canals are expected. Some may be spanned by transmission lines, but are not expected to be affected, and they would continue to operate.

Table 9. Site Impact					
Site	Site Type	Proposed Project	Non-BLM Gen-Tie	Impact	NRHP/CRHR Eligibility
CA-IMP-7834	Westside Main Canal	X	X	Avoided	Recommended Eligible: A/1 (Davis et al. 2011)
CA-IMP-8821	Foxglove Canal		X	Avoided	Recommended Not Eligible (Davis et al. 2011)
P-13-008983	Wormwood Canal	X		Avoided	Recommended Not Eligible (Davis et al. 2011)
P-13-012688	Dixie Drains 2, 3, & 4, Dixie Lateral 1 (portions)	X	X	Avoided	Recommended Not Eligible (Davis et al. 2011)
P-13-012689	Fern Canal and Fern Drain	X		Avoided	Recommended Not Eligible (Davis et al. 2011)
P-13-012690	Forget-Me-Not Canal		X	Avoided	Recommended Not Eligible (Davis et al. 2011)
P-13-012693	Fig Canal	X		Avoided	Recommended Not Eligible (Davis et al. 2011)
P-13-013747	Diehl Drain	X		Avoided	Recommended Not Eligible (Davis et al. 2011)
P-13-013748	Fig Drain	X		Avoided	Recommended Not Eligible (Davis et al. 2011)
P-13-013760	Westside Drain	X	X	Avoided	Recommended Eligible: A/1 (Davis et al. 2011)
P-13-013761	Wixom Drain	X		Avoided	Recommended Not Eligible (Davis et al. 2011)
P-13-013749	Isolate bottle base and nail	X		No Impact	Recommended Not Eligible
P-13-013750	Isolate bottle base	X		No Impact	Recommended Not Eligible
P-13-013751	Isolate whiteware ceramic fragment	X		No Impact	Recommended Not Eligible
P-13-013752	Isolate whiteware ceramic fragment	X		No Impact	Recommended Not Eligible
P-13-013753	Isolate glass fragments: 1 purple dating to 1890-1920; and 1 clear 1935-1964	X		No Impact	Recommended Not Eligible
CA-IMP-11758	Historic refuse scatter; 19 <sup>th</sup> century kaolinite pipestem fragment & 3 prehistoric pottery fragments also found within the trash scatter	X		Possible Impact	Insufficient Data – likely a secondary deposit, greatly disturbed.
P-13-013755	Isolate “SMIRNOFF” bottle dating to 1932-1964.	X		No Impact	Recommended Not Eligible
P-13-013756	Isolate 1911 Liberty Head nickel	X		No Impact	Recommended Not Eligible
P-13-013757	Isolate green/black bottle glass fragment	X		No Impact	Recommended Not Eligible
P-13-013759	Isolate purple glass		X	No Impact	Recommended Not Eligible

## **9. MANAGEMENT CONSIDERATIONS**

Based on the inventory results there are two sites that are recommended eligible for the NRHP and CRHR recorded within the Proposed Project APE and the Non-BLM Gen-Tie alternative (CA- IMP-7834 and P-13-013760).

One site (CA-IMP-11758) recorded within the Proposed APE requires additional research in order to determine CRHR eligibility if it cannot be avoided through project design.

In order to minimize damage to archaeological resources, a number of options for protection and avoidance are proposed. The evaluation process itself can be considered to be a potential impact, as the process of evaluation is destructive when it involves the excavation of the site. In order to minimize damage from evaluation efforts, all of the resources in the project area are considered to be potentially eligible for nomination to the National Register or California Register. Therefore, the first option is to avoid impacts through project design to locations outside the recorded site boundary. A second option is establishing Environmentally Sensitive Areas (ESAs) around cultural resource sites. These exclusion zones will be a temporary fenced buffer around known sites. No project activities will occur within them. These areas will be established by a qualified archaeologist and will be shown on the project construction plans as ESAs with specific language for avoidance for the construction personnel. On-site project monitors will be required to maintain the protective fencing throughout the duration of construction activities in the area of the specific ESAs.

The final option will be to initiate National Register eligibility evaluations at sites where avoidance of impacts is not possible. These sites will be subjected to specific evaluation efforts in the areas of direct impact potential only. The evaluation work will be completed by a qualified archaeologist. The results of the evaluation efforts will be used by the SHPO to determine site eligibility and management recommendations for eligible sites.

There is also one non-archaeological cultural feature present within the Proposed Project area. The memorial for Margarito Hernandez is not a recorded archaeological or historic site; however, it is a modern cultural feature. If this feature might be impacted by the Project, management will be coordinating with the landowner for the appropriate treatment for the memorial.

### **Areas with Potential for Buried Cultural Deposits**

Based on the results of the Class III Inventory conducted by KPE, the Project Area is identified as having a moderate to low probability to produce unidentified subsurface cultural materials. This assumption is based on several criteria, including the presence of sufficient sedimentation to cover potential cultural resources, geomorphology, land form characteristics, proximity to a reliable water source, and the occurrence of previously recorded cultural resources in the immediate area. Thus, although no cultural resources were identified on the ground surface in

some of these areas, it is possible that unidentified cultural resources exist below the surface, based on previous archeological studies in the region. In order to ensure as much as possible that cultural resources are not adversely impacted, it is recommended that an archaeological monitor should be present during initial ground-disturbing activities.

### **Conclusion**

A Class III archaeological inventory has been completed for the Project, which includes the solar facility footprint and project components, and a transmission line alternative. Strategies to avoid, minimize, or mitigate effects to cultural resources have been summarized here.

## 10. REFERENCES CITED

American Indian Religious Freedom Act of 1978, 42 U.S.C. 1996. Protection and Preservation of Traditional Religions of Native Americans.

Bates, James B. 1970. The Plank Road. *The Journal of San Diego History*, Volume 16, Number 2, Spring 1970.

Bean, Lowell John, Jerry Schaefer, and Sylvia Brakke Vane. 1995. *Archaeological, Ethnographic, and Ethnohistoric Investigations at Tahquitz Canyon, Palm Springs, California*. Prepared by Cultural Systems Research, Inc., Menlo Park, California, for Riverside County Flood Control and Water Conservation District.

Bee, Robert L. 1981. *Crosscurrents Along the Colorado*. University of Arizona, Tucson.

Bee, Robert L. 1983. Quechan. In *Southwest*, edited by Alfonso Ortiz, pp. 86-98. Handbook of North American Indians, Vol. 10, William G. Sturtevant, general editor. Smithsonian Institution, Washington D.C.

Bee, Robert L. 1989. *The Yuma*. Chelsea House, New York.

Begole, Robert S. 1973. An Archaeological Survey in the Anza-Borrego Desert State Park: 1972. Preliminary Report. *Pacific Coast Archaeological Society Quarterly*. 9(2):27-55.

Begole, Robert S. 1976 A Continuing Archaeological Survey in the Anza-Borrego Desert State Park: 1975-1976 Report. *Pacific Coast Archaeological Society Quarterly* 12(2):1-24.

Berryman, Judy A. 2001a. Cultural Resource Treatment Plan in Support of the Construction of Two 230-kV Transmission Lines from Imperial Valley Substation to the International Border with Mexico. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Berryman, Judy A. 2001b. Cultural Resource Survey for the 230-kV Transmission Corridor from Imperial Valley Substation to the International Border with Mexico. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Berryman, Judy A. 2001c. 230-kV Transmission Corridor Cultural Resource Survey from Imperial County, CA to the International Border with Mexico. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Binford, Lewis. 1952. A New Method of Calculating Dates from Kaolin Pipe Stem Fragments. *Southeastern Archaeological Conference Newsletter* 9(1):19-21.

Bolton, Herbert Eugene. 1930. *Anza's California Expeditions, Volume IV, Font's Complete Diary of the Second Anza Expedition*. Translated and edited by H. E. Bolton. University of California Press, Berkeley, California.

Brian F. Mooney Associates. 1992. Rio Bend Specific Plan Final Environmental Impact Report. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Bull, Charles S. 1980. A Cultural Resource Survey of the Proposed Imperial Valley Substation. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

BLM (Bureau of Land Management). 1981. APS/SDG&E Interconnection Supplement to Draft Environmental Document. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

BLM (Bureau of Land Management). 2001. Environmental Assessment for Presidential Permit Applications for Baja California Power, Inc and Sempra Energy Resources. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

BLM (Bureau of Land Management). 2004a. Draft Environmental Impact Statement for the Imperial-Mexicali 230-kV Transmission Lines. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

BLM (Bureau of Land Management). 2004b. The Foundations for Managing Cultural Resources. United States Department of the Interior, Bureau of Land Management Manual, Section 8100.

Burkendroad, David. 1979. APS/SDG&E Interconnection Environmental Study Cultural Resources: History, Phase 1 Regional Studies. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

California Penal Code 622½. Destruction to Archaeological or Historical Resources. <http://www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=45785219007+1+0+0&WAIAction=retrieve>. Accessed February 1, 2009.

California Code of Regulations Title 14, Section 4850. California Register of Historic Resources. Authority.

California Code of Regulations Title 14, Section 4852. California Register of Historic Resources. Types of Historical Resources and Criteria for Listing in the California Register of Historical Resources.

California Health and Safety Code 7050.5. Human Remains. <http://www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=4543487786+0+0+0&WAISaction=retrieve>. Accessed February 1, 2009.

California Health and Safety Code 7052. Human Remains. <http://www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=4543487786+0+0+0&WAISaction=retrieve>. Accessed February 1, 2009.

California Office of Historic Preservation. 1989. California Archaeological Inventory Handbook for Completing an Archaeological Site Record. California Office of Historic Preservation, Sacramento, CA.

California PRC 5021. State Historic Landmarks. <http://www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=4536766035+0+0+0&WAISaction=retrieve> . Accessed February 1, 2009.

California PRC 5024. California Register of Historic Resources. <http://www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=4536766035+0+0+0&WAISaction=retrieve> . Accessed February 1, 2009.

California PRC 5097.5. Native American Heritage Commission. <http://www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=4541157112+8+0+0&WAISaction=retrieve>. Accessed February 1, 2009.

California PRC 5097.98. Native American Heritage Commission. <http://www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=4541157112+8+0+0&WAISaction=retrieve>. Accessed February 1, 2009.

California Environmental Quality Act, PRC 21002. Environmental Impact Reports. <http://www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=45262626334+1+0+0&WAISaction=retrieve>. Accessed February 1, 2009.

California Environmental Quality Act, PRC 21083.2. Effects on Archaeological Resources. <http://www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=45262626334+0+0+0&WAISaction=retrieve>. Accessed February 1, 2009.

California Environmental Quality Act, PRC 21084.1. Effects on Historic Resources. <http://www.leginfo.ca.gov/cgi-bin/waisgate?WAISdocID=45262626334+0+0+0&WAISaction=retrieve>. Accessed February 1, 2009.

Campbell, E.W.C. and W. H. Campbell. 1935. The Pinto Basin Site: An Ancient Aboriginal Camping Ground in the California Desert. *Southwest Museum Papers* 9:1-51. Los Angeles.

Carrico, R.L. 1985. Before the Strangers: American Indians in San Diego County at the Dawn of Contact. *The Impact of European Exploration and Settlement on Local Native Americans*, Cabrillo Historical Association, San Diego, CA.

Carrico, R. 2008. *Strangers in a Stolen Land: Indians of San Diego County from Prehistory to the New Deal*. Sunbelt Publications, San Diego, CA.

Castetter, Edward F. and William H. Bell. 1951. Yuman Indian Agriculture. University of New Mexico Press, Albuquerque.

County of Imperial. 1993. County of Imperial General Plan: Conservation and Open Space Element.

Crabtree, Don E. 1981. Archaeology. In *A Cultural Resources Overview of the Colorado Desert Planning Units* by Elizabeth von Till Warren, et. al., pp. 25-54. U.S. Department of Interior Bureau of Land Management, California Desert District, Riverside.

CSRI (Cultural Systems Research, Inc.). 1982a. Archaeological Field Investigation of Cultural Resources Associated with the Proposed Imperial Valley Substation (7A) Access Road, Cultural Resource Report. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

CSRI (Cultural Systems Research, Inc.). 1982b. Mountain Springs (Jade) to Sand Hills Portion of the APS/SDG&E Interconnection Project 500 kV Transmission Line Draft Archaeological Research Design and Data Recovery Program for Cultural Resources. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

CSRI (Cultural Systems Research, Inc.). 1982c. Mountain Springs (Jade) to Sand Hills Data Recovery Preliminary Report. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Davis, Emma Lou. 1980. Class II Cultural Resource Inventory East Mesa and West Mesa Regions, Imperial Valley, California. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Davis, Emma Lou, Kathryn H. Brown, and Jacqueline Nichols. 1980. *Evaluation of Early Human Activities and Remains in the California Desert*. Great Basin Foundation, San Diego.

Deetz, James. 1987. Harrington Histograms Versus Binford Mean Dates as a Technique for Establishing the Occupational Sequence of Sites at Flowerdew Hundred, Virginia. *American Archeology* 6(1):62-67.



Delessandro, Maj. Robert J. 1995. Clay Pipe Stems: The Other End of the Story. *North South Trader: Virginia Civil War Relics*, Vol. XXII, No. 2.

Executive Order 13007. 1996. Presidential Documents: Executive Order 13007 of May 24, 1996. Indian Sacred Sites. *Federal Register* Vol. 61, No. 104. Wednesday, May 29, 1996.

Executive Order 13084. 1998. Presidential Documents: Executive Order 13084 of May 19, 1998. Consultation and Coordination With Indian Tribal Governments. *Federal Register* Vol. 63, No. 96. Tuesday, May 19, 1998.

Forbes, Jack D. 1965. *Warriors of the Colorado: The Yumas of the Quechan Nation and Their Neighbors*. Norman, Oklahoma: University of Oklahoma Press.

Forde, C. Daryll. 1931. Ethnography of the Yuma Indians. *University of California Publications in American Archaeology and Ethnology* 28(4):83-278. Berkeley.

Foster, John and Roberta Greenwood. 1983. Cultural Resource Inventory of the La Rosita to Imperial Valley Interconnection Project 230 kV Transmission Line, Imperial Valley, California. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Gallegos, Dennis. 1979. Class II Cultural Resource Inventory East and West Mesa Region, Imperial Valley, California. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Gallegos, Dennis. 1984. West Mesa Cultural Resource Survey and Site Evaluation, Imperial Valley, California. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Gifford, Edward W. 1931. The Kamia of Imperial Valley. *U.S. Bureau of American Ethnology Bulletin 97*. United States Government Printing Office, Washington.

Graves Engineering. 1984. Rio Bend RV Resort Ranch Environmental Impact Report. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Gupta, Avijit. 2007. *Large rivers: geomorphology and management*. John Wiley & Sons, West Sussex, England.

Harrington, J.C. 1954. Dating Stem Fragments of Seventeenth and Eighteenth Century Clay Tobacco Pipes. *Quarterly Bulletin of the Archeological Society of Virginia*. 9(1):10-14.

Hayden, Julian. 1976. Pre-altithermal Archaeology in the Sierra Pinacate, Sonora, Mexico. *American Antiquity* 41:274-289.

HCFDL (Historical Committee of the Friends of the Descanso Library). 1988. *Descanso: Place of Rest*. Friends of the Descanso Library. San Diego, CA.

Hunt, Kevin. 2008. Cultural Resources Survey of Alternatives for the Sunrise Powerlink Project in Imperial, Orange, Riverside, and San Diego Counties, California. SWCA Environmental Consultants. Report submitted to Bureau of Land Management, California Desert District, Moreno Valley, California.

Imperial County. 1979. APS/SDG&E Interconnection Environmental Study Cultural Resources: Archaeology, Phase 1 Regional Studies. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Imperial Irrigation District. 1993. East Lowline and Trifolium Interceptors and Completion Projects Draft Environmental Impact Report. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Ives, Ronald L. 1975. Retracing Fages' Route from San Gabriel to Yuma April 1782. *Arizona and the West*, 27 (Summer):143-155.

Knack, Martha. 1981. Ethnography. In *A Cultural Resources Overview of the Colorado Desert Planning Units*, by Elizabeth von Till Warren, Robert H. Crabtree, Claude N. Warren, Martha Knack, and Richard McCarty, pp. 55-82. Cultural Resources Publications, Anthropology-History, Bureau of Land Management, California Desert District, Riverside.

Kroeber, Alfred L. 1925. *Handbook of the Indians of California*. Smithsonian Institution, Washington, D.C.

Laylander, Don. 1997. The Last Days of Lake Cahuilla: The Elmore Site. *Pacific Coast Archaeological Society Quarterly* 33(1-2): 1-138.

Lindsay, Diana. 1973. *Our Historic Desert: The Story of the Anza-Borrego Desert*. Union Tribune Publishing Company, San Diego, California.

Lindsay, Diana. 2001. *Anza-Borrego A to Z: People, Places, and Things*. Sunbelt Publications, El Cajon, California.

Love, Bruce. 1996. *Archaeology on the North Shoreline of Ancient Lake Cahuilla*. Prepared by CRM TECH, Riverside, California for U.S. Home Corporation, Tempe, Arizona.

McCarthy, Daniel. 1982. The Coco-Maricopa Trail Network. In *Cultural Resource Inventory and National Register Assessment of the Southern California Edison Palo Verde to Devers Transmission Line Corridor (California Portion)*, Appendix C. Prepared by Westec Services, San Diego, for Southern California Edison, Rosemead, California.

McCarthy, Daniel. 1993. *Prehistoric Land-Use at McCoy Spring: An Arid-Land Oasis in Eastern Riverside County, California*. Unpublished M.A. Thesis, University of California, Riverside.

McDonald, Alison Meg. 1992 *Indian Hill Rockshelter and Aboriginal Cultural Adaptation in Anza-Borrego Desert State Park, Southeastern California*. Unpublished Ph.D. dissertation, University of California, Riverside.

McGuire, Randall H. and Michael B. Schiffer. 1982. *Hohokam and Patayan, Prehistory of Southwestern Arizona*. Academic Press, New York.

Mitchell, Patricia T. 2010. Class III Cultural Resource Survey Report for the Proposed Dead, Dying and Diseased "D3" Tree Removal Project, Descanso and Sherilton Valley, San Diego County, California. On file at The Resource Conservation District of Greater San Diego, Lakeside, CA.

Mitchell, Patricia T. 2011. Inventory Report of the Cultural Resources within the Centinela Solar Energy Gen-tie Line, Imperial County, California. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Monroe, J. Cameron, Seth Mallios, and Quinn Emmett. 2004. A Dating Formula for Colono Tobacco Pipes in the Chesapeake. *The Journal of the Jamestown Rediscovery Center*, Vol. 2 Jan. 2004.

Moratto, Michael J. 1984. *California Archaeology*. Academic Press, Inc., Orlando, Florida.

Noel Hume, I. 1970. *A Guide to Colonial Artifacts of Colonial America*. New York: Alfred A. Knopf.

NPS (National Park Service). 2009. Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines [As Amended and Annotated]. Electronic document, [http://www.nps.gov/history/local-law/arch\\_stnds\\_7.htm](http://www.nps.gov/history/local-law/arch_stnds_7.htm), accessed on December 11, 2009.

NPS and ACHP (National Park Service and the Advisory Council on Historic Preservation). 1998. *The Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act*. Published jointly by the National Park Service of the U.S. Department of the Interior and the Advisory Council on Historic Preservation.

Native American Graves Protection and Repatriation Act: Final Rule, 43 CFR 10. 1995. *Federal Register* Vol. 60, No. 232. Monday, December 4, 1995.

Noah, Anna C. and Dennis R. Gallegos. 2008. Class III Archaeological Inventory for the SDG&E Sunrise Powerlink Project, San Diego and Imperial Counties, California. On file at

the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Office of Historic Preservation. 1995. Instructions for Recording Historical Resources. California Office of Historic Preservation, Sacramento, CA.

Olech, Lilliana. 1981. Yuha Basin Area of Critical Environmental Concern Management Plan. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

OSHA, 29 CFR 1910. Occupational Safety and Health Standards. United State Department of Labor.

OSHA, 29 CFR 1926. 1979. Safety and Health Regulations for Construction. United State Department of Labor.

Oswald, A. 1975. Clay Pipes for the Archaeologist. *British Archaeological Reports* #14. Oxford: Archaeopress.

Pendleton, Lorann. 1984. *Archaeological Investigations in the Picacho Basin*. Wirth Environmental Services for San Diego Gas and Electric.

Pico, Anthony R. 2000. The Kumeyaay Millennium: The Story of the Original San Diegans. <http://www.americanindiansource.com/khistories/kumeyaaymill.html>.

PLoS. 2007. Genet 3(11): e185. doi:10.1371/journal.pgen.0030185  
<http://www.med.umich.edu/opm/newspage/2007/beringstrait.htm>

Pourade, Richard F. 1960. *The History of San Diego: The Explorers*. Union-Tribune Publishing Company, San Diego.

Rensch, Hero Eugene. 1955. Fage's Crossing the Cuyamacas. *California Historical Society Quarterly*, 3 (3):193-208.

Ritter, Eric W. 1975. An Analysis of Cultural Resources Along the Proposed Yuha Desert ORV Courses. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

REH Consultants. 1992. Rio Bend Specific Plan. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Rogers, Malcolm J. 1929. Report on an Archaeological Reconnaissance in the Mojave Sink Region. *San Diego Museum of Man Papers* No. 1.

Rogers, Malcolm J. 1936. Yuman Pottery Making. *San Diego Museum of Man Papers* No. 2.

Rogers, Malcolm J. 1939. Early Lithic Industries of the Lower Basin of the Colorado River and Adjacent Areas. *San Diego Museum of Man Papers* No. 3.

Rogers, Malcolm J. 1945. An Outline of Yuman Prehistory. *Southwestern Journal of Anthropology* 1(2):167-198.

Rogers, Malcolm J. 1958. San Dieguito Implements from the Terraces of the Rincon-Pantano and Rillito Drainage System. *The Kiva* 24(1):1-23.

Rogers, Malcolm J. 1966. *Ancient Hunters of the Far West*. Union-Tribune, San Diego.

Rowe, Robert A. 2008. A Cultural Resource for the Mount Signal Solar Power Station Project, Imperial County, California. *EPG Cultural Resource Services Technical Paper* No. 2008-001.

Schaefer, Jerome. 1981. Archaeological Survey of the La Rosita 230 kV Interconnection Project Vol. II Appendix, Phase II. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Schaefer, J. 1994. The Challenge of Archaeological Research in the Colorado Desert: Recent Approaches and Discoveries. *Journal of California and Great Basin Anthropology* 16 (1):60-80.

Schaefer, Jerry, Lowell J. Bean, and C. Michael Elling. 1987. Settlement and Subsistence at San Sebastian: A Desert Oasis on San Felipe Creek, Imperial County, California. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Schroeder, Albert H. 1952. A Brief Survey of the Lower Colorado River from Davis Dam to the International Border. Manuscript on file at the National Park Service, Boulder City.

Schroeder, Albert H. 1975. The Hohokam, Sinagua and the Hakataya. *Imperial Valley College Occasional Paper* No. 3. El Centro, California.

Schroeder, Albert H. 1979. Prehistory: Hakataya. In *Southwest*, pp. 100-107, edited by Alfonso Ortiz. Handbook of North American Indians, Vol. 9. Smithsonian Institution, Washington, D.C.

Secretary of the Interior's Standards and Guidelines [As Amended and Annotated], 48 FR Sections 44716-44740. 1983. [http://www.cr.nps.gov/local-law/arch\\_stnds\\_0.htm](http://www.cr.nps.gov/local-law/arch_stnds_0.htm). Accessed February 1, 2009.

Shackley, Steven. 1982a. Mountain Springs (Jade) to Sand Hills Portion of the APS/SDG&E Interconnection Project 500 kV TL Archaeological Survey, Phase II. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Shackley, Steven. 1982b. Mountain Springs (Jade) to Sand Hills Portion of the APS/SDG&E Interconnection Project 500 kV TL Vol II Confidential Technical Appendices, Phase III Archaeological Survey. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Shackley, Steven. 1984a. SWPL Mountain Springs (Jade) to Sand Hills Segment Data Recovery - Vol. 2 Appendices. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Shackley, Steven. 1984b. Western Colorado Desert Archaeological Investigations, Vol. 1. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Taylor, R. E., L. A. Payen, C. A. Prior, P. J. Slota Jr., R. Gillespie, J. A. J. Gowlett, R. E. M. Hedges, A. J. T. Jull, T. H. Zabel, D. J. Donahue and R. Berger. 1985. Major Revisions in the Pleistocene Age Assignments for North American Skeletons by C-14 Accelerator Mass Spectrometry: None Older than 11,000 C-14 Years B.P. *American Antiquity* 50:136-140.

Townsend, Jan. 1983. Southwest Powerlink Cultural Resources Management Plan (Draft). On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Townsend, Jan. 1984a. Southwest Powerlink Cultural Resources Management Plan - Vol. II. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Townsend, Jan. 1984b. Southwest Powerlink Cultural Resources Management Plan - Vol. I. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Trafzer, Clifford E. 1980. *Yuma: Frontier Crossing of the Far Southwest*. Western Heritage Books, Wichita, Kansas.

van der Pas, Peter W. (ed.) 1976. The Imperial Valley in 1904: An Account by Hugo de Vries. *The Journal of San Diego History*, Winter 1976, Volume 22, Number 1.

Van Wormer, Stephen R. 2008. Unabridged Historic Background. In: Appendix F, Volume II. Class III Archaeological Inventory for the SDG&E Sunrise Powerlink Project, San Diego and Imperial Counties, California. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Various. Various dates. SDG&E La Rosita Line – Misc Documents. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Von Werlhof, Jay and Karen McNitt. 1980. Archaeological Examinations of the Republic Geothermal Field, East Mesa, Imperial County. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Walker, Carol, Charles Bull, and Jay Von Werlhof. 1979. Jade to the Sand Hills Cultural Resource Study. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Walker, Carol, Charles Bull, and Jay Von Werlhof. 1981. Jade to the Sand Hills Cultural Resource Study. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Wallace Roberts & Todd. 1999. County of Imperial Bicycle Master Plan. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Warren, Claude N. 1967. The San Dieguito Complex: A Review and Hypothesis. *American Antiquity* 32(2):168-185.

Warren, Claude N. and Delbert L. True. 1961. The San Dieguito Complex and its Place in San Diego County Prehistory. *Archaeological Survey Annual Report* (1960-1961), pp. 246-291. University of California, Los Angeles.

Warren, Elizabeth von Till, Robert H. Crabtree, Claude N. Warren, Martha Knack, and Richard McCarthy. 1981. *A Cultural Resources Overview of the Colorado Desert Planning Units*. U.S.D.I, Bureau of Land Management, California Desert District, Riverside.

Weide, David. 1974. Regional Environmental History of the Yuha Desert Region. In *Background to Prehistory of the Yuha Desert Region*, by Weide, Margaret L. and James P. Barker, pp. 4-15. Report prepared by the Archaeological Research Unit, University of California, Riverside for the U.S.D.I., Bureau of Land Management, California Desert Planning Program, Riverside.

Welch, Patrick. 1983. Cultural Resource Inventory for Thirty Proposed Asset Management Parcels in Imperial County, California. On file at the South Coastal Information Center, Department of Anthropology, San Diego State University, San Diego, California.

Wirth Associates, Inc. 1980a. APS/SDG&E Interconnection Project (Phase II Corridor Studies) - Cultural Resources: Archaeology. On file at the Bureau of Land Management, El Centro Field Office.

Wirth Associates, Inc. 1980b. APS/SDG&E Interconnection Project Environmental Study Phase II Corridor Studies - Native American Cultural Resources Appendices. On file at the Bureau of Land Management, El Centro Field Office.

Wlodarski, Robert J. 2006. Nextel Wireless Telecommunications Site CA8991C (Sunbeam:Kuhn 2) Cellular Archaeological Resource Evaluations. On file at the Bureau of Land Management, El Centro Field Office.

Woods, Clyde M. 1982. *APS/SDG&E Interconnection Project Native American Cultural Resources: Miguel to the Colorado River and Miguel to Mission Tap*. (Identification and Evaluation of Native American Cultural Resources Situated Within One Mile of the Proposed and Existing Rights-of-Way In California). Submitted to San Diego Gas & Electric Company. Copies available from Wirth Environmental Services, San Diego.

Yost, Stephen W., Michael Mirro, Lori Rhodes, J. David Ing, and Howard Higgins. 2001. San Diego, CA to Yuma, AZ Final Report on Cultural Resource Monitoring Along the Level (3) Long Haul Fiber Optic Running Line. On file at the Bureau of Land Management, El Centro Field Office.

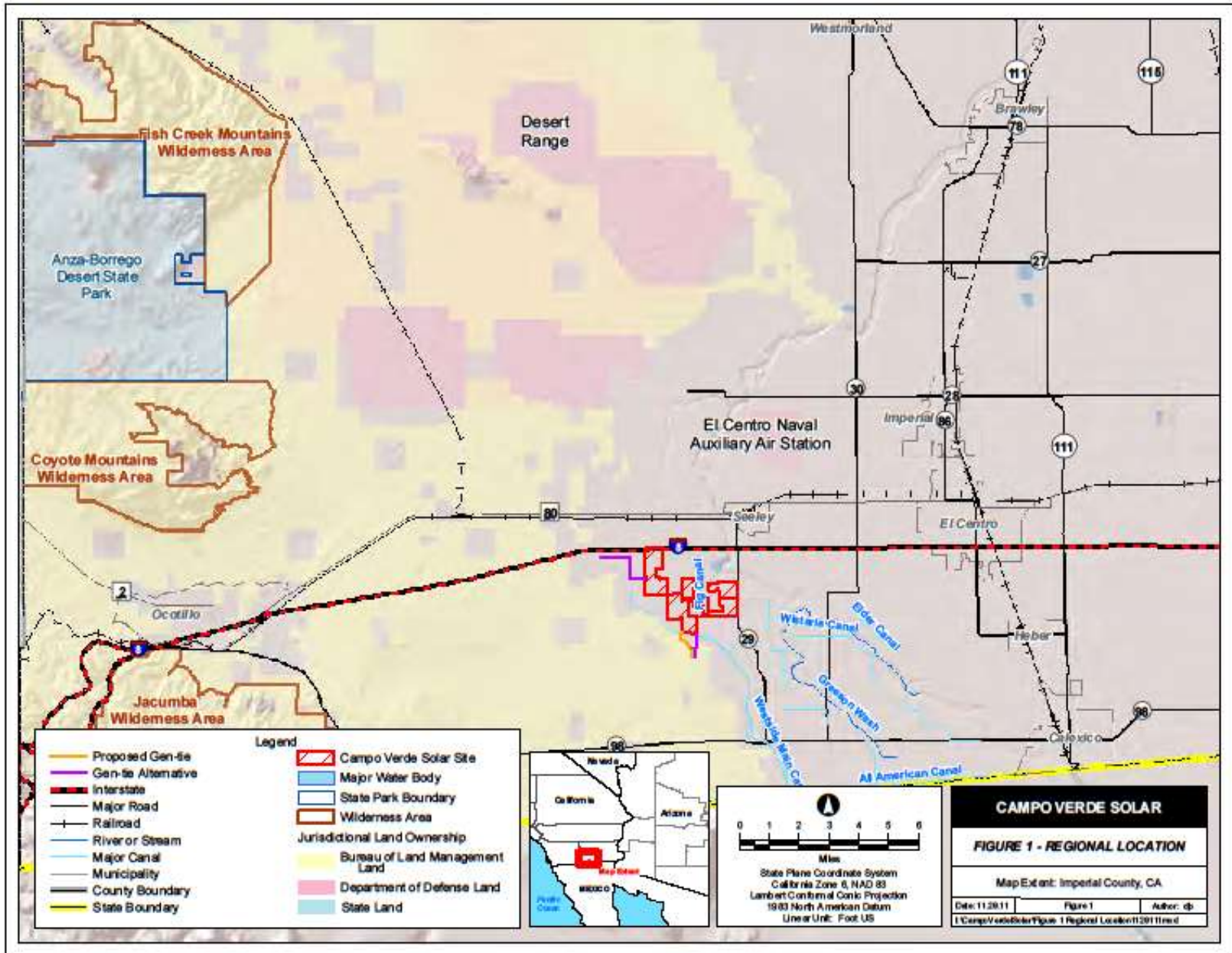
Zepeda-Herman, Carmen, Richard Shultz and Harry Price. 2011. Cultural Resources Survey for the Imperial Solar Energy Center South Project, Imperial County, California. On file at the Bureau of Land Management, El Centro Field Office.

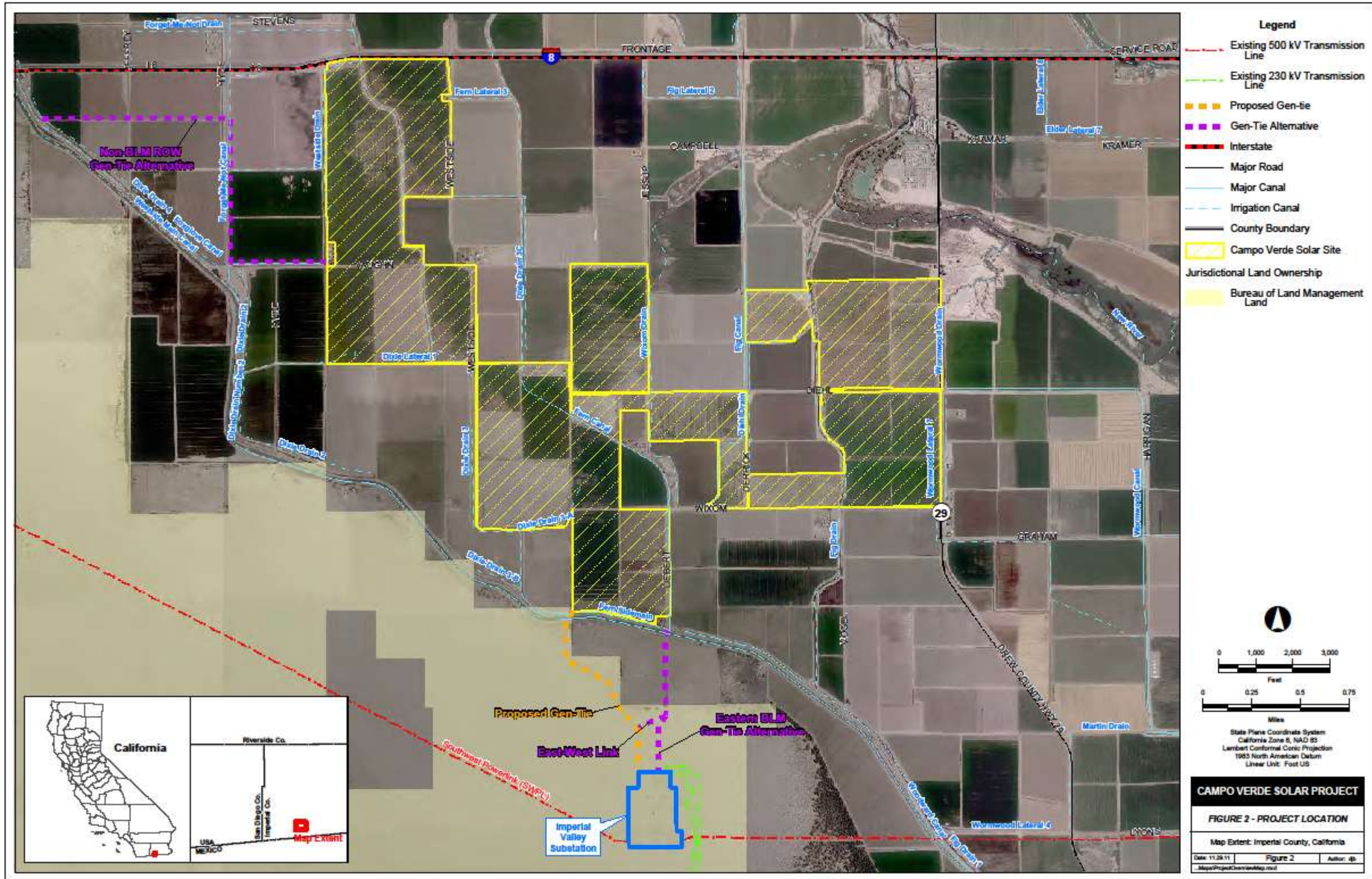


## **APPENDICES**

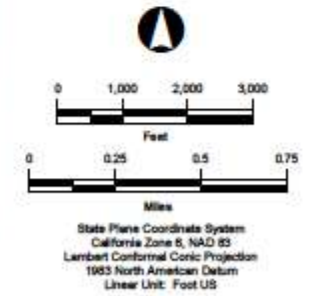
## **Appendix A**

### **Non-Confidential Figures**





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



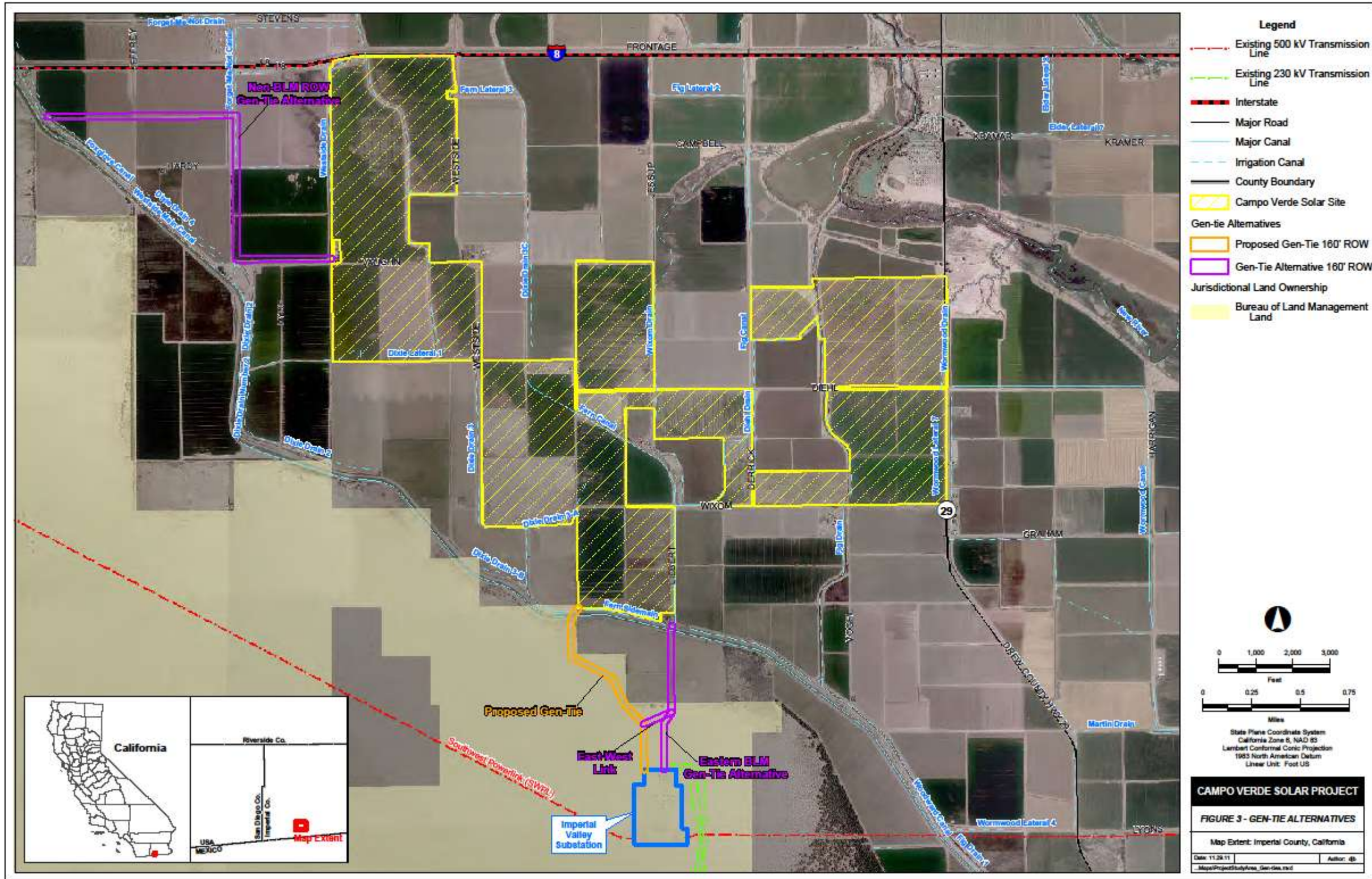
**CAMPO VERDE SOLAR PROJECT**

**FIGURE 2 - PROJECT LOCATION**

Map Extent: Imperial County, California

Date: 11.29.11      Figure 2      Author: db

MapProjectOverviewMap.mxd



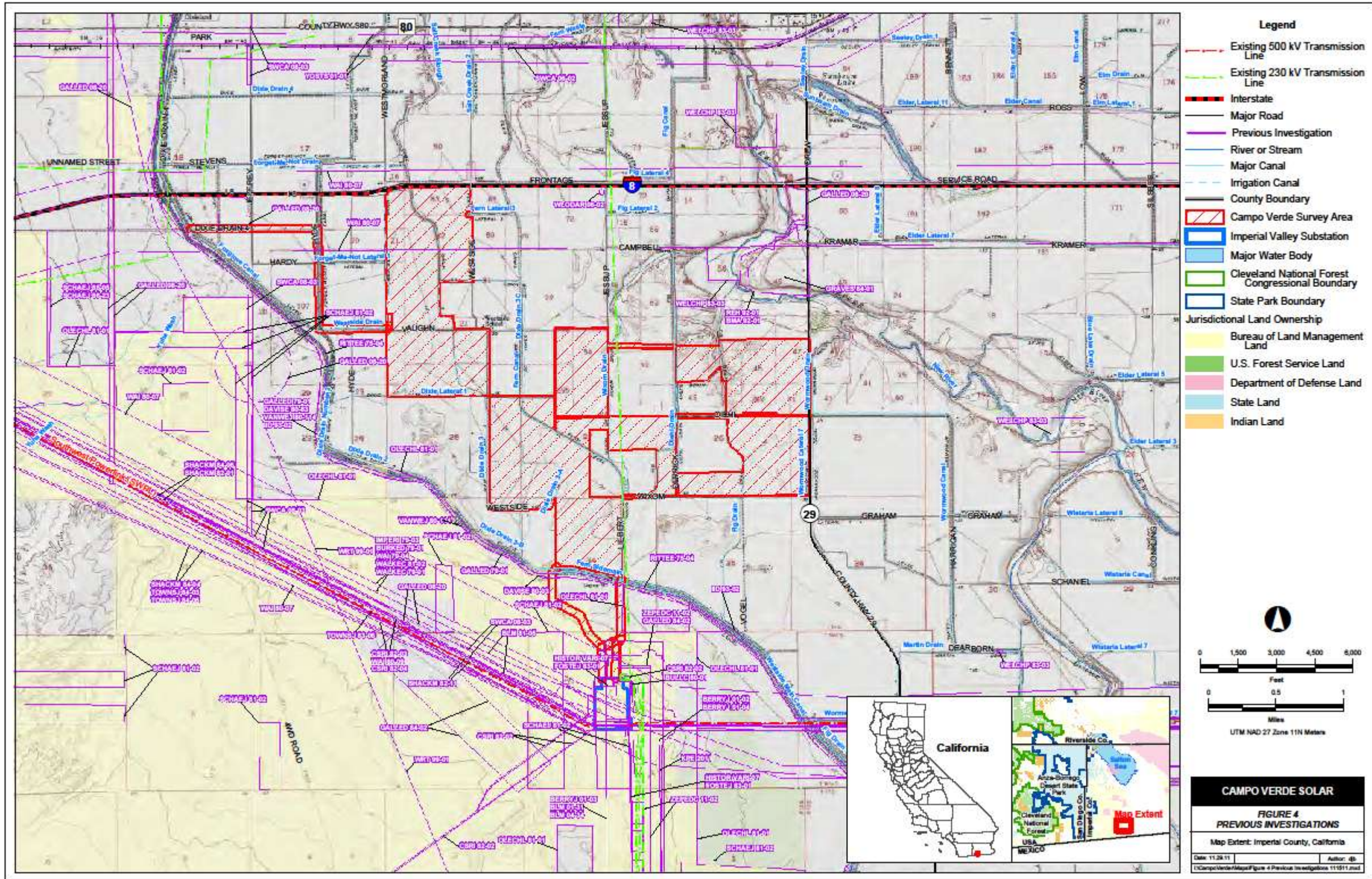




Figure 7. Memorial

# **HISTORIC RESOURCES REPORT**

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**INVENTORY, EVALUATION  
AND ANALYSIS OF  
IMPACTS ON HISTORIC RESOURCES ON  
PRIVATE LANDS WITHIN  
THE AREA OF POTENTIAL EFFECT OF  
THE CAMPO VERDE SOLAR PROJECT,  
IMPERIAL COUNTY, CALIFORNIA**

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2034 Corte del Nogal  
Carlsbad, California 92011

December 2011  
PN 18820

USGS 7.5-minute Quadrangles: Mount Signal, Seeley  
Acres: approximately 1,990 acres

Keywords: CEQA, built-environment inventory, direct impacts, indirect impacts, visual impacts, auditory impacts, atmospheric impacts, Westside Main Canal

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# NATIONAL ARCHEOLOGICAL DATA BASE INFORMATION

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**Report Title:** Inventory, Evaluation, and Analysis of Impacts on Historic Resources On Private Lands within the Area of Potential Effect of the Campo Verde Solar Project, Imperial County, California

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**Project Number:** ASM PN 18820

**USGS Quadrangle:** 7.5-minute Mount Signal and Seeley

**Acres:** approximately 1,990 acres

**Keywords:** CEQA, built-environment inventory, direct impacts, indirect impacts, visual impacts, auditory impacts, atmospheric impacts, Westside Main Canal

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## MANAGEMENT SUMMARY

This report summarizes the results of a survey for historic resources located on private lands within the Area of Potential Effect (APE) of the Campo Verde Solar Project (Project) proposed by First Solar, Inc. (First Solar) in Imperial County, California. The report addresses the potential for direct impacts to those historic resources, and also the potential for indirect impacts resulting from the introduction of visual, auditory, or atmospheric elements on historic resources situated within the APE. The proposed Project consists of two primary components: (i) a solar field on privately owned land (the “Campo Verde Facility”) and (ii) an aboveground, transmission line (the “Gen-tie Line”) that will connect the Campo Verde Facility with the Imperial Valley Substation located on federal land within the California Desert Conservation Area under the jurisdiction of the Bureau of Land Management (BLM). The Gen-tie Line will be addressed in a separate report for the BLM. The Campo Verde Facility and Gen-tie Line are referred to collectively as the “Project.” In this report, the area encompassing only the private land areas within the Campo Verde Facility and the Gen-tie Line are referred to as the “Project Area.”

The APE is the geographic area or areas, regardless of land ownership, within which an undertaking may directly or indirectly cause alterations in the character or use of historic resources, if any such properties exist. The APE for this assessment of direct and indirect impacts was defined as encompassing an area extending 0.5 mile (mi.) from the centerline of the proposed transmission line and a radius of 0.5 mi. surrounding the solar field in order to assess indirect visual, auditory, or atmospheric impacts on significant historic resources. ASM Affiliates, Inc. (ASM) conducted field surveys within that APE, to identify historic resources and to assess the potential direct and indirect impacts on those historic resources as a result of the Project. This report presents those findings for the areas within the APE only located on private lands, referred to as the Project APE.

Historical resources studies for this report were carried out in compliance with the California Environmental Quality Act (CEQA). As such, this report identifies and evaluates historic resources within the Project APE for eligibility for inclusion in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR), and as CEQA historical resources.

To assess direct and indirect impacts to historic resources, ASM completed an inventory and field documentation of built-environment properties (i.e., buildings and structures) more than 45 years old within the APE where impacts to the historic resources and settings could occur, or 0.5 miles (mi.) around the Project Area footprint, including the solar field and transmission line. Historic resources constructed prior to 1966 were identified through an analysis of historical maps, aerial photographs, and a records search at the South Coastal Information Center provided by KP Environmental, LLC. A field survey was then conducted, and all historic resources visible from the public right-of-way (ROW) were documented. The buildings and structures identified as a result of archival research and field survey were then evaluated

using NRHP and CRHR eligibility. An analysis of impacts was completed for all buildings and structures recommended eligible to the NRHP and CRHR.

This report is divided into seven chapters. Following an introduction to the undertaking in Chapter 1, Chapter 2 provides an historical overview for the Project Area. Chapter 3 summarizes previous surveys conducted within the APE for indirect impacts and previously recorded historic resources. Chapter 4 discusses the research and field methods guiding the identification and evaluation of historic resources. Chapter 5 summarizes the survey results, and provides details on the limitations of the field survey. Chapter 6 provides evaluation of historic resources for their eligibility for listing in the NRHP and/or CRHR, and Chapter 7 is an assessment of direct and indirect impacts to eligible historic resources.

As a result of the inventory, 20 historic resources were identified within the areas of the Project APE that were surveyed. One NRHP-eligible historic resource was identified, the Westside Main Canal (CA-IMP-7834). No significant direct or indirect (visual, auditory, or atmospheric) impacts were identified. The Project will not result in the any direct impacts to the Westside Main Canal system within the Project Area. The canal would not be subject to a visual intrusion by the Project, but may be subject to temporary auditory and atmospheric intrusions during Project construction. However, neither intrusion is likely to affect the qualities or values that would qualify this property for listing in the NRHP/CRHR and would not result in a significant impact under CEQA.

Documentation of historic resources complied with the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44740), and the California Office of Historic Preservation Planning Bulletin Number 4(a), December 1989, *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format for the Preparation and Review of Archaeological Reports* (ARMR Guidelines). All historic buildings and structures identified during this inventory were recorded on California Department of Parks and Recreation (DPR) Form DPR 523 (Series 1/95), using the *Instructions for Recording Historical Resources* (Office of Historic Preservation 1995). These forms are included a confidential appendix (Appendix A) to this report.



# 1. INTRODUCTION

This report describes the goals and methods of the historic resources survey completed by ASM Affiliates, Inc. (ASM) in support of the Project in Imperial County, California, which is bordered by Mexico to the south, Arizona to the east, and San Diego County to the west. The following introductory sections present a description of the project and an introduction to the survey.

## PROJECT DESCRIPTION

### Solar Project

The Campo Verde Solar Project is a proposed solar photovoltaic (PV) energy-generating facility located in Imperial County approximately 7 miles southwest of the community of El Centro, California (Figure 1 – Confidential Appendix C).

The Project is being developed to sell its electricity and all renewable and environmental attributes to an electric utility purchaser under a long-term contract to help meet California RPS goals. The applicant has a long-term Power Purchase Agreement (PPA) with San Diego Gas and Electric (SDG&E) to purchase output from the Project.

The Project Site is south of I-8 and west of Drew Road and northeast of Westside Main Canal. Figure 2 (Confidential Appendix C) shows the boundary of the Site and the included parcels which total approximately 1,990 acres of private lands that have been used for agriculture.

The Project would use First Solar PV modules that are generally non-reflective and convert sunlight into direct current (DC) electricity. The DC output of multiple rows of PV modules is collected through one or more combiner boxes and directed to an inverter that converts the DC electricity to alternating current (AC) electricity. From the inverter, the generated energy flows to a transformer where it is stepped up to distribution level voltage (approximately 34.5 kV). Multiple transformers are connected in parallel via 34.5 kV lines to the Project substation, where the power will be stepped up to 230 kV (KP Environmental 2011).

### Gen-Tie

The Project will be interconnected to the regional transmission system via a 230kV double-circuit transmission line from the Project to the Imperial Valley Substation. The proposed Gen-Tie would originate at the Project substation/switchyard at the southern end of the Project site and would go across BLM land for about 0.9 miles BLM to the Imperial Valley Substation. The Gen-Tie is located entirely within a BLM-designated utility corridor.

The boundaries of the APE for this study, comprising only those areas in private ownership, are shown in Figure 3 (Confidential Appendix C).

## **ALTERNATIVES**

The project considered several Gen-Tie alternatives to provide the needed interconnection to the Imperial Valley Substation. In addition to the proposed Gen-Tie, route alternatives were developed to minimize impacts by co-locating with existing linear facilities.

### **Eastern BLM Gen-Tie Alternative**

The Eastern BLM Gen-Tie Alternative would follow the existing Imperial Irrigation District (IID) S-line and associated access road. It would cross about 0.4 miles of BLM land and 0.4 miles of private lands.

### **Non-BLM ROW Gen-Tie Alternative**

The Non-BLM ROW Alternative would originate from the western side of the Project site and would cross approximately 1.75 miles of private lands to the west. It would follow existing field roads and ditches to the C-Solar West Project site. From there, available capacity would be utilized on that project's gen-tie line that has an approved right-of-way to the Imperial Valley Substation.

Figure 2 shows the locations of the various gen-tie alternatives described above.

In addition to any of the long-term interconnection solutions described above, a short-term electrical interconnection solution may be implemented that would involve an interconnection to IID's S Line that crosses the site. If this solution is utilized, it would provide temporary interconnection to the grid and would be replaced by the permanent interconnection into the Imperial Valley Substation when completed.

## **REGULATORY FRAMEWORK**

The County of Imperial is the lead agency under CEQA. Public Resources Code (PRC) Section 5020.1 and CEQA Guidelines Section 15064.5(b)(1) define a significant effect as one that would materially impair the significance of an historical resource. An adverse visual, auditory, or atmospheric effect to a historic resource is one that negatively affects the integrity of setting or feeling of the resource to the extent that the characteristics that would qualify the resource for listing in the NRHP or the CRHR are compromised. Accordingly, this report addresses direct and indirect significant impacts under CEQA to historic buildings and structures.

A phased approach to evaluating potential impacts on historic resources was implemented. First, an inventory of known historic resources within the Project APE was compiled and historic maps were examined. Second, a field survey was conducted within the APE, to identify and evaluate the eligibility of historic structures (see Figure 3). This information was then analyzed to determine the age, integrity, and historic context of the resources present. Third, direct and indirect impacts were evaluated for those historic structures considered

eligible for the NRHP and/or CRHR or as CEQA historical resources within the areas of the APE where impacts could occur.

## PROJECT PERSONNEL

Table 1. ASM Project Personnel

<b>Role</b>	<b>Individual</b>
Principal in Charge / Contract Administration	John R. Cook, B.A., RPA
Project Manager	Sinéad Ní Ghabhláin, Ph.D., RPA
Senior Architectural Historian	Shannon Davis, M.A.
Associate Architectural Historian	Jennifer Krintz, M.H.P.
Senior Historian	Sarah Stringer-Bowsher, M.A.

ASM's team of cultural resource professionals included Dr. Sinéad Ní Ghabhláin, as Project Manager. Dr. Ní Ghabhláin has 26 years of professional and academic experience in historical archaeology, history, and architectural history. Shannon Davis, M.A., has 14 years experience in historic preservation, 10 of which were spent as a Historian with the NRHP, and is qualified as Architectural Historian and Historian under the SOI's qualifications standards. Jennifer Krintz, M.H.P., has seven years of experience in cultural resources and historic preservation planning, evaluation, and documentation, and is qualified as Architectural Historian under the SOI's qualifications standards. Both Ms. Davis and Ms. Krintz are well-versed in all aspects of evaluating buildings and structures for listing in federal and state registers, and in applying the aspects of integrity to a given property. Sarah Stringer-Bowsher, M.A., has seven years of experience and is qualified as a Historian under the SOI's qualifications standards. She is also registered as a professional historian in the state of California. Ms. Stringer-Bowsher has worked for a water utility and has a wealth of experience developing historic contexts, especially concerning irrigation systems, for clients such as the Bureau of Reclamation and the Coachella Valley Water District.

## **2. NATURAL AND HISTORICAL SETTING**

### **NATURAL SETTING**

The Project APE is roughly bordered on the west by the Yuha Basin and Yuha Desert; on the east by Drew Road; on the north by Interstate 8; and on the south by the Westside Main Canal. It is mostly comprised of agricultural land and open space y. The nearest community is Seeley (outside that APE) to the north. Imperial Valley is part of the Colorado Desert.

The Colorado Desert in California is a low-lying area east of the Peninsular Ranges, with its southern end extending through Mexico to the head of the Gulf of Mexico. Elevations in the Colorado Desert range between 70 meters (m) (230 ft.) below mean sea level to 670 m (2,200 ft.) above mean sea level (Miles and Goudey 1998). A hot and dry climate characterizes the Colorado Desert. Average annual temperatures range between 20° and 24° Celsius (C) (68° and 75° Fahrenheit (F)), with only 76 to 152 mm of mean annual precipitation. The Colorado Desert represents an arid region, with episodic freshwater lakes formed by the infilling of Lake Cahuilla throughout the Holocene. Vegetation communities in the Colorado Desert include desert scrublands, riparian woodland and scrublands, and wetlands in moist areas (Miles and Goudey 1998). Mammals that have typically resided in the Colorado Desert include desert bighorn sheep, mule deer, pronghorn antelope (now extirpated), desert kit fox, coyote, spotted skunk, spotted bat, black-tailed jackrabbit, cottontail rabbit, ground squirrels, kangaroo rats, and mice. Common birds include eagles, hawks, owls, quail, doves, warblers, blackbirds, and finches. The Salton Sea provides habitat for a wide variety of waterfowl and shorebirds. Reptiles include numerous species of lizards and snakes.

### **HISTORICAL CONTEXT**

#### **Reclamation and Early Settlement in the West**

In the mid-1800s, available federal land lured pioneering settlers to the West. Patenting that land under the Homestead Act of 1862, Timber Culture Act 1873, and the Desert Land Act 1877, gave settlers the opportunity to secure and improve land for themselves and for their families. Combating the rough mountainous terrain, traversing canyons and valleys, and crossing arid deserts, settlers had no guarantees that they could improve or sustain themselves on the land. Although land was readily available, water was not. Early land acts attempted to give settlers incentives to create their own irrigation features, but most settlers lacked the knowledge and resources (Robinson 1948). They often pooled their individual irrigation efforts and started water users' associations and private water companies, but the vast majority of those collective efforts were not long-term solutions. Many settlers had difficulty accumulating sufficient finances, manpower, and engineering knowledge to build and sustain reliable delivery systems. Raging floods often wreaked havoc on settler-built wooden headgates and earthen ditches. Even if settlers were able to obtain water from artesian wells and to afford pumping water, the water tables often fluctuated.

While Western farmers realized the need for consistent and reliable irrigation systems in the late nineteenth century, it was water shortages and not “resource planning” or “scientific farming” that prompted the initial interest in irrigation systems (Pisani 1984:95). Sparse settlement and sporadic irrigation in the arid West (primarily in California, but also Colorado and Utah), meant Congress was not initially interested in spending the time or funds surveying the feasibility of harnessing water resources in the West. In 1873, Senator William Morris Stewart of Nevada introduced a bill for the survey of California, which Congress approved. The Alexander Commission report (1874) advocated irrigation in the Central Valley and prompted some congressmen to push for a coordinated irrigation program. The report fell short of advocating a national reclamation program, but instead supported a “mixed enterprise” of public (state) and private water works (Pisani 1984). At that time, the greater populace was reluctant to take on the financial responsibility of a federal Project and was generally unwilling to accept the federal government’s authority for such a Project (Rowley 2006). However, the combined effects of droughts, a depression in the 1890s, and the U.S. Geological Survey (USGS) expedition led by John Wesley Powell (1888-1892), created the necessary backdrop for Congressional support of the National Reclamation Act in 1902 (Pisani 2002).

### **Early Irrigation Efforts in the Imperial Valley**

In 1853, William P. Blake conducted a preliminary survey that showed that overflows of the Colorado River emptied into the low-lying Salton Trough through the New and Alamo rivers. This process had begun thousands of years earlier, on several occasions forming ancient Lake Cahuilla. Observing the rich harvests of the Colorado River Yumans, Blake (1853) remarked on the fertility of the river-deposited clay soils, for which only the application of irrigation was needed to produce abundant crop yields. His barometric readings showed that Imperial Valley lay below sea level, and his investigations paved the way for the conception of a gravity flow irrigation system. Early solicitation by Dr. O. M. Wozencraft for federal support for such a system between 1849 and 1887 did not produce results, but Wozencraft’s efforts laid the groundwork for later endeavors by Charles R. Rockwood (Steere 1953).

The first irrigation system in Imperial Valley, built by the California Development Company (CDC) under the direction of Charles Rockwood and George Chaffey, first operated in August 1900 (Frisby 1992; JRP Consulting 2000; Rockwood 1930; Starr 1990; Tout 1931). The Alamo or Imperial Canal delivered Colorado River water to the Alamo River Channel just north of the Mexican Border. Available water offered settlers an opportunity to establish farms on the government-owned lands of Imperial Valley under the Homestead Act of 1862, the Desert Land Act of 1877, and the Carey Land Act of 1894. While settlers could purchase up to 320 acres at \$1.25 an acre, they also had to purchase water stock from George Chaffey’s Imperial Land Company. Thirteen mutual water companies were eventually formed to distribute water in the valley. Cash-short settlers financed these costs by conveying to the Imperial Land Company either the land mortgage or water company stock as security for a 6 percent note on the cost of the water stock (Starr 1990). By 1904, the early channel had silted up, and a second bypass suffered the same fate. Both the CDC’s operation and the potential for its exploitation of the homesteading pioneers in the Imperial Valley alarmed the federal

government (Ní Ghabhláin and Schaefer 2005). Theodore Roosevelt's signature on the Reclamation Act of 1902 (Newlands Act) gave the federal government the authority to allocate funding to aid settlement in the West by helping establish sustainable water sources through water works Projects. This act profoundly affected the development of the Arid West and "laid the foundation for a powerful new federal presence in western water matters" (Rowley 2006:100). It also created the Reclamation Service as part of the USGS, which provided the engineering expertise and directed the Projects (Armstrong 1976).

Almost as soon as it was formed, the Reclamation Service took measures to challenge the way the CDC operated in the Imperial Valley and how it used public water from the Colorado River and public lands of Imperial Valley to make a profit. The Reclamation Service attacked the claims of the CDC concerning the fertility of the alkaline soils in Imperial Valley and the economics of developing that land. As the federal entity charged with water development, the Reclamation Service also began to explore much more ambitious and reliable approaches to controlling the Colorado River (Starr 1990). In 1903, the federal declaration of the Colorado River as a navigable waterway undermined the CDC's right to tap the water. These actions led to a period of extreme conflict between the CDC and the Reclamation Service.

The CDC, then under the control of Anthony Heber, pursued an alternate route outside the U.S., since it would be impossible to obtain a water diversion permit from the Reclamation Service. A new intake south of the U.S.-Mexico border was also expected to solve the problem of the silted Alamo Canal (Starr 1990). Efforts in 1905 to open this diversion without a permanent concrete headgate coincided with an unusually rainy year for the Southwest that caused the Colorado River to redirect itself westward, destroying the partially completed headgate and pouring 360 million ft<sup>3</sup> of water per hour into the Imperial Valley. The flood ironically renewed the ecological balance in the Imperial Valley by recreating Lake Cahuilla in the form of the Salton Sea. This balance, however, was at the cost of destroying the Imperial Valley's irrigation system. The series of floods in the spring of 1905 forced the CDC to try to close the Mexican cut with a series of dams, but money and limited engineering capabilities were spent. In June 1905, the Southern Pacific Railroad acquired the failed CDC and fought the disastrous floods during 1905-1907. Despite the Southern Pacific's requests for help from the federal government in 1906, President Roosevelt offered no support for the CDC, even though the Southern Pacific now controlled the company, because the CDC caused the problem. Only monumental and extremely expensive efforts by the Southern Pacific Railroad finally diverted the river back to the Gulf of California (Corey 1915; Starr 1990).

## **The Imperial Irrigation District**

Dissatisfied Imperial Valley settlers ultimately opted for an alternative to the CDC and supported the Reclamation Service efforts for more ambitious and reliable approaches to controlling the Colorado River. In 1904, the concerned settlers first organized their own Imperial Water Users Association as a prerequisite for the federal government's assistance (Dowd 1956; Starr 1990). Efforts to convince the federal government to buy out the CDC and to strengthen local support for the Reclamation Service resulted in threats by the CDC to cut off the water supply. Some fearful farmers turned against Reclamation and literally tarred and

feathered a pro-Reclamation advocate after a public debate. Eventually, the cost of controlling the 1905-1907 floods, damage suits by the New Liverpool Salt Company resulting from the floods, and other litigation forced the CDC into bankruptcy and receivership (Starr 1990).

The Imperial Irrigation District (IID) was founded in 1911 in response to the logistical, legal, and economic problems caused by the CDC bankruptcy and the aftereffects of more flooding. Over the next 11 years, the IID acquired all 13 Imperial Valley mutual water companies and existing waterworks. In the early 1900s, Caffey had constructed the Alamo Canal as an intake canal from Hanlon or Rockwood Heading at the Colorado River that extended through Mexico before connecting with the old Alamo River Channel and then heading north to the Salton Sink at Sharp's Heading. The first canal, Central Main Canal, extended west and northwest from Sharp's Heading serving Imperial Water Company No. 4 and No. 8. The Encina Canal or Westside Main Canal headed southwesterly from the Alamo Canal in Mexico toward Signal Mountain and continued northwesterly along the westerly irrigation boundary as Westside Main Canal for Imperial Water Company No. 6 and later No. 12. The East Side Main Canal served Company No. 7 and Low Line Canal served Company No. 5. Eighty miles of main canals served the Imperial and Mexicali valleys by January 1905 (Dowd 1956). However, severe floods (1905-1907) severely impacted the waterworks and by the time the IID organized, the Mexican Revolution had already begun.

The IID joined efforts to deliver water from a politically secure location north of the Mexican border and through a system that would not be threatened by Colorado River floods. As early as 1904, the Reclamation Service proposed several routes (Dowd 1956). The original concept was to divert water at Laguna Dam (1908) to irrigate lands at the Colorado-Gila River confluence. Imperial Valley farmers formed the Imperial Laguna Water Company in 1914 as a mutual water company to develop East Mesa lands. By 1918, they had come to an agreement with the IID to build a canal to service all of Imperial Valley. In 1919, the two parties supported the construction of an All-American Canal and a Colorado River storage reservoir. This new All-American canal would solve the previous problems of dependence on a Mexican right-of-way. A large dam would eliminate issues of siltation and threats of destruction during spring floods. First, legislation was necessary for the distribution of Colorado River water among the seven states that bordered the river (Fradkin 1981). The 1922 Colorado River Compact authorized the allocation of the water supply between upper and lower basin states. Secretary of Commerce Herbert Hoover persuaded all seven states to sign, but the Arizona legislature failed to ratify because the Compact did not specify water allotments to each state. California pushed for the All-American Canal, while the possibility of its effects on Arizona's water rights prompted opposition from Arizona representatives (Reisner 1993).

Growing Congressional support for water development Projects on the Colorado River rallied around protecting the precarious position of the successful agricultural community in the Imperial Valley. The valley produced crops valued between \$40 and \$50 million in 1927, but had already lost millions of dollars in 1924 due to water shortage. Fluctuations in the water supply from either floods or shortages consistently threatened Imperial Valley farmers (Brown 1927; James 1928). The valley became an example of the potential for agricultural

development hindered by an inability to control the Colorado River as a consistent water source.

## **All-American Canal**

Construction of the All-American Canal was authorized under the Boulder Canyon Project Act of 1928, one of the most monumental public reclamation Projects ever undertaken in the western United States. Along the Colorado River, the Imperial Dam (built in 1935-1938) became the diversion point for the All-American Canal, where three enormous desilting basins cleansed the muddy Colorado River waters. The All-American Canal, excavated between 1934 and 1940, carried water 82 mi. to Imperial Valley (Schaefer and O'Neill 2001).

Although portions of the canal, including the Coachella Canal and all of the Imperial Valley mains, were not complete until 1948, the All-American Canal was supplying approximately 50 percent of Imperial Valley's water by 1941. Construction required removing 57.5 million yard (yd.)<sup>3</sup> of soil and sand, and 1.05 million yd.<sup>3</sup> of rock. Canal structures required an additional 2.7 million yd.<sup>3</sup> of excavation and backfill. The 82-mi.-long canal has the capacity of 15,155 ft.<sup>3</sup> per second (cfs) at the initial diversion, reducing gradually as water is drawn for irrigation. It has a maximum width of 200 ft. at water level, 134 ft. at the bottom, and a water depth of 22 ft. Beyond the Pilot Knob Wasteway, the canal dimensions diminish to 130 ft. wide, 16.6 ft. water depth, and a capacity of 10,155 cfs. The canal now delivers 3.1 million acre-ft. annually to nine cities and half a million acres of agricultural lands throughout the Imperial and Coachella valleys. In 2001, the Bureau of Reclamation (BOR) and the California State Historic Preservation Officer (SHPO) determined that the All-American Canal was eligible for the NRHP (Burkard et al. 2007).

## **Project Area**

### **Irrigation and Drainage**

Transforming a desert into fertile agricultural fields required water conveyed via canals and their laterals. Sustaining agricultural efforts in a desert valley with the propensity for alkali contamination and a lack of natural soil drainage necessitated construction of artificial drains. Only a few early wasteways existed such as the waste gate from the Central Main and Encina canals to the Alamo River, another waste gate on the Central Main in Mexico, and the Wormwood Drain. Despite early warnings from the Department of Agriculture to consider drainage, no major efforts were made. During the first two decades of the twentieth century, the acreage of irrigated land skyrocketed in the Imperial Valley. New settlers to the area prompted the incorporation of El Centro and Brawley and those farmers had the capacity to fund improvements to the area, including schools. Most fields were planted in alfalfa with cotton and grains following closely behind. Sheep and poultry were important livestock industries for the valley as were fruit trees, melons, and lettuce (Imperial County Board of Supervisors 1909; Dowd 1956:69; Moore 1991:49-54; Thurston 1920; United States Army Corps of Engineers 1909; United States Geological Survey 1957:44).

By the 1920s, the IID operational area had expanded after the purchase of C.D. Company properties, yet no drainage system existed. As early as 1911, high salinity was already



affecting crops yields but many thought the natural drainage of the New and Alamo rivers that flowed from Mexico and emptied into the Salton Sea was sufficient. Soil surveys of the 1918-1920 identified salt accumulation as the reason for low crop yields in certain areas and confirmed the fact that alkali and waterlogged land was a problem that would not dissipate. In response, the IID began investigations and requesting bonds to fund a grid-based drainage system of deep drain with outlets to the rivers. Construction of 234 miles of deep drains (open canals 10-12 ft. deep) began in 1922 though most of the main drains were constructed using funding from the 1929 bond. Farmers independently dug smaller laterals that connected to these large drains in an effort to rid their land of excess water and salt. While the IID's efforts were an important start, farmers needed more individualized attention. Soils varied across the valley and areas transformed by alluvial deposits from swollen rivers meant a one size approach to drainage problems was not realistic. An expanded IID program included the construction of additional drains and considered soil variations of individual farms. As part of this program, the IID worked with those land owners to survey and analyze their properties for proper, individualized drainage. Tile drainage systems became the cornerstone of that project. These individualized drainage systems included a series of concrete tiles laid underground within fields with outlets to main drains. The first tile drains were constructed in 1928 in Calipatria. By 1930, an estimated 740 miles of lateral drains had been constructed, contributing to growing agricultural industries in the valley (Dowd 1956:19, 69-71; Moore 1991:53-66; United States Army Corps of Engineers 1909).

By 1930, the impact of the All American Canal had not been realized, yet the county was ranked eleventh in the country for agricultural production and livestock. Most of the acreage was still devoted to alfalfa for feed for dairy cows, raising sheep, hogs, and cattle. Melons and lettuce were prime vegetable crops, but sugar beet, which is used for livestock feed, and flaxseed were on the rise (Los Angeles Directory Company 1939:11-12). The Depression significantly affected agricultural production causing a steep drop in land assessments and therefore funding for additional drainage work. However, improved technologies developed in the 1930s streamlined the installation of tile drainage on individual properties in the 1940s and 1950s that expanded in the 1950s and 1960s (Moore 1991:68-82). In the project area, all major drains had been constructed by March 1949 (United States Department of Agriculture).

Since the early 1900s agriculture has been an important economic market for the Imperial and Coachella valleys, yet unparalleled growth in agricultural production followed the completion of the All-American Canal in Imperial Valley with a staggering 1,122 percent increase. The value of field crops produced in Imperial County grew from just over \$5 million in 1940 to \$65 million in 1954. Property values more than doubled between 1940 and 1954 with reported incomes increasing from \$30 million in 1940 to \$136 million in 1952. In 1955, a year after the distribution system off the All American Canal's Coachella Canal was complete, irrigated lands in the Imperial and Coachella valleys contributed "almost the entire flow of vegetable and truck crop specialties into the Nation's market" during certain seasons (Bureau of Reclamation 1955:1, 8, 11). Growth in agricultural production in Imperial and Coachella valleys has continued unabated to the present day making this area one of the most productive in the United States.

## General Development

The Westside Main Canal had been constructed by 1907, originally constructed to serve Imperial Water Company No. 6 (organized in 1901) and later Company No. 12 (organized in 1908). The Fig, Fern, and Forget-Me-Not canals were constructed circa 1909 and maintained a similar alignment over time. The only drain identified in the area at that time was the Wormwood, which has maintained that same alignment within the project area. As previously mentioned, the floods of 1905-1907 wreaked havoc on the valley and caused waterways such as the New River to swell. Once a river recedes from an area, it leaves behind alluvial soils that are ideal for farming. Many early settlers acquired land tracts adjacent to those newly fertile lands and by 1912, most of the farming tracts within the project area hugged the New River. At the center of activity was Storm's Crossing near Derrick Road and West Campbell Road, a tract where the Derrick family later operated a farm in the 1920s (Grumbles n.d.; Dowd 1959:67-68; Tait 1908; Thurston 1912a; United States Army Corps of Engineers 1909).

In 1911, Seeley had been established as a new town on the west side of the valley and a school, bank, and hotel were the first buildings constructed. Telephone lines, Highway 80, and the San Diego and Arizona Railroad connected the town and its growing cotton industry with San Diego and beyond. Seeley never became a bustling town (Henderson 1968:80-81). Instead, the area southwest of Seeley (Westside) developed as a rural community with family farms dispersed over large acreage. By 1914, several other waterworks had been constructed in the area, including Foxglove Canal, Fushia Canal (now Fern Side Main), Wormwood Canal, Lateral 1 off Foxglove Canal (a portion of present-day Dixie Lateral 1), and an early version of Dixie Drain 3/3-A that extended from Fushia Canal as Lateral 1 (Thurston 1914). By 1919, many of the present-day roads had developed around the waterways (Blackburn 1919). Families such as the Derricks, Diehls, Lieberts, Vaughns, and Wixoms were living in the greater Westside area. Many of the roads are named after local families, most of whom lived in the area from the 1910s and 1920s until the 1950s. The Derrick family is a family that arrived early and remained in the area until at least 1979 (Los Angeles Directory Co. 1930, 1939, 1949; Polk 1959, 1962; Thurston 1912b, 1920). A number of drains were also named after local families that no doubt pushed for their construction. By March 1949, at least the Westside Drain, Dixie Drain 3, Wixom Drain, Fig Drain, and Diehl Drain had been constructed (United States Department of Agriculture 1949). As previously mentioned, the Wormwood Drain already existed by 1909 and retained the same alignment over time within the project area.

## Westside School

The first Westside School had been established in 1917 to serve agricultural families in the rural Seeley area. Although a school also existed in Seeley, families such as the Derricks attended the Westside School since it was closer to home. Helen and Laura Jean Derrick taught at the school, Helen since 1945 and Laura since at least the 1950s. By 1979, the two still taught at the school. The one-room school house constructed in 1917 was torn down in 1970 and was replaced by the present-day school (*Imperial Valley Press* 1979).

### **Westside Main Canal**

One of the principal canals branching off the All-American Canal is the Westside Main Canal. Built circa (ca.) 1907, the Westside Main Canal was later integrated into the All-American Canal system in the mid- to late 1930s (Burkard et al. 2007). This canal runs north from the All-American Canal just west of El Centro, and through the community of Dixieland. The canal remains in use today as an integral component of the Imperial Irrigation District (IID) irrigation system. As referenced in previously prepared DPR Form 523a forms, the Bureau of Reclamation (BOR) and the California State Historic Preservation Officer (SHPO) determined in 2001 that the All-American Canal was eligible for listing in the NRHP/CRHR, and by extension, the Westside Main canal was eligible for listing in the NRHP/CRHR for its significance in association with the development of the Imperial Valley (Burkard et al. 2007) (Appendix B).

### 3. PREVIOUS RESEARCH

#### PREVIOUS STUDIES

As a result of a historic resources records search conducted by KP Environmental, LLC, 40 cultural resource studies were identified that address cultural resources within one mi. of the Project. All previous studies are summarized in Table 2. The majority of these studies focused on archaeological resources. Those that evaluated the built-environment include evaluations of the Westside Main (Burkard, et al. 2007), and Dixie, Fern, Fig, Forget-Me-Not and Foxglove Canals (Tessera Solar 2010).

Table 2. Cultural Resource Investigations within a One-Mile Radius of the Project

Author	Title	Company/Agency	Year
Walker, Bull & Von Werlhof	Cultural Resource Study of a Proposed Electric Transmission Line From Jade to the Sand Hills, Imperial County, California	RECON	1979
Gallegos	Class II Cultural Resource Inventory East Mesa and West Mesa Regions Imperial Valley, California, Volume I	Westec Services, Inc.	1979
Davis	Class II Cultural Resource Inventory East Mesa and West Mesa Regions Imperial Valley, California	Westec Services, Inc.	1980
Von Werlhof & McNitt	Archaeological Examinations of the Republic Geothermal Field, East Mesa, Imperial County	Imperial Valley College Museum	1980
Bull	A Cultural Resource Survey of the Proposed Imperial Valley Substation	RECON	1980
Walker, Bull, & Von Werlhof	Cultural Resource Study of a Proposed Electric Transmission Line from Jade to the Sand Hills, Imperial County, California	RECON	1981
BLM	APS/SDG&E Interconnection Project- Supplement to the Draft Environmental Document	BLM	1981
Schaefer	Volume II Appendix; Phase II; Archaeological Survey of the La Rosita 230 KV Interconnection Project	Cultural Systems Research	1981
Cultural Systems Research Inc.	Archaeological Field Investigation of Cultural Resources Associated with the Proposed Imperial Valley Substation (7A) Access Road	Cultural Systems Research	1982
Shackley	Phase III Archaeological Survey of the Mountain Springs (Jade) to Sand Hills Portion of the APS/SDG&E Interconnection Project 500 KV Transmission Line	Cultural Systems Research	1982
Foster & Greenwood	Cultural Resource Inventory of the La Rosita to Imperial Valley Interconnection Project 230 KV Transmission Line, Imperial Valley, California	Greenwood & Associates	1983
Welch	Cultural Resource Inventory for Thirty Proposed Asset Management Parcels in Imperial County, California	BLM	1983
Graves Engineering	Environmental Impact Report, Rio Bend RV Resort Ranch, SCH #83102609, Imperial County, California	Graves Engineering	1984
Townsend	Southwest Powerlink Cultural Resources Management Plan- Volume II	Wirth Environmental Services	1984
Townsend	Southwest Powerlink Cultural Resources Management Plan- Volume I	Wirth Environmental Services	1984
Shackley	Volume II- Appendixes, Data Recovery on the Mountain Springs (Jade) to Sand Hills Segment: Southwest Powerlink Project	Wirth Environmental Services	1984
Shackley	Archaeological Investigations in the Western Colorado Desert: A Socioecological Approach- Volume I	Wirth Environmental Services	1984
REH Consultants	Rio Bend Specific Plan	REH Consultants	1992

### 3. Natural and Historical Setting

<b>Author</b>	<b>Title</b>	<b>Company/Agency</b>	<b>Year</b>
Brian F Mooney Associates	Final Environmental Impact Report for the Rio Bend Specific Plan, Imperial County, California	Brian F. Mooney Associates	1992
Imperial Irrigation District	Draft Environmental Impact Report for East Lowline and Trifolium Interceptors, and Complete Projects	Imperial Irrigation District	1993
Burkenroad	Phase One Regional Studies APS/SDG&E Interconnection Project Transmission System Environmental Study Cultural Resources: History	David Burkenroad	1979
Wirth Associates, Inc.	Phase One Regional Studies APS/SDG&E Interconnection Project Transmission System Environmental Study Cultural Resources: Archaeology	Wirth Associates, Inc.	1979
Imperial County	Proposed Workscope Phase II Cultural Resources Studies APS/SDG&E Transmission Interconnect Project, Miguel to Sand Hills, Sand Hills to PVNGS, Imperial County	Imperial County	1979
Cultural Systems Research, Inc.	Draft Archaeological Research Design and Data Recovery Program for Cultural Resources within the Mountain Springs (Jade) to Sand Hills Portion of the APS/SDG&E Interconnection Project 500 KV Transmission Line	Cultural Systems Research, Inc.	1982
CSRI	Mountain Springs (Jade) to Sand Hills Data Recovery Preliminary Report	CSRI	1982
Wallace, Roberts & Todd	County of Imperial Bicycle Master Plan	Wallace, Roberts & Todd	1999
BLM	Environmental Assessment for Presidential Permit Application for Baja California Power, Inc. and Sempra Energy Resources	BLM	2001
BLM	Draft Environmental Impact Statement for the Imperial-Mexicali 230KV Transmission Lines	BLM	2004
Wlodarski	Nextel Wireless Telecommunications Site CA8991C (Sunbeam: Kuhn 2)	Cellular Archaeological Resource Evaluations	2006
Berryman	Cultural Resource Treatment Plan in Support of the Construction of Two 230KV Transmission Lines from the Imperial Valley Substation to the International Border with Mexico	RECON	2001
Yost, Mirro, Ing, Higgins	Final Report on Cultural Resource Monitoring Along the Level (3) Long Haul Fiber Optic Running Line, San Diego, California to Yuma, Arizona	TRC	2001
Ritter	An Analysis of Culture Resources Along the Proposed Yuha Desert ORV Courses	Ritter	1975
Wirth Associates, Inc.	APS/SDG&E Interconnection Project Environmental Study Phase II Corridor Studies- Native American Cultural Resources Appendices	Wirth Associates, Inc.	1980
Townsend	Southwest Powerlink Cultural Resources Management Plan (Draft)	Wirth Associates, Inc.	1983
Wirth Associates, Inc.	APS/SDG&E Interconnection Project (Phase II Corridor Studies)- Cultural Resources: Archaeology	Wirth Associates, Inc.	1980
Shackley	Volume II- Phase III Archaeological Survey of the Mountain Springs (Jade) to Sand Hills Portion of the APS/SDG&E Interconnection Project 500KV Transmission Line Confidential Technical Appendices.	Cultural Systems Research, Inc.	1982
SWCA	Final Cultural Resources Survey of Alternatives for the Sunrise Powerlink Project in Imperial, Orange, Riverside and San Diego Counties	SWCA	2008
Noah & Gallegos	Final Class III Archaeological Inventory for the SDG&E Sunrise Powerlink Project, San Diego and Imperial Counties, California	Gallegos & Associates	2008
Olech	Yuha Basin Area of Critical Environmental Concern (ACEC) Management Plan	BLM	1981
Zeppeda-Herman	Class III Cultural Resources Survey for the Imperial Solar Energy Center South Project	BLM	2011

Author	Title	Company/Agency	Year
Mutaw, Roberts, Tucket, Shaw, Bagwell, O'Hanlon, Nixon, Fink, Hollins, Neal	Draft Final Class III Confidential Cultural Resources Technical Report for the Imperial Valley Solar (formerly Solar 2), Imperial Valley County	Tessera Solar	2010

## PREVIOUSLY DOCUMENTED RESOURCES

Previous studies have identified eight historic resources within the Project APE. These are described below and summarized in Table 3. The following resource descriptions detail the resources as documented by previous studies. Updates concerning the current condition of resources are provided in Chapter 5.

Table 3. Previously Documented Built-Environment Resources

Resource	Trinomial/Primary Number
Westside Main Canal	CA-IMP-7834 /P-13-008334
Dixie Drain 3	P-13-012688
Fern Canal and Fern Drain	P-13-012689
Fig Canal	P-13-012693
Forget-Me-Not Canal	P-13-012690
Foxglove Canal	CA-IMP-8821
Wormwood Canal	CA-IMP-8983
Leibert Road Shed	P-13-013567

### Westside Main Canal (CA-IMP-7834)

In 2007, J. Burkard, H. Thompson, and J. Covert of SWCA Environmental Consultants evaluated a segment of the Westside Main Canal, built by 1907 and later integrated into the larger Imperial Valley irrigation system. Rendering a professional, independent recommendation, SWCA concurred with the previous 2001 determination by the BOR and the California SHPO that the Westside Main Canal was eligible for the NRHP and CRHR as a contributor to a larger historic district that includes the All-American Canal, which is also eligible for listing in the NRHP.

### Dixie Drain 3 (P-13-012688)

URS Corporation previously evaluated the Dixie Drain 3, originally constructed ca. 1940 as part of the Dixie Canal irrigation system, part of the larger Imperial Valley irrigation system. URS recommended that the Dixie Drain 3 was not eligible for the NRHP or the CRHR due to a loss of integrity from regular dredging and widening of the canals and drains over time to alleviate problems of silt and build-up.

### **Fern Canal and Fern Drain (P-13-012689)**

URS Corporation previously evaluated the Fern Canal, one of the earliest irrigation canals in the Imperial Valley (ca. 1909) and later integrated into the larger Imperial Valley irrigation system. URS recommended that the Fern Canal was not eligible for the NRHP or the CRHR due to a loss of integrity from regular dredging and widening of the canals and drains over time to alleviate problems of silt and build-up.

### **Fig Canal (P-13-012693)**

URS Corporation previously evaluated the Fern Canal, constructed ca. 1909 and later integrated into the larger Imperial Valley irrigation system. URS recommended that the Fig Canal was not eligible for the NRHP or the CRHR due to a loss of integrity from regular dredging and widening of the canals and drains over time to alleviate problems of silt and build-up.

### **Forget-Me-Not Canal (P-13-012690)**

URS Corporation previously evaluated the Forget-Me-Not Canal, originally constructed ca. 1909. URS recommended that the Forget-Me-Not Canal was not eligible for the NRHP or the CRHR due to a loss of integrity from regular altering and modernizing of the canals and drains over time.

### **Foxglove Canal (CA-IMP-8821)**

URS Corporation previously evaluated a portion of the Foxglove Canal, originally constructed ca. 1912. URS recommended that the Foxglove Canal was not eligible for the NRHP or the CRHR due to a loss of integrity from regular altering and modernizing of the canals and drains over time.

### **Wormwood Canal (CA-IMP-8983)**

In 1999, Jill Hupp of Caltrans evaluated a section of the Wormwood Canal, first built in 1911 and later integrated into the larger Imperial Valley irrigation system by connection to the Westside Main Canal (Hupp 1999). Hupp recommended that the canal was not eligible for listing in the NRHP because it was realigned and lined with concrete, replacing its original earthen lining, thereby affecting the resource's integrity.

### **Leibert Road Shed (P-13-013567)**

In 2011, ASM previous evaluated the shed on the south corner of Liebert Road and Westside Main Canal constructed ca. 1940. ASM recommended that the shed did not meet the criteria for eligibility for the NRHP or CRHR (Davis et al. 2011a).

## 4. RESEARCH AND FIELD METHODS

### INTRODUCTION

All known historic resources located within the Project Area and within 0.5 mi. of the Project Area boundaries were identified and subjected to analysis to assess which NRHP/CRHR-eligible resources would be subject to potential direct and indirect (visual, auditory, and atmospheric) impacts resulting from the Project (see Figure 3 – Confidential Appendix C). Due to inaccessibility, some areas within the western portion of the APE were not surveyed; however, a review of current aerial photographs and historic United States Geological Survey (USGS) maps indicates an absence of historic resources in that portion of the APE.

### SECRETARY OF THE INTERIOR’S (SOI) GUIDELINES

The SOI has issued the Secretary of the Interior’s *Standards and Guidelines for Archeology and Historic Preservation* [48 FR 44720–44726]), as guidance to ensure that the procedures for the identification and evaluation of historic resources are adequate and appropriate. The National Park Service has also produced a series of bulletins that provide guidance on historic preservation. The current study was conducted in compliance with the guidelines provided in Bulletin 24, *Guidelines for Local Surveys: A Basis for Preservation Planning* (Derry et al. 1985).

The five property types are defined as follows:

**District:** A district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.

**Site:** A site is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historical, cultural, or archeological value regardless of the value of any existing structure.

**Building:** A building, such as a house, barn, church, hotel, or similar construction, is created to shelter any form of human activity. Building may also be used to refer to an historically and functionally related unit, such as a courthouse and jail or a house and barn.

**Structure:** The term structure is used to distinguish from buildings those functional constructions made usually for purposes other than creating shelter.

**Object:** The term object is used to distinguish from buildings and structures those constructions that are primarily artistic in nature or are relatively small in scale and simply constructed. Although it may be, by nature or design, movable, an object is



associated with a specific setting or environment, such as statuary in a designed landscape.

The objective of this study is the assessment of direct impacts and visual, auditory, and atmospheric intrusions on historic resources resulting from the construction of the Project. The term “built-environment” is a relatively new term used in its broadest sense to designate “the part of the environment formed and shaped by humans, including buildings, structures, landscaping, roads, signs, trails, and utilities”

([www.co.tompkins.ny.us/planning/vct/glossary.html](http://www.co.tompkins.ny.us/planning/vct/glossary.html)). For the purposes of this study, historic resources include historic districts, buildings, structures, and objects that are listed in, or eligible for listing in, the NRHP and/or the CRHR. Ruined buildings and fragmentary structures (such as sections of stone walls) are classified as ruins and are therefore assumed to be addressed in the cultural resources report for this project. Likewise, historic trails, unimproved roads and minor historic structures and objects such as stone wells, cisterns, claim markers, stone cairns, survey markers, and isolated mining prospecting pits are also excluded from consideration in this study, because they are not considered part of the built-environment.

Several avenues of research were included in this built-environment inventory and assessment, including: an inventory of all known historic resources within the Project APE, an evaluation of identified resources’ eligibility for listing in the NRHP and/or CRHR; and an analysis of direct and indirect impacts for all built-environment properties eligible for listing in the NRHP and/or CRHP. Although the area west of the Project (but within the Project APE) was inaccessible for field survey, historic maps and current aerial photographs indicate that no historic resources are located in that area. The methodology developed to identify, document, and evaluate NRHP and/or CRHR-eligible and CEQA historical resources is described below.

## **METHODOLOGY**

### **Archival Research**

ASM conducted archival research to develop a regional historical context and resource-specific contexts for resources within the APE (see Chapter 2). Decisions about the identification, evaluation, designation, and treatment of historic resources are most reliably made when the relationship of individual properties to other similar properties is understood. Information about historic resources representing aspects of history, architecture, archaeology, engineering and culture must be collected and organized to define these relationships. This organizational framework is called a “historic context.” The historic context organizes information based on a cultural theme and its geographical and chronological limits. Contexts describe the significant broad patterns of development in an area that may be represented by historic resources. The development of historic contexts is the foundation for decisions about identification, evaluation, designation, and treatment of historic resources.

In an effort to create a historic context and identify buildings and structures of local significance, ASM consulted with various local repositories. Resources consulted at the

Imperial Valley Pioneers Museum included newspaper clippings, historic maps, histories of the area, city and county directories, and materials regarding operations of the IID. Aerials, manuscripts, senate reports, and other historical documents were collected from repositories such as the University of California, San Diego; San Diego State University; and Water Resources Collections and Archives. Present-day operational maps were gathered from the IID.

## **Records Search and Data Analysis**

As a first step in identifying historic resources within the Project APE, ASM consulted historic maps to help identify the locations of potential historic resources. ASM consulted Imperial County Assessor Parcel data for evidence of built-environment structures; however, dates of construction were not recorded for all resources. ASM obtained the results of a cultural resources records search, conducted by KP Environmental at the South Coastal Information Center of the California Historical Resources Information System to identify all previously-recorded historic resources in the Project APE (Appendix B). Previous studies in and adjacent to the Project Area, many of which were conducted by ASM, were also consulted (Davis et al. 2011a, 2011b, and 2011c).

## **Field Survey**

ASM conducted historic resource field surveys on November 2 and November 10, 2011, to document historic resources within the Project APE. The reconnaissance-level field surveys, historic building and structure evaluations, and assessment of visual impacts were conducted by ASM's Senior Architectural Historian Shannon Davis, Associate Architectural Historian Jennifer Krintz, and Senior Historian Sarah Stringer-Bowsher. The reconnaissance-levels, or "windshield surveys," were conducted from a vehicle, guided by the project area and historical maps, with some pedestrian survey as warranted. No permits were required for the survey. The field survey began at the southeastern section of the Project Area and continued north and west. The buildings and structures, and their viewsheds, were photographed from public roads and canal access roads. The addresses of the buildings, when available, were recorded. For those that were not available, the location was verified and noted on USGS topographic quad maps. During the surveys, descriptive information about buildings within the Project Area was noted and the buildings were analyzed through visual observation. GIS data points were taken of potential historic resources.

As a result of the field survey, 20 historic resources were identified and documented within the Project APE (Figure 4 – Confidential Appendix C).

## 5. REPORT OF FINDINGS

### HISTORIC SITES AND STRUCTURES

Twenty historic resources were identified within the APE that are more than 45 years old: the Westside Main, Diehl, Dixie, Fern, Fig, Forget-Me-Not, Foxglove, Wixom, and Wormwood canal systems, one shed, one school, and nine residential buildings (Table 4).

Table 4. Historic Resources More Than 45 Years Old

Resource	Date Built	Resource Type
Westside Main Canal	ca. 1907	Canal system
Diehl Drain	ca. 1940	Canal system
Dixie Drains and Lateral 1	ca. 1940 and ca. 1914	Canal system
Fern Canal	ca. 1909	Canal system
Fig Canal	ca. 1909	Canal system
Forget-Me-Not Canal	ca. 1909	Canal system
Foxglove Canal	ca. 1912	Canal system
Wixom Drain	ca. 1940	Canal system
Wormwood Canal	ca. 1911	Canal system
1210 Drew Road	ca. 1955	Residence
1220 Drew Road	ca. 1940	Residence
1276 Drew Road	ca. 1940	Residence
1796 W. Graham Road	ca. 1955	Residence
2596 W. Hardy Road	ca. 1940	Residence
Leibert Road Shed	ca. 1940	Shed
W. Stevens Road	ca. 1940	Residence
2396 W. Vaughn Road	ca. 1955	Residence
2104 W. Wixom Raod	ca. 1955	Residence
1651 Westside Road	ca. 1955	Residence
Westside School	1970	School

#### Westside Main Canal

Westside Main Canal was constructed ca. 1907 as one of four canals constructed for the earliest irrigation system in the Imperial Valley. It was later connected to the All-American Canal which extends westward from Yuma, Arizona north of the U.S.-Mexico border and terminates at the Westside Main Canal. The segment of the Westside Main Canal within the Project APE is approximately 5.5 mi. long, beginning just north of its intersection with Interstate 8 extending southeast approximately 0.5 mi. past its intersection with Liebert Road and the Fern Canal. The canal is approximately eight ft. deep and approximately 40 ft. wide. Numerous laterals extend from the canal into the Project area. The canal system also includes drains that remove the salinity from the agricultural lands the canal and its laterals irrigate.

## **Diehl Drain**

The Diehl Drain is an irrigation drainage ditch constructed after 1922 and before 1949, possibly ca. 1940. It is located northeast of the Westside Main Canal and flows north and south. The canal is approximately 10-20 ft. wide and about 10 ft. deep. It is an earthen dug ditch. The entire drain is approximately one mi. long and connects with the Fig Drain.

## **Dixie Drains and Lateral 1**

The Dixie drains, which now includes Lateral 1, is part of a larger drainage system that includes Westside Drain, Forget-Me-Not Drain, and Salt Creek Drain. This drainage system empties into the New River, south of Worthington Road. Salt Creek extended through the project area in 1909. Today the creek bed is part of the present-day Dixie Drain 3. The Dixie drains were constructed after 1922 and before 1949, possibly ca. 1940. The earthen dug drainage ditches are approximately 10 ft. wide and about 6 ft. deep. The Dixie Lateral 1 had been constructed before 1914. Dixie Lateral 1 is an irrigation canal lateral that extends eastward from the Westside Main west of Hyde Road and south of West Vaughn Road. It interconnects with the Dixie Drain 3 at Diehl Road and Westside Road. The earthen dug canal is approximately 10 ft. wide and about 6 ft. deep. Lateral 1 was extended to connect with Dixie Drain 3 in later years.

## **Fern Canal**

The Fern Canal is an irrigation canal constructed ca. 1909. In the Project Area, it is located west of Liebert Road, and flows north from the Westside Main Canal beyond Interstate 8. The canal is approximately 10 ft. wide and about 6 ft. deep. The canal is lined with concrete. Modifications were made to the canal in the 1960s. The entire canal is approximately 10 mi. long.

## **Fig Canal**

The Fig Canal is an irrigation canal constructed ca. 1909. It is located east of the Westside Main Canal and flows north from the Fern Canal at Liebert Road and West Wixom Road to the Fig Spill around Evan Hewes Highway (Old Highway 80) near Seeley. The canal is approximately 10 ft. wide and about 6 ft. deep. The canal is lined with concrete. Modifications were made to the canal in the 1970s. The canal system also includes drains that remove the salinity from agricultural lands. The Fig Drain is an earthen dug irrigation drainage ditch located between Drew and Derrick roads that flows north to the New River. The drain is approximately 10 ft. wide and about 6 ft. deep. It was originally constructed after 1922 and before 1949, possibly ca. 1940. The entire drain is approximately 4 mi. long.

## **Forget-Me-Not Canal**

The Forget-Me-Not Canal is an irrigation canal constructed ca. 1909. It is located east of the Westside Main Canal and extends northward along Hyde Road. The earthen dug irrigation canal is approximately 10 ft. wide and about 6 ft. deep. The Forget-Me-Not Lateral 1 is an irrigation lateral constructed ca. 1909. It is located west of the Westside Road and flows

eastward from the Forget-Me-Not canal and empties into the Westside Drain. The concrete-lined lateral is approximately 10 ft. wide and about 6 ft. deep. Modifications were made to the canal ca. 1960s/1970s.

### **Foxglove Canal**

The Foxglove Canal is an irrigation canal constructed ca. 1912. It is located east of and directly parallel to the Westside Main Canal. The canal begins at a point just west of Hyde Road, and flows north to the canal's terminus one mile north of the intersection of Westmoreland and W. Hetzel Rd. The concrete-lined irrigation canal is approximately 12 ft. wide and about 6 ft. deep. Modifications were made to the canal in the 1960s. The entire canal is approximately 9 mi. long.

### **Wixom Drain**

The Wixom Drain is an earthen-dug irrigation drainage ditch constructed after 1922 and before 1949, possibly ca. 1940. It is located east of the Westside Main Canal and flows north to the New River from the Fig Canal at Liebert Road and West Wixcom Road. The drainage ditch is approximately two mi. long, 10-20 ft. wide and about 10-15 ft. deep.

### **Wormwood Canal**

The Wormwood Canal is a concrete-lined irrigation canal constructed in 1911 and modified in the 1960s. It extends from the Westside Main Canal at Fisher Road and continues eastward to Wormwood Road before extending northwesterly to Drew Road. The canal is approximately 10 ft. wide and about six ft. deep and is accessible from Old Highway 80, State Route 98, and Interstate 8. The project area also includes Wormwood Lateral 7 (an extension of the canal system from 1950) as well as the earthen Wormwood Drain, one of the earliest drains in the Imperial Valley, dating to at least 1909. Wormwood Drain primarily extends along Wormwood Canal, paralleling Drew Road, northward from Graham Road to the New River.

### **1210 Drew Road**

1210 Drew Road is a one-story vernacular building constructed as a single-family residence ca. 1955. ASM confirmed that by March 1949, a residence did not exist on the property (United States Department of Agriculture 1949). Located on the east side of Drew Road, it is a wood frame building, rectangular in plan with a concrete foundation. The exterior is clad in stucco siding. The roof is a low-pitched, side gable roof with a front gable projection with widely overhanging eaves and clad in an asphalt roll. On the west elevation, a concrete walkway leads to a recessed corner porch. The primary entrance is located in a porch and could not be seen from the street at the time of the survey. The windows consist of aluminum sliders. There is a stone chimney on the exterior of the west elevation. Modifications to the building include the replacement siding, windows and doors. Landscape features include a grass lawn and a palm tree-lined front yard with a chain-link fence.

### **1220 Drew Road**

1220 Drew Road is a one-story vernacular building constructed as a single-family residence ca. 1940. ASM confirmed that by March 1949, a residence existed on the property (United States Department of Agriculture 1949). An addition was constructed along the eastern side of the building at a later time. Located on the east side of Drew Road, it is a wood frame building, rectangular in plan with a concrete foundation. The exterior is clad in horizontal wood board siding. The roof is a low-pitched front gable roof with overhanging eaves and exposed rafter tails. The roof is clad in asphalt sheets. On the south elevation, a concrete walkway leads to a partial-width porch with a front gable roof. Wood posts support the front gable roof. The primary entrance is located within the porch and could not be seen from the street at the time of the survey. The windows consist of double-hung wood sash windows with wood shutters.. Landscape features include a yard surrounded by a chain-link fence.

### **1276 Drew Road**

1276 Drew Road is a one-story vernacular building constructed as a single-family residence ca. 1940. ASM confirmed that by March 1949, a residence existed on the property (United States Department of Agriculture 1949). Located on the east side of Drew Road, it is a wood frame building, rectangular in plan with a concrete foundation. The exterior is clad in horizontal wood board siding. The roof is a low-pitched front gable roof with a shed roof extension surrounding the north, west and south facades. The roof also has overhanging eaves and is clad in asphalt sheets. On the north elevation, a gravel drive leads to an entrance that could not be seen from the street at the time of the survey. The windows could not be seen from the street at the time of the survey and have security bars over the windows. Additions include a rear one-story front gable addition on the east elevation. Modifications to the building include the enclosed shed roof porch enclosure. Landscape features include a gravel and dirt yard with a chain-link fence.

### **1796 W. Graham Road**

1796 W. Graham Road is a one-story vernacular building constructed as a single-family residence ca. 1955. ASM confirmed that by March 1949, a residence existed on the property but was not the present-day building (United States Department of Agriculture 1949). Located on the northeast corner of W. Graham Road and Drew Road, it is a wood frame building, rectangular in plan with a concrete foundation. The exterior is clad in stucco siding. The roof is a low-pitched side gable roof with a front gable dormer. The roof has widely overhanging eaves and clad in asphalt and gravel. On the south elevation, a grass lawn leads to the primary entrance which consists of one wood paneled door with a semi-circle glaze. There is a secondary entrance located on the south elevation which consists of a sliding glass door. The windows consist of aluminum sliders. Modifications to the building include the non-original windows, doors and siding. Landscape features include a grass lawn and some trees.

## **2596 W. Hardy Road**

2596 W. Hardy Road is a one-story vernacular building constructed as a single-family residence ca. 1955. ASM confirmed that by March 1949, a residence did not exist on the property (United States Department of Agriculture 1949). Located on the south side of Hardy Road, it is a wood frame building, rectangular in plan with a concrete foundation. The exterior is partially clad in horizontal siding. The roof is nearly flat with widely overhanging eaves. The property contains heavy landscaping which obscures the view of the property to a great degree from the public right of way.

## **Leibert Road Shed**

The building on the south corner of Liebert Road and Westside Main Canal (P-13-013567) was constructed as a shed ca. 1940. The vernacular building is one-and-one-half stories located on the south side of Liebert Road. The shed is wood framed and rectangular in plan with a concrete foundation. The exterior is clad in vertical wood board siding. The roof is a frontgable low-pitched roof with wide eaves. There is one entryway on the north elevation. A chain link fence surrounds the building. No other features could be seen from the road at the time of the survey.

## **W. Stevens Road**

The W. Stevens Road property Road is a one-story vernacular building constructed as a single-family residence ca. 1940. ASM confirmed that by March 1949, a residence existed on the property (United States Department of Agriculture 1949). Located on the north side of W. Stevens Road, it is a wood frame building, near rectangular in plan with a wood post and beam foundation. The exterior is clad in horizontal and vertical wood board siding. The roof is a low-pitched side gable roof with moderate eaves and clad in asphalt sheets. The primary entrance is located on the east façade. Additions include a shed roof addition on the north façade, and two other one-story additions on the south elevation. The windows and doors are missing. Landscape features include a group of trees and a gravel and dirt driveway. There is also a large mechanical equipment garage located to the north of the main dwelling as well as a shed roof shop building associated with the property. The building is currently vacant.

## **2396 W. Vaughn Road**

2396 W. Vaughn Road is a one-story vernacular building constructed as a single-family residence ca. 1955. ASM confirmed that by March 1949, a residence did not exist on the property (United States Department of Agriculture 1949). Located on the north side of W. Vaughn Road, it is a wood frame building, T-shaped in plan with a concrete foundation. The exterior is clad in stucco siding. The roof is a low-pitched cross-gable roof with widely overhanging eaves and clad in asphalt siding. On the south elevation, a concrete walkway leads to a partial-width recessed porch with a front gable roof. Wood posts support the porch roof. The primary entrance is located within the porch and consists of paneled wood door with glazing. The windows consist of vinyl sliders and sashes. Modifications to the building include

the replacement doors and windows. Landscape features include a grass lawn with trees and a wood fence surrounding the property.

### **2104 W. Wixom Road**

2104 W. Wixom Road is a one-story vernacular building constructed as a single-family residence ca. 1955. ASM confirmed that by March 1949, a residence did not exist on the property (United States Department of Agriculture 1949). Located on the north side of W. Wixom Road, it is a wood frame building, near rectangular in plan with a concrete foundation. The exterior is clad in a stone veneer siding. The roof is a cross-gable roof with shallow eaves and clad in an asphalt roll. The residence is oriented south and was located behind vegetation and a wood fence. The primary entrance could not be seen from the road at the time of the survey. The windows consist of vinyl sliders. One window on the east elevation has been boarded over with plywood boards. Modifications to the building include the replacement windows. Landscape features include a dirt road and trees. There are also approximately 3 ancillary buildings associated with the property.

### **1651 Westside Road**

1651 Westside Road is a one-story Ranch house constructed as a single-family residence ca. 1955. A structure may have existed on property by March 1949, but it is not the present-day building (United States Department of Agriculture 1949). Located on the west side of Westside Road, it is a wood frame building, rectangular in plan with a concrete foundation. The exterior is clad in stucco siding. The roof is a low-pitched side gable roof with a front gable projection on the south section of the building and clad in an asphalt roll. On the east elevation, a concrete walkway leads to a primary entrance located on the north or east elevation. The primary entrance could not be seen from the street at the time of the survey. The windows consist of vinyl sliders with sandwich muntins. There is one chimney located within the roof surface. Modifications to the building include the replacement windows. Landscape features include tall palm trees. Other buildings include a front gable carport and garage as well as a shed roof storage shed.

### **Westside School**

Westside School was constructed in 1970, void of most stylistic references, although exhibiting some characteristics of Modern architecture. It replaced a previous one-room school house at the site built in 1917. It is a complex of five buildings; all one-story educational buildings located on the north side of W. Vaughn Road. The main educational building has a wood frame, near rectangular plan with a concrete foundation. The exterior is clad in stucco siding. The roof is a low-pitched side gable roof with shallow eaves and clad in asphalt sheets. The building was constructed in two parts; the easternmost section has windows on the south façade and a flush wood door entrance. The north façade of the easternmost section of the main building has large sash multi-light windows and entrances that lead to the rear exterior playground area. The westernmost section has no windows or entrances on the south façade and has aluminum sash windows in between a series of mechanical or HVAC units which protrude from the wall surface on the north facade.



There are three buildings located to the west of the main building. These buildings consist of a one-story classroom building with an overhanging eave on the north façade; a one-story stucco building with a front gable roof and a concrete block fence on the north façade; and a one-story building with a side gable roof and vertical siding with an access ramp located on the east façade. There is also a one-story building located north of the main educational building with a front gable roof. Landscape features include trees along the south section of the property as well as trees and a lawn with playground equipment on the north side of the property.

## **6. EVALUATION OF BUILT-ENVIRONMENT RESOURCES**

This historic built-environment evaluation and assessment of direct and indirect impacts was carried out in compliance with CEQA and other applicable federal, state, or local laws, ordinances, rules, regulations, and policies as discussed under the Regulatory Framework in Chapter 1. Compliance with CEQA requires consideration of impacts to cultural resources that are either historical resources (determined eligible for NRHR and/or CRHR) or resources potentially eligible for listing on the CRHR. The procedures for assessing archaeological and historical resources are addressed in CEQA Guidelines Section 15064.5(a) and 15064.5(c).

All known historic resources located within 0.5 mi. of the Project Area (the Project APE) were inventoried and analyzed to assess which eligible resources would be subject to potential direct and indirect impacts or intrusions resulting from the Project.

### **NATIONAL REGISTER CRITERIA FOR EVALUATION**

The NRHP criteria for evaluation are designed to guide federal agencies and others in evaluating whether a property is eligible for inclusion in the NRHP. The criteria for evaluation are as follows:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that:

- A. are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. are associated with the lives of persons significant in our past; or
- C. embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. have yielded or may be likely to yield, information important in prehistory or history [36 CFR 60.4].

Generally, properties eligible for NRHP listing are at least 50 years old. Properties less than 50 years of age must be exceptionally important to be considered eligible for listing.

## **CEQA AND THE CALIFORNIA REGISTER CRITERIA FOR EVALUATION**

CEQA requires that all private and public activities not specifically exempted be evaluated against the potential for environmental damage, including impacts to historical resources. Historical resources are recognized as part of the environment under CEQA. It defines historical resources as “any object, building, structure, site, area, or place which is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California,” as cited in Division I, Public Resources Code, Section 5021.1[b].

Lead agencies have a responsibility to evaluate historical resources against the CRHR criteria prior to making a finding as to a proposed Project’s impacts to historical resources. Mitigation of adverse impacts is required if the proposed Project will cause substantial adverse change to a historic resource. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The CEQA Guidelines provide that a Project that demolishes or alters those physical characteristics of an historical resource that convey its historical significance (i.e., its character-defining features) can be considered to materially impair the resource’s significance. The CRHR is used in the consideration of historic resources relative to significance for purposes of CEQA. The CRHR includes resources listed in, or formally determined eligible for listing in, the NRHP, as well as some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory, may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise.

Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the CRHR, cited as PRC Section 5024.1, Title 14 CCR, Section 4852, consisting of the following:

1. it is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. it is associated with the lives of persons important to local, California, or national history; or
3. it embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or
4. it has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

## INTEGRITY

In order to be eligible for listing in the NRHP or the CRHR, a property must also retain sufficient integrity to convey its significance. The seven elements of integrity defined by the NRHP are: location, design, setting, materials, workmanship, feeling and association (National Park Service 1991). To retain historic integrity, a property must possess several, and usually most, aspects of integrity.

**Location:** “the place where the historic resource was constructed or the place where the historic event occurred” (National Park Service 1991:44)

**Design:** “the combination of elements that create the form, plan, space, structure, and style of a property” (National Park Service 1991:44)

**Setting:** the “physical environment of a historic resource” (National Park Service 1991:45)

**Materials:** the “physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic resource” (National Park Service 1991:45)

**Workmanship:** the “physical evidence of the crafts of a particular culture or people during any given period in history or prehistory” (National Park Service 1991:45)

**Feeling:** “a property’s expression of the aesthetic or historic sense of a particular time” (National Park Service 1991:45)

**Association:** “the direct link between an important event or person and a historic resource” (National Park Service 1991:45)

## HISTORIC BUILT-ENVIRONMENT EVALUATION

### Recommended Eligible

Of the 20 historic resources within the APE that are more than 45 years old, one resource, the Westside Main Canal, has been determined eligible for listing in the NRHP. No other historic resources within the APE are recommended as eligible for listing in the NRHP or CRHR.

### Westside Main Canal

The canal system, including the canal, lateral, and drain segments in the Project APE, is eligible for listing in the NRHP and CRHR under Criterion A/1 for its significance in the development of the Imperial Valley. The earthen canal was integral to the development of irrigated commercial agriculture since its construction in the early 1900s. Under the themes of agriculture and economic development, ASM’s professional, independent recommendation is that this section of the Westside Main Canal is eligible for the NRHP and CRHR on the local and state levels.

Character-defining features of the canal include:

- original canal alignment
- earthen walls
- earthen levees
- agricultural setting
- structures such as bridges, siphons, drops, and gates

As an irrigation system, the viewshed, or historic setting, is not a character-defining feature of this type of historic resource.

### Recommended Ineligible

Of the 20 historic resources within the APE that are more than 45 years old, 19 are recommended as ineligible for listing in the NRHP and the CRHR (Table 5).

Table 5. Ineligible Resources More Than 45 Years Old

Resource	Date Built	Resource Type
Diehl Drain	ca. 1940	Canal system
Dixie Drains and Lateral 1	ca. 1940 and ca. 1914	Canal system
Fern Canal	ca. 1909	Canal system
Fig Canal	ca. 1909	Canal system
Forget-Me-Not Canal	ca. 1909	Canal system
Foxglove Canal	ca. 1912	Canal system
Wixom Drain	ca. 1940	Canal system
Wormwood Canal	ca. 1911	Canal system
1210 Drew Road	ca. 1955	Residence
1220 Drew Road	ca. 1940	Residence
1276 Drew Road	ca. 1940	Residence
1796 W. Graham Road	ca. 1955	Residence
2596 W. Hardy Road	ca. 1940	Residence
Leibert Road Shed	ca. 1940	Shed
W. Stevens Road	ca. 1940	Residence
2396 W. Vaughn Road	ca. 1955	Residence
2104 W. Wixom Raod	ca. 1955	Residence
1651 Westside Road	ca. 1955	Residence
Westside School	1970	School

### Diehl Drain

The Diehl Drain was an early irrigation drain for the agricultural fields of the Imperial Valley. The Diehl Drain was shown on 1949 aerial photos of the region, but was not present among the earliest irrigation systems known to exist by 1909. Drainage ditches were added to the

Imperial Valley irrigation systems beginning in the 1920s to alleviate silt and build-up within the agricultural fields. Although the drainage ditch is associated with the early irrigation system of the Imperial Valley, and the important local theme of agricultural development, this particular drain does not convey that theme as well as other similar resources such as the Westside Main and the All-American canals. Therefore, the Diehl Drain is recommended not eligible for the NRHP and the CRHR.

### **Dixie Drains and Lateral 1**

Dixie drains and Dixie Lateral 1 are part of the Dixie Canal irrigation system. Dixie Lateral 1 had been constructed before 1914 and the Dixie drains were constructed after 1922 and before 1949, possibly ca. 1940. According to a previous evaluation by URS Corporation, the Dixie Drain 3 was recommended not eligible for the NRHP or the CRHR for the loss of integrity from regular dredging and widening of the canals and drains over time to alleviate problems of silt and build-up. Although the drainage ditch and lateral are associated with the early irrigation system of the Imperial Valley, and the important local theme of agricultural development, these particular waterways do not convey that theme as well as other similar resources such as the Westside Main and the All-American canals—in part due to their loss of integrity. Therefore the Dixie Drain 3 and the Dixie Lateral 1 are recommended not eligible for the NRHP and the CRHR.

### **Fern Canal**

The Fern Canal was one of the earliest irrigation canals in the Imperial Valley, constructed in 1909. According to a previous evaluation by URS Corporation, the Fern Canal was recommended not eligible for the NRHP or the CRHR for the loss of integrity from regular dredging and widening of the canals and drains over time to alleviate problems of silt and build-up. Although the canal is associated with the early irrigation system of the Imperial Valley, and the important local theme of agricultural development, this particular canal does not convey that theme as well as other similar resources such as the Westside Main Canal and the All-American canals—in part due to their loss of integrity. Therefore the Fern Canal is recommended not eligible for the NRHP and the CRHR.

### **Fig Canal**

Fig Canal was one of the earliest irrigation canals in the Imperial Valley, constructed in 1909 and the associated Fig Drain was constructed ca. 1940. According to a previous evaluation by URS Corporation, the Fig Canal was recommended not eligible for the NRHP or the CRHR for the loss of integrity from regular dredging and widening of the canals and drains over time to alleviate problems of silt and build-up. Although the canal is associated with the early irrigation system of the Imperial Valley, and the important local theme of agricultural development, neither the Fig Canal nor the Fig Drain convey that theme as well as other similar resources such as the Westside Main Canal and the All-American canals—in part due to their loss of integrity. Therefore the Fig Canal is recommended not eligible for the NRHP and the CRHR.

### **Forget-Me-Not Canal**

Forget-Me-Not Canal and Forget-Me-Not Lateral 1 was part of one of the earliest irrigation systems in the Imperial Valley, constructed in 1909. According to a previous evaluation by URS Corporation, the Forget-Me-Not Canal was recommended not eligible for the NRHP or the CRHR for the loss of integrity from regular altering and modernizing of the canals and drains over time. Although the canal is associated with the early irrigation system of the Imperial Valley, and the important local theme of agricultural development, neither the Forget-Me-Not Canal nor Forget-Me-Not Lateral 1 convey that theme as well as other similar resources such as the Westside Main Canal and the All-American canals—in part due to their loss of integrity. Therefore the Forget-Me-Not Canal is recommended not eligible for the NRHP and the CRHR.

### **Foxglove Canal**

The Foxglove Canal was an early irrigation canal in the Imperial Valley, constructed ca. 1912. According to a previous evaluation by URS Corporation, the Foxglove Canal was recommended not eligible for the NRHP or the CRHR for the loss of integrity from regular dredging and widening of the canals and drains over time to alleviate problems of silt and build-up. Although the canal is associated with the early irrigation system of the Imperial Valley, and the important local theme of agricultural development, this particular canal does not convey that theme as well as other similar resources such as the Westside Main Canal and the All-American canals—in part due to its loss of integrity. Therefore the Foxglove Canal is recommended not eligible for the NRHP and the CRHR.

### **Wixom Drain**

The Wixom Drain was an early irrigation drain for the agricultural fields of the Imperial Valley. The Wixom Drain was shown on 1949 aerial photos of the region, but was not present among the earliest irrigation systems known to exist by 1909. Drainage ditches were added to the Imperial Valley irrigation systems beginning in the 1920s to alleviate silt and build-up within the agricultural fields. Although the drainage ditch is associated with the early irrigation system of the Imperial Valley, and the important local theme of agricultural development, this particular drain does not convey that theme as well as other similar resources such as the Westside Main and the All-American canals. Therefore, the Diehl Drain is recommended not eligible for the NRHP and the CRHR.

### **Wormwood Canal**

The Wormwood Canal was one of the earliest irrigation canals in the Imperial Valley, constructed in 1911, with the Wormwood Drain constructed earlier by at least 1909, while Lateral 7 was constructed much later in 1950. According to a previous evaluation by Caltrans, the Wormwood Canal was recommended not eligible for listing in the NRHP because the canal was realigned and lined with concrete. Therefore the canal does not retain enough integrity to convey its significance as one of the original irrigation canals for the Imperial Valley. ASM concurs with this finding and recommends the Wormwood Canal as not eligible for listing in

the NRHP and the CRHR. Although the canal is associated with the early irrigation system of the Imperial Valley, and the important local theme of agricultural development, this particular canal, nor the early Wormwood Drain on its own, convey that theme as well as other similar resources such as the Westside Main and the All-American canals. Therefore, the Wormwood Canal is recommended not eligible for the NRHP and the CRHR.

### **Leibert Road Shed**

ASM previously recommended that the Leibert Road Shed was not eligible for listing in the NRHP and the CRHR. We concur with our previous recommendation, and the shed is recommended not eligible for listing in the NRHP or CRHR. Specifically, under Criterion A/1, research failed to tie the shed to events that have made a significant contribution to the broad patterns of local or regional history, or to the cultural heritage of California or the U.S., including agricultural complexes in Imperial Valley. Under Criterion B/2, research failed to link the building with the lives of persons important to local, California, or national history. Under Criterion C/3, the building does not embody significant characteristics of a type, period, region, or method of construction; nor does it represent the work of a master, or possess high artistic values that would qualify it for listing. Finally, because this resource is a common property type it does not have the potential to provide information that is not available through historic research. Therefore, the Leibert Road Shed is not eligible for listing in the NRHP or the CRHR under Criterion D/4.

### **Westside School**

Westside School was constructed as a rural school in 1970. The Westside School is recommended not eligible for listing in the NRHP or CRHR. Specifically, under Criterion A/1, research failed to tie the school to events that have made a significant contribution to the broad patterns of local or regional history, or to the cultural heritage of California or the U.S., including agricultural complexes in Imperial Valley. Under Criterion B/2, research failed to link the building with the lives of persons important to local, California, or national history. Under Criterion C/3, the building does not embody significant characteristics of a type, period, region, or method of construction; nor does it represent the work of a master, or possess high artistic values that would qualify it for listing. Finally, because this resource is a common property type it does not have the potential to provide information that is not available through historic research. Therefore, the Westside School is not eligible for listing in the NRHP or the CRHR under Criterion D/4.

### **Residential Buildings within the APE**

The remaining nine historic resources within the APE that are recommended ineligible for listing in the NRHP and CRHR are all single-family residential buildings:

- 1210 Drew Road
- 1220 Drew Road
- 1276 Drew Road
- 1796 W. Graham Road



## 6. Evaluation of Built-Environment Resources

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- 2596 W. Hardy Road
- W. Stevens Road
- 2396 W. Vaughn Road
- 2104 W. Wixom Road
- 1651 Westside Road

None of these buildings are recommended as eligible for listing in the NRHP and CRHR. Specifically, under Criterion A/1, research failed to tie these buildings to events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the U.S. Under Criterion B/2, research failed to link the buildings with the lives of persons important to local, California, or national history. Under Criterion C/3, none of these buildings embody significant characteristics of a type, period, region, or method of construction; nor do they represent the work of a master, or possess high artistic values that would qualify them for listing. Finally, because these resources are a common property type, they do not have the potential to provide information that is not available through historic research. Therefore, none of these buildings are eligible for listing in the NRHP or the CRHR under Criterion D/4.

## 7. ASSESSMENT OF IMPACTS ON THE HISTORIC BUILT-ENVIRONMENT

### DIRECT IMPACTS

CEQA Guidelines Section 15064.5(b)(1) define a significant effect as one that would materially impair the significance of an historical resource. The Project will not result in the any direct impacts to the historic resources. Portions of the Westside Main Canal system (including its laterals and drains) are located within the Project area, however they will not be altered or impacted directly from the construction or installation of the solar field or Gen-Tie line.

### INDIRECT IMPACTS

An adverse indirect impact—visual, auditory, or atmospheric—to a historic resource is one that negatively affects the integrity of setting or feeling of the resource to the extent that the characteristics that would qualify the resource for listing in the NRHP or the CRHR are compromised. An undertaking can therefore only have an adverse effect if it impacts an historic built-environment resource that is eligible for listing in the NRHP or the CRHR. This section provides an assessment of indirect impacts that may affect the Westside Main Canal, which has been determined eligible for listing in the NRHP/CRHR. This property will not be subject to any indirect impacts by the Project.

#### Visual Impacts

In evaluating visual impacts on historic resources, and for purposes of this report, the following definitions have been employed (Delaware SHPO 2003):

**Adverse Visual Effect:** National Historic Preservation Act Section 106 regulations in 36 CFR 800 define an adverse effect as one that occurs when an undertaking carries the potential to directly or indirectly alter the characteristics of an historic resource that make it eligible for listing in the NRHP. Accordingly, an adverse visual effect is one that negatively affects the integrity of the setting or feeling of an historic built-environment resource, to the extent that significance and eligibility for listing in the NRHP are compromised. In particular, adverse visual impacts can be seen as negatively affecting the following characteristics of integrity: setting, feeling, or association.

**Historic Built-Environment Resource:** a historic site, district, building, structure, or object that is either eligible for inclusion in the NRHP, or listed therein.

**Obstructive Visual Impacts:** any visual effect that carries the potential to obstruct any part of the view of an historic built-environment resource, or the scenic view from such a resource.

Adverse obstructive impacts can obstruct all or a portion of an historic built-environment resource and/or its viewshed, in turn negatively affecting the property's historic character.

**Scenic Views:** any scenic resources or resources that are visually and aesthetically important and that contribute to an historic built-environment resource's significance.

**Viewsheds:** those areas visible from a specified location or locations.

**Visual Impacts:** any aspect of a proposed undertaking that will be seen from or will be in the view of an historic built-environment resource. A visual effect may be beneficial or adverse and may affect the historic resource in an aesthetic or obstructive manner. The determination that a visual effect exists does not automatically imply that the effect is adverse.

### **Issues of Visual Impacts and Historic Built-Environment Resources**

Because there is no universally accepted yardstick for measuring visual impacts, and because those impacts do not always damage the defining characteristics of an historic built-environment resource in any physical manner, assessing them can be difficult and complicated, and is almost always subjective. If we are to consider that an historic built-environment resource is affected when its historic significance and integrity have been diminished, determining how a Project harms a resource's historical significance and integrity is essential to any assessment. In assessing the visual impacts for historic resources, the criteria for significance and the aspects of integrity are factors that require careful evaluation and can provide a defensible qualitative method for determining visual impacts on historic resources.

### **Adverse Visual Impacts**

Adverse visual impacts may be created when an undertaking is visible within the viewshed of the historic resource, when it blocks a view toward the historic resource, or when it introduces an element that is incompatible with the criteria under which the property is eligible.

Simply because an undertaking will be visible from an historic built-environment resource does not mean it automatically will create an adverse visual effect. Therefore, notwithstanding whether the undertaking is or is not an historic built-environment resource, it is necessary to evaluate the visual changes and alterations the undertaking will introduce to the resource. In assessing adverse visual impacts on a built-environment resource it is necessary to identify the criterion or criteria under which the resource is eligible and what qualities or characteristics of the resource contribute to its significance or eligibility. For example, if a resource is eligible for its innovative engineering qualities, visual impacts on the property may not be adverse, whereas if the property is eligible on the basis of its architectural significance, an adverse effect very well may be created.

An adverse effect may be obstructive, which is to say it may block the view to or from an historic resource; it may also not be obstructive and still create an adverse effect in that it introduces elements so incompatible with the criterion or criteria under which the property is eligible for listing that it diminishes the property's significance to a substantial degree. A

highway proposed to run alongside an historic rural church, while it would not directly obstruct the view to or from the building, might still introduce an element so incompatible with the rural setting of the property that it would have a diminishing effect upon the integrity of the property's setting.

Adverse aesthetic impacts should be determined on a case-by-case basis, weighing the following factors:

- **Significance.** An historic built-environment resource's historical significance and its key aspects of integrity must be taken into account in order to evaluate the Project's impacts on the property's eligibility for listing in the NRHP/CRHR.
- **Character-Defining Features.** The alteration of character-defining features at the Project location (including open space) can affect the view from the historic built-environment resource and possibly the location, feeling, setting, and association of that resource.
- **Compatibility.** Whether in an open space or a developed area, the compatibility of the Project with the character of the Project's location and surrounding area, including historic resources, is important. The character of the historic built-environment resource's site and architectural features should be the basis for determining the appropriate characteristics of the proposed Project. The compatibility of the Project is determined by:
  - mass – the arrangement of the Project's spaces;
  - scale and proportion – the size and the proportion of the Project to the surrounding structures and features;
  - height – sometimes it may be necessary that a Project height extend beyond that of the surrounding buildings and other features within view of the Project; it is important that the height of the Project not cause the line of sight to move so far up that the surrounding features are out of view, thereby detracting from the original view;
  - shadows;
  - color;
  - the degree to which the Project would contribute to the area's aesthetic value;
  - the degree of contrast, or lack thereof, between the Project and the background, surrounding scenery, or neighborhood; and,
  - the amount of open space.
- **Obstructive Impacts.** Whether a Project is on or near an historic built-environment resource, it can block the resource from being viewed, or block a view seen from that resource, thereby possibly diminishing its integrity. Determination of adverse obstructive impacts should be made on a case-by-case basis, considering the following factors:

- The historic built-environment resource's significance. It is necessary to understand the resource's historic significance and its key aspects of integrity in order to evaluate the Project's impacts on the resource's eligibility for listing in the NRHP/CRHR.
- Nature and quality of the view from the historic built-environment resource. This includes such features as natural topography, settings, man-made or natural features of visual interest, and other historic resources seen from the historic built-environment resource, any of which would contribute to its significance and integrity.
- Extent of obstruction. This includes total blockage, partial interruption, or interference with a person's enjoyment and appreciation of a scenic view or historic resource viewed from the historic built-environment resource, to the extent it affects the integrity of the historic built-environment resource.
- Obstruction of an historic built-environment Resource. The Project might obstruct the historic built-environment resource from being viewed from the Project site or other area. If the historic built-environment resource is visually appreciated from surrounding viewpoints, obstructing its view may affect its feeling, setting, location, or association.

### **Assessment of Visual Impacts**

#### **Westside Main Canal**

Both the solar field and electric line of the Project will be visible from the segments of the Westside Main Canal located within the Project APE (Figures 5, 6, and 7). Those segments of the canal are recommended as eligible for listing in the NRHP and CRHR under Criterion A/1 for their significance in the development of the Imperial Valley. Character-defining features of the canal include original canal alignment, earthen walls, earthen levees, agricultural setting, and structures such as bridges, siphons, drops, and gates. Viewshed from the canal is not a character-defining feature of this historic resource, nor a quality that contributes to its NRHP eligibility. A small portion of the overall setting will be altered by the solar field, but not to a level that would significantly compromise the integrity of its setting. Neither the solar field nor the electric lines significantly diminish the integrity of the setting and feeling of this historic built-environment resource and therefore do not constitute a significant visual impact under CEQA.

#### **Auditory Impacts**

In consideration of auditory impacts from the Project, the effect of the noise generated by the solar field and electric line must be considered in relationship to the current ambient noise levels in the vicinity of the historic built-environment resource within the Project APE. The findings of the Noise Report being prepared concurrently with this report were not available to determine the noise level that will be generated by the Project. However, ASM does not anticipate that those levels will exceed the current noise levels allowed for the setting of the Westside Main Canal. This opinion is based on recent experience



Figure 5. Viewshed from the Westside Main Canal at Leibert Road., looking south towards Imperial Valley Substation.



Figure 6. Viewshed from the intersection of the Westside Main Canal and Fern Canal, looking northeast into solar field area in the distance.

in evaluating the effects of similar solar projects in the same area as the Camp Verde Solar Project, in which the Westside Main Canal was also within the Project APE (Davis 2011a, 2011b and 2011c). Therefore, the operation of the Project is not likely to constitute a significant auditory impact under CEQA.

Auditory impacts during construction of the solar field and electric line may constitute a temporary auditory intrusion to the Westside Main Canal due to the proximity of the Project to this historic resource. Although specific information on the type of construction equipment to be used was not yet available at the time of the preparation of this report, typical construction equipment for this type of solar project could include off-highway trucks, graders, rollers, tractors/loaders/backhoes, water trucks, rubber-tired bulldozers, and rough terrain forklifts (LS Power Development, LLC 2011). The cumulative noise level of the combined operation of such equipment could result in noise levels that are at the acceptable threshold established by Imperial County for allowable noise level for construction noise, but will exceed the ambient sound levels typical for the setting of the Westside Main Canal (LS Power Development, LLC 2011). However, because the impact of these auditory impacts would be temporary, the impact will likely not rise to the level of a significant auditory impact under CEQA.



Figure 7. Viewshed from the Westside Main Canal near Diehl Road, looking east toward solar field area.

## Atmospheric Impacts

In consideration of atmospheric impacts from the Project, the effect of atmospheric intrusions generated by the solar field and electric line must be considered in relationship to the current

levels at the location of the historic built-environment resource within the Project APE. Potential atmospheric intrusions can include elements such as dust, emissions, and chemical residue from dust abatement. Air emissions are generated during construction activities associated with the development of a Project, including grading, clearing, hauling, underground utility construction, and paving activities. During site clearing and remedial grading, diesel exhaust emissions are generated by construction-related vehicles such as bulldozers, loaders, dump/haul trucks, and scrapers. Emissions are also generated in the form of dust and PM10 as a result of soil disturbance (Davis 2011a and 2011c).

The findings of the Air Quality Report being prepared concurrently with this report were not available to determine the emissions that will be generated by the Project. However, ASM does not anticipate that those levels will exceed the current ambient air quality thresholds allowed for the setting of the Westside Main Canal. This opinion is based on recent experience in evaluating the effects of similar solar projects in the same area as the Camp Verde Solar Project, in which the Westside Main Canal was also within the Project APE. It is anticipated that if any of the air quality threshold are exceeded, that will likely only be during the construction of the Project, and will only constitute a temporary atmospheric intrusion. Therefore, because the impact of these atmospheric intrusion would be temporary, the impact will likely not rise to the level of a significant atmospheric impact under CEQA.

Based on our understanding of the project, emissions during operation would likely be less than those during construction, and the Project will be required to comply with all applicable air quality regulations for operating facilities. Operation of the Project will therefore likely not be a significant impact under CEQA.

## **SUMMARY**

No significant impacts to historic resources were identified as a result of this evaluation. Portions of the Westside Main Canal system (including its laterals and drains) are located within the Project area, however they will not be altered or impacted directly from the construction or installation of the solar field or Gen-Tie line. No significant indirect impacts (visual, auditory, or atmospheric) were identified as a result of the evaluation of indirect impacts on the Westside Main Canal, the only built-environment resource within the Project APE determined eligible for listing in the NRHP/CRHR or as a CEQA historical resource. The canal will not be subject to a visual intrusion by the Project. The canal may be subject to temporary auditory and atmospheric intrusions during the construction of the Project. However, neither intrusion is likely to rise to the level of a significant impact under CEQA.



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## REFERENCES

Armstrong, Ellis L. (editor)

1976 *History of Public Works in the United States, 1776-1976*. American Public Works Association, Chicago.

Blackburn, O.V.

1919 *Blackburn's Map of Imperial Valley: Roads, Tracts and Canals*. El Centro.

Blake, William P.

1853 Geological Report. In *Report of Explorations in California for Railroad Routes to Connect with the Routes Near the 35th and 32nd Parallels of North Latitude*, by R. S. Williamson. U.S. War Department, Washington, D.C.

Bureau of Reclamation

1955 *Report on the Contribution of the All-American Canal System, Boulder Canyon Project, to the Economic Development of the Imperial and Coachella Valleys, California, and to the Nation*. United States Government Printing Office, Washington.

Brown, Robert M.

1927 The Utilization of the Colorado River. *Geographical Review* 17(3):453-466.

Burkard, J., H. Thompson, and J. Covert

2007 Westside Main Canal. Department of Parks and Recreation Primary and Building, Structure and Object Forms. SWCA Environmental Consultants. Prepared for the Sunrise Powerlink Project, San Diego, Imperial, Riverside, and Orange Counties.

Corey, H. T.

1915 Irrigation and River Control in the Colorado River Delta. In *The Imperial Valley and the Salton Sink*, by H. T. Corey, pp. 1204-1453. John J. Newbegin, San Francisco.

Davis, Shannon, Jennifer Krintz, Sinéad Ní Ghabhláin, and Michael Pumphrey

2011a Inventory, Evaluation, and Analysis of Effect on Historic Built-Environment Properties within the Area of Potential Effect of the Imperial Solar Energy Center South, Imperial County, California. ASM Affiliates, Inc. Prepared for CSOLAR Development, LLC.

2011b Inventory, Evaluation, and Analysis of Effect on Historic Built-Environment Properties within the Area of Potential Effect of the Imperial Solar Energy Center West, Imperial County, California. ASM Affiliates, Inc. Prepared for CSOLAR Development, LLC.

## References

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- Davis, Shannon, Jennifer Krintz, Shelby Gunderman, and Sinéad Ní Ghabhláin  
2011c Inventory, Evaluation, and Analysis of Effects on Historic Built-nvironment Properties within the Area of Potential Effect of the Centinela Solar Energy, LLC, Imperial County, California.
- Delaware SHPO  
2003 Assessing Visual Effects on Historic resources. Electronic document, <http://history.delaware.gov/pdfs/visualeffects.pdf>, accessed September 8, 2009.
- Derry, Anne, H. Ward Jandl, Carol D. Shull, and Jan Thorman  
1985 *Guidelines for Local Surveys: A Basis for Preservation Planning*. National Register Bulletin No. 24.
- Dowd, M. J.  
1956 History of the Imperial Irrigation District and the Development of Imperial Valley. Manuscript on file, Imperial Irrigation District.
- Fradkin, Philip L.  
1981 *A River No More*. Knopf Publishers, New York.
- Frisby, Karen J.  
1992 *Imperial Valley: The Greening of a Desert*. Occasional Paper No. 9. Imperial Valley College Desert Museum Society, Ocotillo, California.
- Grumbles, Ethel Derrick  
n.d. History of William Henry Derrick. On file at the Imperial Valley Pioneers' Museum.
- Henderson, Tracey  
1968 *Imperial Valley*. Neyenesch Printers, Inc. San Diego.
- Hupp, Jill  
1999 Historical Architectural Survey Report for Pavement. Caltrans.
- Imperial County Board of Supervisors  
1909 Official Map of Imperial County, California.
- Imperial Valley Press  
1979 "Classes Opened in 1917." September 25. On file at the Imperial Valley Pioneers' Museum.
- James, Henry F.  
1928 The Salient Geographic Factors of the Colorado River and Basin. *Annals of the American Academy of Political and Social Science* 135:97-107.

## JRP Consulting and California Department of Transportation (Caltrans)

- 2000 *Water Conveyance Systems in California: Historic Context Development and Evaluation Procedures*. Caltrans, Sacramento.

## KP Environmental

- 2011 Draft Internal Project Description for Campo Verde Solar Project, November 10, 2011.

## Los Angeles Directory Co.

- 1930 *Los Angeles Directory Company's Imperial Valley Directory, 1930*.  
1939 *Los Angeles Directory Company's Imperial Valley Directory, 1939*.  
1949 *Los Angeles Directory Company's Imperial Valley Directory, 1949*.

## LS Power Development

- 2011 Preliminary data from the Draft EA/EIR for the Centinela Solar Energy Project, May 31, 2011. LS Power Development, LLC.

## Miles, Scott R., and Charles B. Goudey

- 1998 Ecological Subregions of California: Section and Subsection Descriptions. U.S. Department of Agriculture, Forest Service. Electronic document, <http://www.fs.fed.us/r5/Projects/ecoregions/toc.htm>.

## Moore, Sandra Lynne

- 1991 *The Use of Tile Drainage in the Reclamation of the Imperial Valley*. Master's Thesis. University of San Diego.

## National Park Service

- 1991 *How to Apply the National Register Criteria for Evaluation*. National Register Bulletin No. 15.

## Ní Ghabhláin, Sinéad, and Jerry Schaefer

- 2005 *Preserving a Record of the Old Coachella Canal: Documents Data Recovery for the Coachella Canal Lining Project, Between Siphons 7 and 32, Imperial and Riverside Counties, California*. ASM Affiliates, Inc., Carlsbad, California. Prepared for the Coachella Valley Water District.

## Office of Historic Preservation

- 1995 Instructions on Recording Historical Resources.

## Pisani, Donald J.

- 1984 *From the Family Farm to Agribusiness: The Irrigation Crusade in California and the West, 1850-1931*. University of California Press, Berkeley.  
2002 *Water and American Government: The Reclamation Bureau, National Water Policy, and the West, 1902-1935*. University of California Press, Berkeley.

## References

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Polk, R.L.

- 1959 Polk's Imperial Valley Directory, 1959. Los Angeles.
- 1962 Polk's Imperial Valley Directory, 1962. Los Angeles.

Reisner, Marc

- 1993 *Cadillac Desert: The American West and Its Disappearing Water*. Penguin Books, New York.

Robinson, W. W.

- 1948 *Land in California: The Story of Mission Lands, Ranchos, Squatters, Mining Claims, Railroad Grants, Land Scrip, Homesteads*. University of California Press, Berkeley.

Rockwood, Charles Robinson

- 1930 *Born of the Desert: Personal Recollections of the Early History of Imperial Valley*. Calexico Chronicle, Calexico, California.

Rowley, William D.

- 2006 *The Bureau of Reclamation: Origins and Growth to 1945*. U.S. Government Printing Office, Washington, D.C.

Schaefer, Jerry, and Collin O'Neill

- 2001 *The All-American Canal: An Historic resources Inventory and Evaluation*. ASM Affiliates, Inc., Encinitas, California.

Starr, Kevin

- 1990 *Material Dreams: Southern California through the 1920s*. Oxford University Press, New York.

Steere, Collis H.

- 1953 *Imperial and Coachella Valleys*. Stanford University Press, Stanford

Tessera Solar

- 2010 Draft Final Class III Confidential Cultural Resources Technical Report for the Imperial Valley Solar (formerly Solar 2), Imperial Valley County

Tait, C.E.

- 1908 *Irrigation in the Imperial Valley: Its Problems and Possibilities*. 60<sup>th</sup> Congress, 1<sup>st</sup> Session. Senate Document No. 246. February 11. Government Printing Office, Washington.

Thurston, Arthur G.

- 1912a Imperial Valley Tract Map. El Centro.
- 1912b *Imperial Valley Business and Resident Directory 1912-1913*. Pasadena.

- 1914 Imperial Valley Tract Map. El Centro.  
1920 *Thurston's Imperial Valley Resident Directory 1920-1921*. El Centro.

Tout, Otis B.

- 1931 *The First Thirty Years, Being An Account of the Principal Events in the History of Imperial Valley, Southern California, U.S.A.* Arts & Crafts Press, San Diego.

United States Army Corps of Engineers

- 1909 15-Minute El Centro Topographic Map.

United States Department of Agriculture

- 1949 Imperial County Aerials.

United States Geological Survey

- 1957 *Water Resource of Southern California with Special Reference to the Drought of 1944-51. Water Supply Paper 1366*. Government Printing Office, Washington.

# **NAHC LETTER**

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**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-6251  
Fax (916) 857-5390  
Web Site [www.nahc.org](http://www.nahc.org)  
ds\_nahc@pacbell.net



July 7, 2011

Ms. Patricia T. Mitchell, M.A., RPA, Senior Project Archaeologist

**KP ENVIRONMENTAL, LLC**

2387 Montgomery Avenue  
Cardiff-by-the-Sea, CA 92007

Sent by U.S. Mail

No. of Pages: 4

Re: Sacred Lands File Search and Native American Contacts list for the "**Proposed Mount Signal Solar Project**," located approximately eight miles southwest of the City of El Centro, in the Mount signal area; Imperial County, California

Dear Ms. Mitchell:

The Native American Heritage Commission (NAHC) conducted a Sacred Lands File search of the 'area of potential effect,' (APE) based on the USGS coordinates provided and found **Native American cultural resources were not identified** in the USGS coordinates you specified. Also, please note; the NAHC Sacred Lands Inventory is not exhaustive. Native American cultural resources may be inadvertently discovered during ground breaking activity. The NAHC is aware of recorded archaeological sites near the APE and there are Native American cultural resources in close proximity to the APE but not with one-half mile of the USGS coordinates provided.

The California Environmental Quality Act (CEQA – CA Public Resources Code §§ 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance.' In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. CA Government Code §65040.12(e) defines "environmental justice" provisions and is applicable to the environmental review processes.

Early consultation, even during Initial Study or First Phase surveys with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Local Native Americans may have knowledge of the religious and cultural significance of the historic properties of the proposed project for the area (e.g. APE). Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). We urge consultation with those tribes and interested Native Americans on the list of Native American Contacts we attach to this letter in order to see if your proposed project might impact Native American cultural resources. Lead agencies should consider avoidance as defined in §15370 of the CEQA Guidelines when

significant cultural resources as defined by the CEQA Guidelines §15064.5 (b)(c)(f) may be affected by a proposed project. If so, Section 15382 of the CEQA Guidelines defines a significant impact on the environment as "substantial," and Section 2183.2 which requires documentation, data recovery of cultural resources.

Partnering with local tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C 4321-43351) and Section 106 4(f), Section 110 (f)(k) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq*, and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation.

Also, California Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery', another important reason to have Native American Monitors on board with the project.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. An excellent way to reinforce the relationship between a project and local tribes is to employ Native American Monitors in all phases of proposed projects including the planning phases.

Confidentiality of "historic properties of religious and cultural significance" may also be protected under Section 304 of the NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibility threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

  
Dave Singleton  
Program Analyst

Attachment: Native American Contact List



**California Native American Contact List**

Imperial County

July 7, 2011

La Posta Band of Mission Indians  
Gwendolyn Parada, Chairperson  
PO Box 1120 Diegueno/Kumeyaay  
Boulevard , CA 91905  
gparada@lapostacasino.  
(619) 478-2113  
619-478-2125

Fort Yuma Quechan Indian Nation  
Michael Jackson., President  
PO Box 1899 Quechan  
Yuma , AZ 85366  
qitpres@quechantribe.com  
(760) 572-0213  
(760) 572-2102 FAX

Manzanita Band of Kumeyaay Nation  
Leroy J. Elliott, Chairperson  
PO Box 1302 Kumeyaay  
Boulevard , CA 91905  
ljbirdsinger@aol.com  
(619) 766-4930  
(619) 766-4957 Fax

Ewiiapaayp Tribal Office  
Will Micklin, Executive Director  
4054 Willows Road Diegueno/Kumeyaay  
Alpine , CA 91901  
wmicklin@leaningrock.net  
(619) 445-6315 - voice  
(619) 445-9126 - fax

Campo Kumeyaay Nation  
Monique LaChappa, Chairperson  
36190 Church Road, Suite 1 Diegueno/Kumeyaay  
Campo , CA 91906  
**(619) 478-9046**  
miachappa@campo-nsn.gov  
(619) 478-5818 Fax

Ewiiapaayp Tribal Office  
Michael Garcia, Vice Chairperson  
4054 Willows Road Diegueno/Kumeyaay  
Alpine , CA 91901  
michaelg@leaningrock.net  
(619) 445-6315 - voice  
(619) 445-9126 - fax

Kwaaymii Laguna Band of Mission Indians  
Carmen Lucas  
P.O. Box 775 Diegueno -  
Pine Valley , CA 91962  
(619) 709-4207

Cocopah Museum/Cultural Resources Dept.  
Jill McCormick, Tribal Archaeologist  
County 15th & Ave. G Cocopah  
Sommerton , AZ 85350  
**culturalres@cocopah.com**  
(928) 530-2291 - cell  
(928) 627-2280 - fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Mount Signal Solar Project; located eight miles southwest of the City of El Centro and just north of the U.S. - Mexico International Boundary; Imperial County, California.

**California Native American Contact List**  
Imperial County  
July 7, 2011

Quechan Indian Nation  
Bridget Nash-Chrabascz, THPO  
P.O. Box 1899                      Quechan  
Yuma                      , AZ 85366  
**b.nash@quechantribe.com**  
(928) 920-6068 - CELL  
(760) 572-2423

Ah-Mut-Pipa Foundation  
Preston J. Arrow-weed  
P.O. Box 160                      Quechan  
Bard                      , CA 92222      Kumeyaay  
ahmut@earthlink.net  
(928) 388-9456

Kumeyaay Cultural Repatriation Committee  
Bernice Paipa, Vice Spokesperson  
P.O. Box 1120                      Diegueno/Kumeyaay  
Boulevard                      , CA 91905  
(619) 478-2113

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Mount Signal Solar Project; located eight miles southwest of the City of El Centro and just north of the U.S. - Mexico International Boundary; Imperial County, California.

# **APPENDIX F**

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# **NOISE STUDY**

# NOISE ASSESSMENT

## Campo Verde Solar County of Imperial

Prepared for:

ENValue, LLC  
3225 Country Club Pkwy.  
Castle Rock, CO 80108

Prepared By:

***Ldn Consulting, Inc.***  
446 Crestcourt Lane  
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February 10, 2012

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## **GLOSSARY OF TERMS**

**Sound Pressure Level (SPL):** a ratio of one sound pressure to a reference pressure ( $L_{ref}$ ) of 20  $\mu$ Pa. Because of the dynamic range of the human ear, the ratio is calculated logarithmically by  $20 \log (L/L_{ref})$ .

**A-weighted Sound Pressure Level (dBA):** Some frequencies of noise are more noticeable than others. To compensate for this fact, different sound frequencies are weighted more.

**Minimum Sound Level ( $L_{min}$ ):** Minimum SPL or the lowest SPL measured over the time interval using the A-weighted network and slow time weighting.

**Maximum Sound Level ( $L_{max}$ ):** Maximum SPL or the highest SPL measured over the time interval the A-weighted network and slow time weighting.

**Equivalent sound level ( $L_{eq}$ ):** the true equivalent sound level measured over the run time.  $L_{eq}$  is the A-weighted steady sound level that contains the same total acoustical energy as the actual fluctuating sound level.

**Day Night Sound Level (Ldn):** Representing the Day/Night sound level, this measurement is a 24 –hour average sound level where 10 dB is added to all the readings that occur between 10 pm and 7 am. This is primarily used in community noise regulations where there is a 10 dB “Penalty” for night time noise. Typically Ldn is measured using A weighting.

**Community Noise Exposure Level (CNEL):** The accumulated exposure to sound measured in a 24-hour sampling interval and artificially boosted during certain hours. For CNEL, samples taken between 7 pm and 10 pm are boosted by 5 dB; samples taken between 10 pm and 7 am are boosted by 10 dB.

**Octave Band:** An octave band is defined as a frequency band whose upper band-edge frequency is twice the lower band frequency.

**Third-Octave Band:** A third-octave band is defined as a frequency band whose upper band-edge frequency is 1.26 times the lower band frequency.

**Response Time (F,S,I):** The response time is a standardized exponential time weighting of the input signal according to fast (F), slow (S) or impulse (I) time response relationships. Time response can be described with a time constant. The time constants for fast, slow and impulse responses are 1.0 seconds, 0.125 seconds and 0.35 milliseconds, respectively.

**Corona Affect (Corona):** Phenomenon associated with the electrical ionization of the air that occurs near the surface of the energized conductor and suspension hardware due to very high electric field strength. This is audible power line noise that is generated from electric Corona discharge, which is usually experienced as a random crackling or hissing sound.

## **EXECUTIVE SUMMARY**

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This noise study has been completed to determine the noise impacts associated with the development of the proposed Campo Verde Solar Energy Project. The Project site includes several parcels which total approximately 1,990 acres of private lands that have been used for agriculture. Construction of the project includes site preparation, foundation construction, erection of major equipment and structures, installation of electrical systems, control systems, and start-up/testing. These construction activities are expected to require approximately 12 to 24 months starting late 2012. The construction workforce is expected to reach a peak during month number seven (7) anticipated to occur during the 1st quarter of 2013 with a peak of up to 325 daily construction workers and 50 daily truck deliveries

During operations and maintenance, the project will primarily operate during daylight hours and will require (on average) less than 10 fulltime personnel for operations and maintenance. During a typical year, the project will require up to 10 daily water trucks for panel washing over approximately 15 business days; however, the washing frequency is estimated from one to four times a year.

Based on the empirical data, the manufactures specifications and the distances to the property lines the unshielded noise levels and cumulative noise levels from the proposed transformers/inverters, array tracker motors and the proposed Substation were found to be below the County's most restrictive nighttime property line standard of 45 dBA. No impacts are anticipated and no mitigation is required.

The measured Corona Affect noise levels were found to be below the County's most restrictive nighttime standard of 45 dBA. This was also consistent with previously measured and modeled noise levels on transmission line Projects throughout California operating at full capacity. No direct or cumulative impacts from the Corona are anticipated from the new transmission lines associated with the Project.

At a distance as close as 140 feet the point source noise attenuation from the grading activities and the nearest property line is -8.9 dBA. This would result in an anticipated worst case eight-hour average combined noise level of less than 75 dBA at the property line. During the installation of the PV panels at a distance of 130 feet would result in a noise level of less than 75 dBA. The mass grading and PV installation equipment is anticipated to average more than 500 feet from the nearest property line. Given this and the spatial separation of the equipment over the large site area, the noise levels of the grading and PV panel installation are anticipated to comply with the County of Imperial's 75 dBA standard at all Project property lines of each Phase and no impacts are anticipated.



Cumulatively, the project would not be expected to incrementally add to the noise levels during construction to any "reasonably foreseeable" projects as they are either not going to coincide with the project with respect to construction phasing or there prescribe worst-case construction noise levels would be separated by enough distance and not cumulatively add to one another.

The Project does create a short-term noise increase during the peak construction of more than 5 dBA CNEL in the "normally acceptable" category on one roadway segments. No sensitive receptors exist along this roadway segments and therefore sensitive receptors would be impacted by construction traffic noise due to the proposed Project's construction traffic and no mitigation would be required.

Traffic related short-term noise increases during the peak construction of the Project and Cumulative Projects has the potential to increase noise levels more than the acceptable limits on up to three roadway segments. Based on the list of cumulative projects, nearly all of the "reasonably foreseeable" projects in the area that affect the roadway noise levels are all photovoltaic projects. Thus, the traffic generation is due to short term construction traffic volumes. However, cumulatively, the project would not be expected to incrementally add to the roadway traffic noise levels to any "reasonably foreseeable" projects. This is because it is unlikely that the peak traffic from the construction of any other solar projects in the immediate area would coincide with the peak traffic period of the Project (a one-month period in the first quarter of 2013). Therefore, no impacts are anticipated during the proposed Project's construction traffic and no mitigation would be required.

During the operations of the Project it is estimated that the Project would generate less than 50 trips per day and no noise impacts would occur. Therefore, the Project's operational traffic will not result in a potentially significant direct or cumulative noise impact at existing or future noise sensitive land uses.

## 1.0 INTRODUCTION

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The purpose of this Noise study is to determine potential noise impacts (if any) that may be created during the construction or operation of the proposed Campo Verde Solar Project. The Project site is spread out and encompasses various agricultural lots totaling 1,990 acres. The Project is within the County of Imperial west of the City of Calexico. Additionally, portions of the Gen-Tie line would traverse through federal lands under the control of the Bureau of Land Management (BLM.)

### 1.1 Project Location

The Campo Verde Solar Project is a proposed solar photovoltaic (PV) energy-generating facility located in Imperial County approximately 7 miles southwest of the community of El Centro, California. The Project Site is south of I-8 and west of Drew Road and northeast of Westside Main Canal. The general location of the Project is shown below in Figure 1-A on Page 3 of this report. The Project site includes several parcels which total approximately 1,990 acres of private lands that have been used for agriculture. A Project overview and layout is provided in Figure 1-B below.

### 1.2 Project Description

The Campo Verde Solar Project is being developed to sell its electricity and all renewable and environmental attributes to an electric utility purchaser under a long-term contract to help meet California RPS goals. The applicant has a long-term Power Purchase Agreement (PPA) with San Diego Gas and Electric (SDG&E) to purchase output from the Project.

The Campo Verde Solar Project would use First Solar PV modules that are generally non-reflective and convert sunlight into direct current (DC) electricity. The DC output of multiple rows of PV modules is collected through one or more combiner boxes and directed to an inverter that converts the DC electricity to alternating current (AC) electricity. From the inverter, the generated energy flows to a transformer where it is stepped up to distribution level voltage (approximately 34.5 kV). Multiple transformers are connected in parallel via 34.5 kV lines to the Project substation, where the power will be stepped up to 230 kV.

The use of solar PV technology is consistent with the definition of an “eligible renewable energy resource” in Section 399.12 of the California Public Utilities Code and the definition of “in-state renewable electricity generation facility” in Section 25741 of the California Public Resources Code.

The PV modules will produce the electricity generated by the Project by converting sunlight directly into electricity. The major equipment in the solar field includes the following:

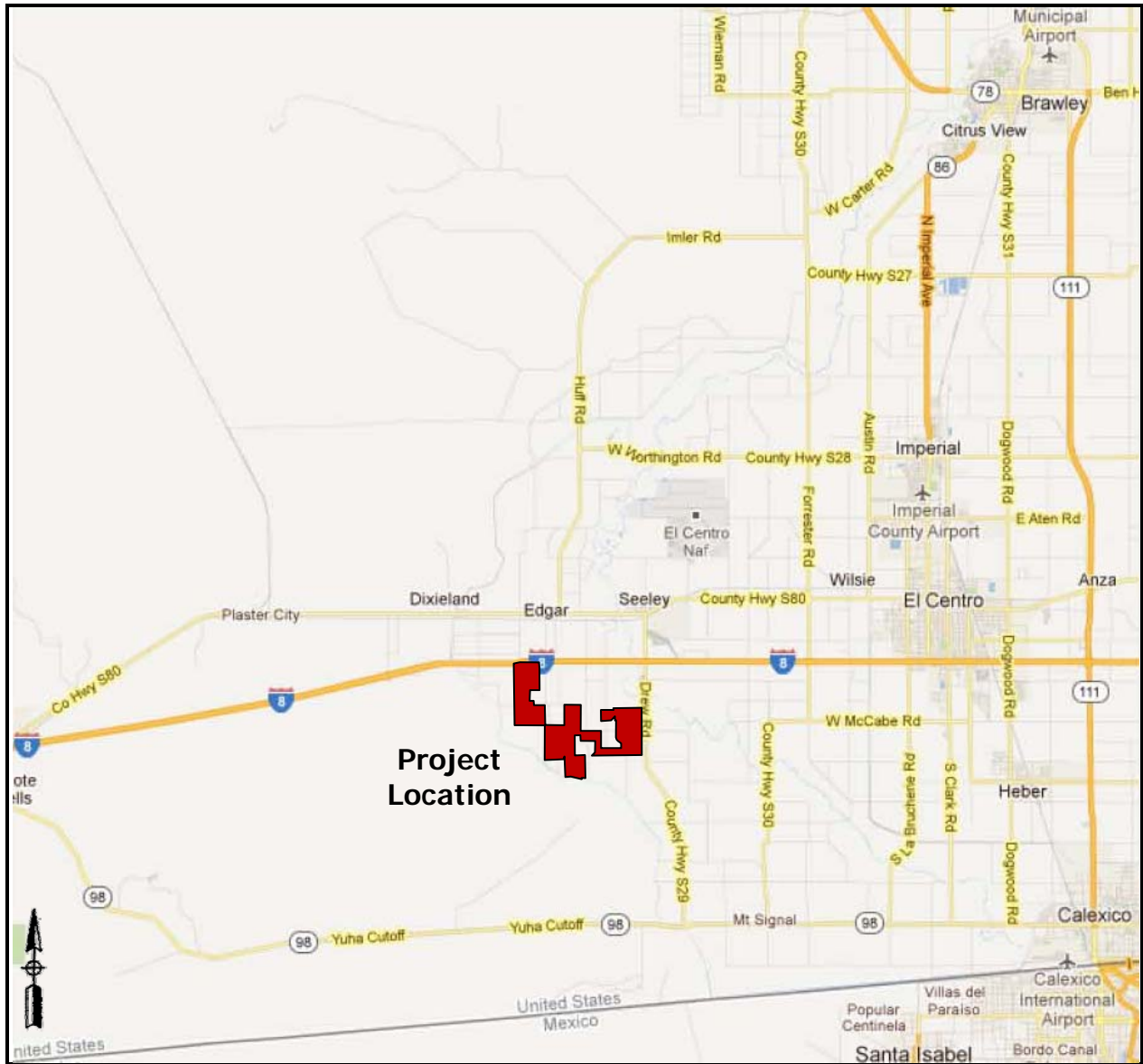
- Power Conversion Stations (PCS)
- 1000V DC collection system comprised of underground cabling and combiner boxes
- Medium voltage (12 kV and/or 34.5 kV) collection system
- Photovoltaic Combining Switchgear (PVCS)
- A Project Substation with 34.5 kV to 230kV/220kV step-up transformer(s) and switchyard
- Meteorological stations
- O&M buildings with parking and other associated facilities
- Telecommunications equipment

Construction of the project includes site preparation, foundation construction, erection of major equipment and structures, installation of electrical systems, control systems, and start-up/testing. These construction activities are expected to require approximately 12 to 24 months. The applicant anticipates construction to start in the second quarter of 2012 following a Conditional Use Permit (CUP) approval. According to the applicant, the construction workforce is expected to reach a peak during month number seven (7) anticipated to occur during the 1st quarter of 2013 with a peak of up to 325 daily vehicles for construction workers and 50 daily truck deliveries

During operations and maintenance, the project will primarily operate during daylight hours and will require (on average) less than 10 fulltime personnel for operations and maintenance. Operations personnel include employees running the facility, security, and any other work associated with the operations. Maintenance personnel include employees addressing maintenance on a daily basis. On average, the operations and maintenance trip generation is estimated at about 20 ADT with approximately 10 AM and 10 PM peak hour trips. During a typical year, the project will require up to 10 daily water trucks for panel washing over approximately 15 business days; however, the washing frequency is estimated from one to four times a year. During the washing period, the total project daily traffic may increase to 40 or 50 ADT over a 15 business day period.

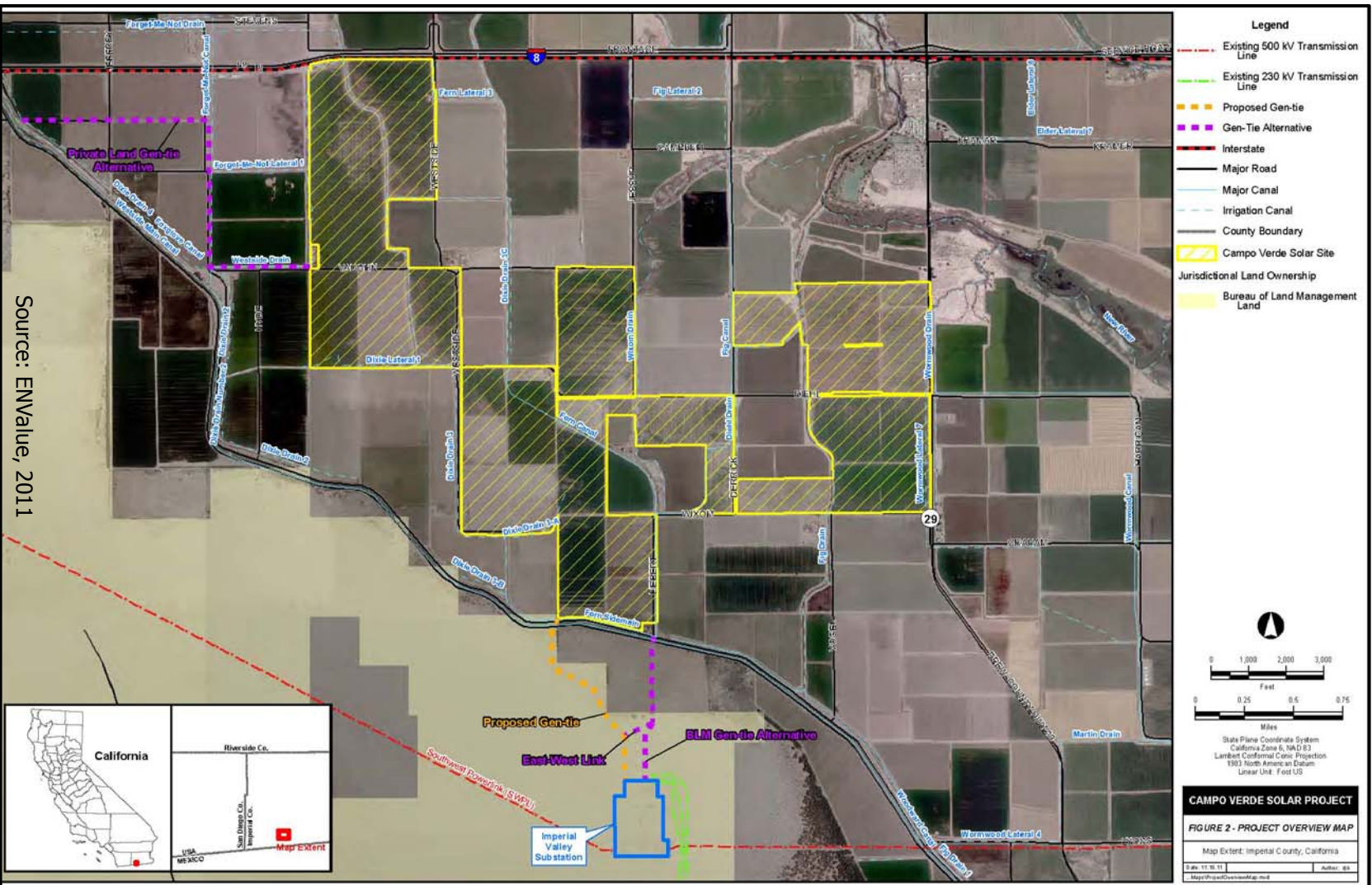
Since the operations and maintenance traffic generation is significantly less than the construction, the higher and more conservative construction trip generation was used to determine potential project impacts. In other words, the construction phase was used for the traffic analysis because it is calculated to generate significantly higher traffic than the project operations and maintenance phase when the Project is operational.

Figure 1-A: Project Vicinity Map and Project Footprint



Source: Google Maps, 12/11

Figure 1-B: Project Area Overview Map



Source: ENValue, 2011

### 1.3 Methodology and Equipment

Noise is defined as unwanted or annoying sound which interferes with or disrupts normal activities. Exposure to high noise levels has been demonstrated to cause hearing loss. The individual human response to environmental noise is based on the sensitivity of that individual, the type of noise that occurs and when the noise occurs.

Sound is measured on a logarithmic scale consisting of sound pressure levels known as a decibel (dB). The sounds heard by humans typically do not consist of a single frequency but of a broadband of frequencies having different sound pressure levels. The method for evaluating all the frequencies of the sound is to apply an A-weighting to reflect how the human ear responds to the different sound levels at different frequencies. The A-weighted sound level adequately describes the instantaneous noise whereas the equivalent sound level depicted as  $L_{eq}$  represents a steady sound level containing the same total acoustical energy as the actual fluctuating sound level over a given time interval.

The Community Noise Equivalent Level (CNEL) is the 24 hour A-weighted average for sound, with corrections for evening and nighttime hours. The corrections require an addition of 5 decibels to sound levels in the evening hours between 7 p.m. and 10 p.m. and an addition of 10 decibels to sound levels at nighttime hours between 10 p.m. and 7 a.m. These additions are made to account for the increased sensitivity during the evening and nighttime hours when sound appears louder.

Because mobile/traffic noise levels are calculated on a logarithmic scale, a doubling of the traffic noise or acoustical energy results in a noise level increase of 3 dBA. Therefore the doubling of the traffic volume, without changing the vehicle speeds or mix ratio, results in a noise increase of 3 dBA. Mobile noise levels radiate in an almost oblique fashion from the source and drop off at a rate of 3 dBA for each doubling of distance under hard site conditions and at a rate of 4.5 dBA for soft site conditions. Hard site conditions consist of concrete, asphalt and hard pack dirt while soft site conditions exist in areas having slight grade changes, landscaped areas and vegetation. On the other hand, fixed or point sources radiate outward uniformly as it travels away from the source. Point Source sound levels attenuate or drop off at a rate of 6 dBA for each doubling of distance.

The most effective noise reduction methods consist of controlling the noise at the source, blocking the noise transmission with barriers or relocating the receiver. Any or all of these methods could be required to reduce noise levels to an acceptable level.

### 1.3.1 Corona Affect Noise

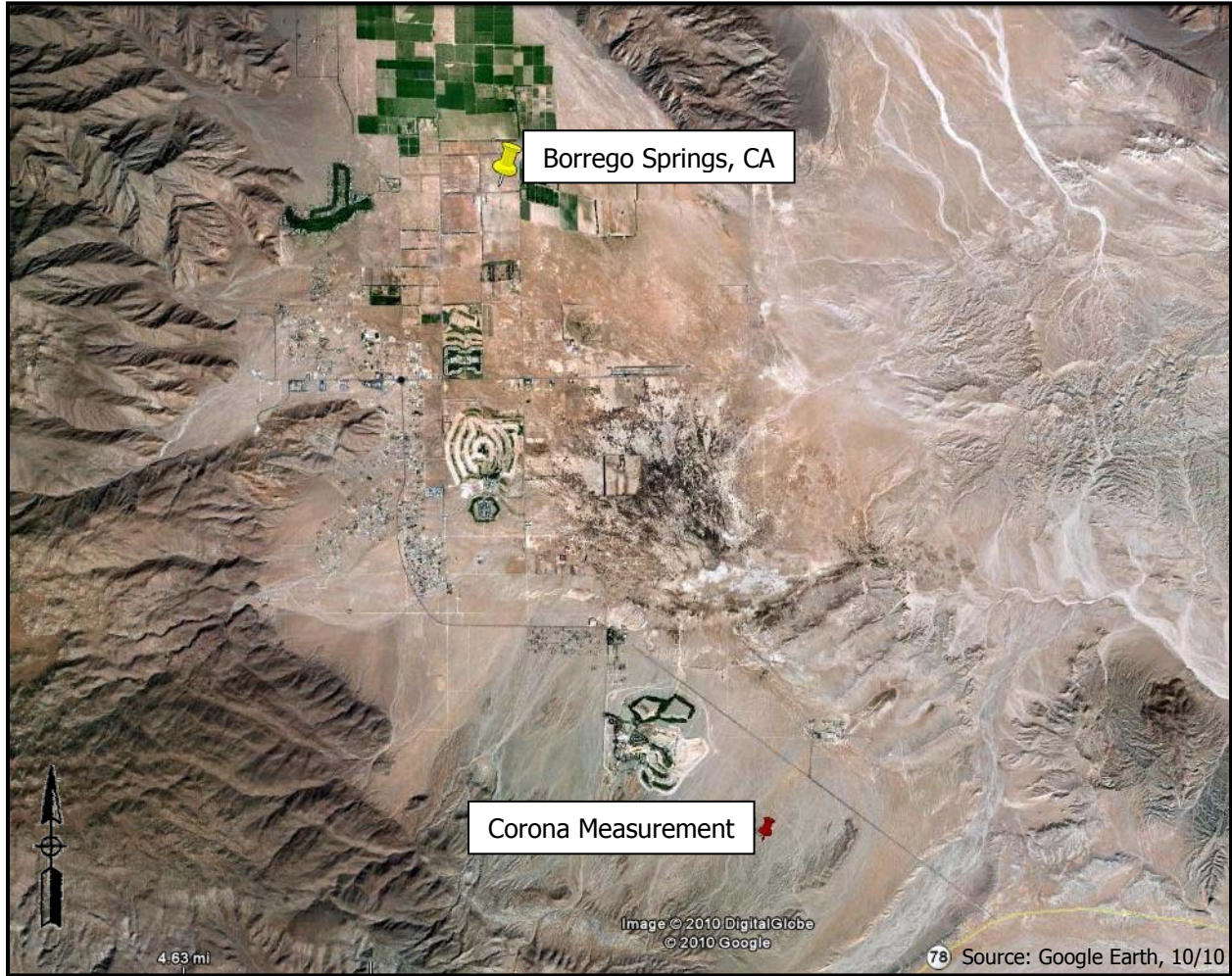
To assess potential noise impacts from the Corona Affect, measurements were taken along an existing San Diego Gas & Electric (SDG&E) transmission line located in the Borrego Springs area. The Corona Affect is a phenomenon associated with the electrical ionization of the air that occurs near the surface of the energized conductor and suspension hardware due to very high electric field strength. This is audible power line noise that is generated from electric Corona discharge, which is usually experienced as a random crackling or hissing sound. This was done to determine the local conditions and to establish a baseline for the Corona Affect of the proposed Gen-Tie transmission line. The noise measurements were conducted for a previous project by Ldn Consulting back in December 2009, between approximately 9:30 a.m. and 10:00 a.m. in dry, calm and clear conditions. The sound levels for the proposed on-site equipment were taken from the manufacture's specifications. The noise measurement location is provided graphically in Figure 1-C, denoted as Corona Measurement.

Noise measurements of the Corona Affect were taken using a Larson-Davis Model LxT Type 1 precision sound level meter, programmed, in "slow" mode, to record noise levels in "A" weighted form. The LxT was set to record in the low range of -10 to 110 dBA. The sound level meter and microphone were mounted on a tripod, five feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200. The noise measurement location was determined based on access and low ambient conditions to capture only the potential transmission line noise levels. The existing SDG&E transmission line measurements were taken mid-span between two power poles along an existing SDG&E easement located outside Borrego Springs, CA.

### 1.3.2 On-site Ambient Noise

To determine the existing noise environment and to assess potential noise impacts, measurements were taken at two locations on the project having a direct line of site to the adjacent roadways. This was done to determine the worst case conditions at the nearest proposed NSLU. The noise measurements were recorded on August 18, 2011 by Ldn Consulting between approximately 10:45 a.m. and 11:45 a.m. The noise monitoring locations are provided graphically in Figure 1-D. Noise measurements gathered at the Project site were taken using a Larson-Davis Model LxT Type 1 precision sound level meter, programmed, in "slow" mode, to record noise levels in "A" weighted form. The sound level meter and microphone were mounted on a tripod, five feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200.

**Figure 1-C: Corona Affect Noise Measurement Location**

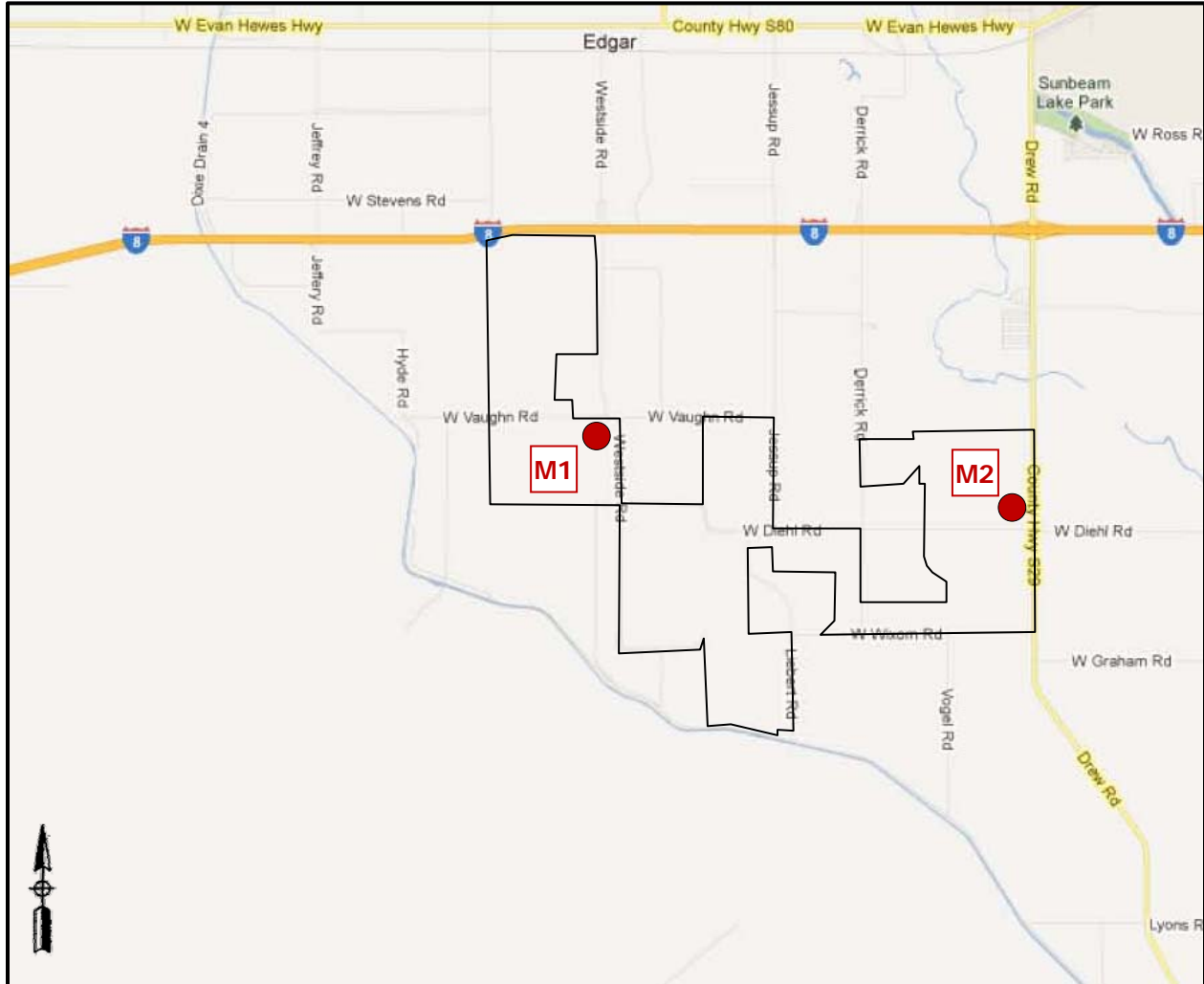


The noise measurement locations were determined based on site access and noise impact potential. Monitoring location 1 (M1) was located roughly 30-feet from Westside Road near the intersection of Vaughn Road. Monitoring location 2 (M2) was taken in the eastern portion of the site approximately 30-feet from Drew Road at the intersection of Diehl Road.

The results of the noise measurements are presented in Table 1-1 on the following Page. The noise measurements were monitored for a time period of 15 minutes each. The ambient Leq noise levels measured in the area of the project during the late morning and mid day were found to be between 50-55 dBA Leq on the western portion of the site and 90% (L90) the noise levels were 36-38 dBA. The existing noise levels in the project area consisted primarily of low traffic volumes along Drew Road and Westside Road and background noise from existing agricultural operations in the distances both on and adjacent to the site. The existing noise levels were found to be below County thresholds for all sensitive land uses.



**Figure 1-D: Project Site Noise Measurement Locations**



**Table 1-1: Project Site Ambient Noise Levels**

Location	Description	Time	Noise Levels (dBA)					
			Leq	Lmin	Lmax	L10	L50	L90
M1	Along Westside Road	10:45 a.m. – 11:00 a.m.	50.4	34.3	70.5	51.1	38.7	36.3
M2	Along Drew Road	11:30 a.m. – 11:45 a.m.	54.8	35.8	74.1	52.8	41.6	38.2

Source: Ldn Consulting, Inc. August 18, 2011

## 2.0 SIGNIFICANCE CRITERIA

### 2.1 Operational Standards

The Property Line Noise Limits listed in Table 9 of the County’s General Plan Noise Element and the County’s Ordinance, Title 9, Division 7 (Noise Abatement and Control) Section 90702.00 Subsection A provides acceptable Sound level limits based on the property zoning. The applicable property line sound level limits are provided in Table 2-1 below and shall apply to noise generation from one property to an adjacent property. The standards imply the existence of a sensitive receptor on the adjacent, or receiving, property. In the absence of a sensitive receptor, an exception or variance to the standards may be appropriate. These standards do not apply to construction noise.

**Table 2-1: Property Line Noise Level Limits**

Zone	Time	Applicable Limit One-hour Average Sound Level (Decibels)
Residential Zones	7 a.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
Multi-residential Zones	7 a.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
Commercial Zones	7 a.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	55
Light Industrial/Industrial Park Zones	Anytime	70
General Industrial Zones	Anytime	75

When the noise-generating property and the receiving property have different uses, the more restrictive standard shall apply. When the ambient noise level is equal to or exceeds the Property Line noise standard, the increase of the existing or proposed noise shall not exceed 3 dB  $L_{eq}$ .

The sound level limit between two zoning districts (different land uses) shall be measured at the property line between the properties.

Fixed-location public utility distribution or transmission facilities located on or adjacent to a property line shall be subject to the noise level limits of subsection A of this section, measured at or beyond six feet from the boundary of the easement upon which the equipment is located.

This section does not apply to noise generated by helicopters at heliports or helistops authorized by a conditional use permit.

This section does not apply to noise generated by standard agricultural field operating practices such as planting and harvesting of crops. The County of Imperial has a Right to Farm Ordinance (1031) which serves as recognition to agricultural practices to new development. Agricultural/industrial operations shall comply with the noise levels prescribed under the general industrial zones.

Source: County of Imperial Ordinance, Title 9, Division 7 (Noise Abatement and Control)

These standards are intended to be enforced through the County's code enforcement program on the basis of complaints received from persons impacted by excessive noise. It must be acknowledged that a noise nuisance may occur even though an objective measurement with a sound level meter is not available. In such cases, the County may act to restrict disturbing, excessive, or offensive noise which causes discomfort or annoyance to reasonable persons of normal sensitivity residing in an area.

## 2.2 Construction Noise Standards

Based on the County of Imperial's Noise Element of the General Plan, construction noise from a single piece of equipment or a combination of equipment, shall not exceed 75 dB  $L_{eq}$ , when averaged over an eight (8) hour period, and measured at the nearest sensitive receptor. This standard assumes a construction period, relative to an individual sensitive receptor of days or weeks. In cases of extended length construction times, the standard may be tightened so as not to exceed 75 dB  $L_{eq}$  when averaged over a one (1) hour period.

Construction equipment operation shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday. No commercial construction operations are permitted on Sunday or holidays. In cases of a person constructing or modifying a residence for himself/herself, and if the work is not being performed as a business, construction equipment operations may be performed on Sundays and holidays between the hours of 9 a.m. and 5 p.m. Such non-commercial construction activities may be further restricted where disturbing, excessive, or offensive noise causes discomfort or annoyance to reasonable persons of normal sensitivity residing in an area.

## 2.3 Significant Increase of Ambient Noise Levels

The increase of noise levels generally results in an adverse impact to the noise environment. The Noise/Land Use Compatibility Guidelines are not intended to allow the increase of ambient noise levels up to the maximum without consideration of feasible noise reduction measures. The following guidelines are established by the County of Imperial for the evaluation of significant noise impact.

- a. If the future noise level after the Project is completed will be within the "normally acceptable" noise levels shown in the Noise/Land Use Compatibility Guidelines, but will result in an increase of 5 dB CNEL or greater, the Project will have a potentially significant noise impact and mitigation measures must be considered.
- b. If the future noise level after the Project is completed will be greater than the "normally acceptable" noise levels shown in the Noise/Land Use Compatibility Guidelines, a noise increase of 3 dB CNEL or greater shall be considered a potentially significant noise impact and mitigation measures must be considered.

## **3.0 OPERATIONAL ACTIVITIES**

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### **3.1 Guidelines for the Determination of Significance**

The County Ordinance, Title 9, Division 7 (Noise Abatement and Control) states it is unlawful for any person to make or cause any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of their property exceeds the applicable limits provided above in Table 2-1. The Project and surrounding properties are zoned as A-2 - General Agriculture, A-2-R - General Agriculture, Rural Zone, and A-3 - Heavy Agriculture. Solar energy electrical generators, electrical power generating plants, substations, and facilities for the transmission of electrical energy are allowed as conditional uses in Agricultural zones. In keeping with the provisions of the zoning designation, the Applicant is seeking a Conditional Use Permit (CUP).

To be conservative, for the purposes of this analysis the most restrictive applicable sound limits identified in Section 90702.00 of the Noise Ordinance will be applied to accommodate the planning of not just existing but potential future residential uses that could be adjacent to the proposed Project. Section 90702.00 of the Noise Ordinance sets a sound level limit of 50 dBA Leq for daytime hours of 7 a.m. to 10 p.m. and 45 dBA Leq during the noise sensitive nighttime hours of 10 p.m. to 7 a.m. for residential noise sensitive land uses. Most of the proposed Project components will only operate during the daytime hours but a few may operate during nighttime or early morning hours and therefore the most restrictive and conservative approach is to apply the 45 dBA Leq nighttime standard at the property lines.

### **3.2 Potential Operational Noise Impacts**

This section examines the potential stationary noise source impacts associated with the operation of the proposed Project. Specifically, noise levels from the proposed transformers, inverters, the substation and the transmission lines. Panels would be electrically connected into panel strings using wiring attached to the racking. Gathering lines would connect individual panel strings to one or more inverters/transformers and combiner boxes distributed throughout the facility. The electrical current is then transferred to the inverters, which convert the Direct Current (DC) produced by the PV panels into Alternating Current (AC). A pad-mounted transformer next to the inverter would increase the voltage. The AC would then travel through underground gathering lines to the Project Substation.

The Project proposes the installation of up to 170 small-scale, above ground structures that would be located within the solar panel fields to shade inverter/distributor transformers and switching gear. These structures would be approximately 9 foot by 30 foot in size and 10 feet high at the roof apex. The structures would be open on the sides and constructed of wood and

steel and would be neutral in color. Each of these locations may house a Satcon PowerGate Plus 1 MW Commercial Solar PV Inverters, or equivalent, and one of the smaller transformers necessary to increase the voltage. The transformer and inverter locations will be spread out over the site with one transformer and one inverter grouped next to each other. The Project also proposes a Project Substation, switchyard and O&M Building located in the southern portion of the site west of Liebert Road north of the Westside Main Canal. The proposed Substation location and a typical inverter / transformer and PV array locations can be seen in Figure 3-A below. Please refer to the Conditional Use Permit Site Plans for more details.

The electric power produced by the Project will be feed into the existing system with the incorporation of a new 230 kV Gen-Tie transmission line running from the site to the existing Imperial Valley Substation as shown previously in Figure 1-B. The new transmission lines may increase a phenomenon referred to as the "Corona Affect" along the new transmission route. The operational noise levels from the proposed on site small-scale inverter/transformer buildings along with the Substation equipment and the offsite Corona Affect are analyzed separately below.

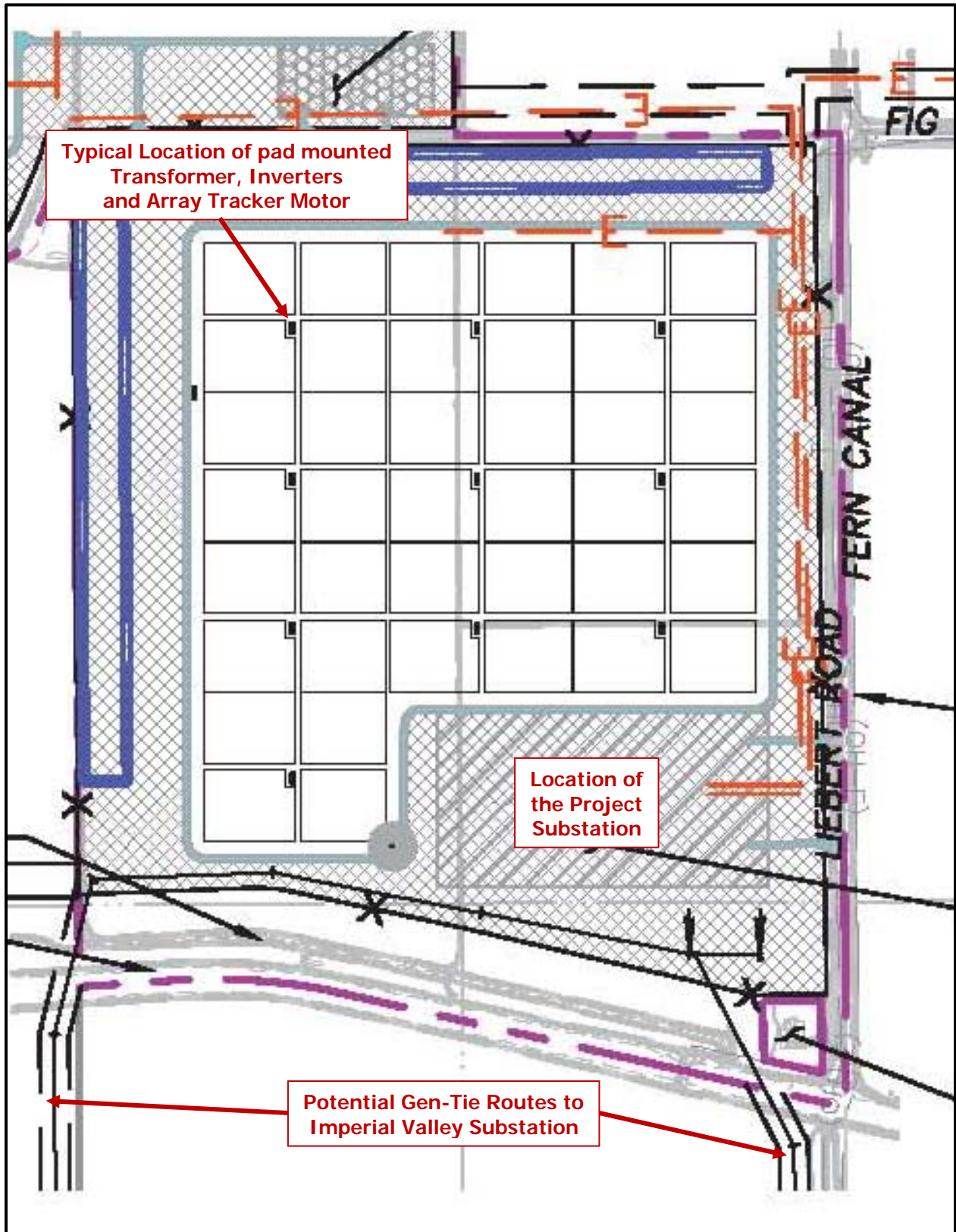
Sound from a small localized source (a "point" source) radiates uniformly outward as it travels away from the source. The sound level attenuates or drops-off at a rate of 6 dBA for each doubling of distance. A drop-off rate of 6 dBA per doubling of distance was used for all operational pieces of equipment. Using a point-source noise prediction model, calculations of the expected operational noise levels and potential impacts were completed. The essential model input data for these performance equations include the source levels of each type of equipment, relative source to receiver horizontal and any vertical separations, the amount of time the equipment is operating in a given day, also referred to as the duty-cycle and any transmission loss from topography or barriers. To determine the worst-case noise levels for the operations no topographic attenuation, duty-cycle reductions or barrier reductions were utilized.

### 3.2.1 Operational Noise Levels On-site

The Project may possibly utilize two different small-scaled transformers as part of the proposed inverter/transformer sites along with array tracker motors. The smaller transformers consist of a 1 megavolt-amp (MVA) from 200V to 12 kV and 1 MVA from 12V to 34.5 kV. A larger transformer is proposed as part of the Project's onsite substation. The unshielded noise levels for these small-scaled transformers and the larger transformer are provided below, respectively (*Source: National Electric Manufactures Association (NEMA) Publication No. TR 1-1993*):

1. 1 MVA from 200V to 12 kV - 58 dBA @ 5 feet
2. 1 MVA from 12V to 34.5 kV - 58 dBA @ 5 feet
3. 20 MVA from 34.5 to 69 kV - 71 dBA @ 5 feet

Figure 3-A: Proposed Equipment Locations



The proposed Satcon PowerGate Plus 1 MW Commercial Solar PV Inverter, or equivalent, has an unshielded noise rating of less than 65 dBA at 5 feet and the array tracker motor has a noise rating of 61 dBA at 5 feet (*Source: Satcon PowerGate Specifications, 2009*). The NEMA test results for transformers and the proposed Satcon inverters manufacturer's specifications are provided as **Attachment A** of this report.

Transformer/Inverter and Array Tracker Noise Levels

The worst case property line noise levels will occur where a transformer/inverter and array tracker motor are located approximately 269-feet from the property as can be seen in Figure 3-A above along Liebert Road. Currently the adjacent properties are zoned for agricultural uses but to be conservative the most restrictive residential nighttime property line standard of 45 dBA was assessed. This was done so that if a future residence or residential development are constructed the proposed Project will still be in compliance with the County standards. The noise levels of 58 dBA for the transformer, 65 dBA for the inverter and 61 dBA for the array tracker motor were combined and propagated out to the property line without any shielding. The results of the propagated noise levels are shown in Table 3-2.

The combined noise level at the nearest property line was projected to be 43.5 dBA Leq and no impacts are anticipated. In fact, at a distance of 65 feet or more the transformers/inverters and array tracker motors, unshielded, will comply with the County's most restrictive property line standard of 45 dBA Leq and no additional analysis is needed for the transform/inverters. Additionally, the transformers/inverters and array tracker motors are located 375 feet or more from other transformers/inverters and will not cumulatively raise the noise levels at the nearest property line due to their distance separation.

**Table 3-2: Transformer/Inverter and Tracker Noise – Nearest Property Line**

Source	Noise Level @ 5-Feet (dBA) <sup>1</sup>	Distance to Nearest Property Line (Feet)	Noise Reduction due to distance (dBA)	Resultant Noise Level @ Property Line (dBA Leq)	Property Line Standard (dBA Leq)	Impact?
Transformer	58.0	75	-34.6	23.4	45	No
Inverter	65.0	75	-34.6	30.4	45	No
Array Tracker	61.0	75	-34.6	26.4	45	No
Cumulative Noise Level @ Property Line (dBA)				32.4	45	No
<sup>1</sup> Noise data provided as an attachment to this report						

### Proposed Project Substation Noise Levels

The proposed Project's onsite Substation will be located in the southern portion of the site west of Liebert Road north of the Westside Main Canal (please refer to Figure 3-A above). The Substation is located 300 feet or more from the nearest property line, located to the south. As stated above, the larger transformer at the Substation has a noise level of 71 dBA at a distance of 5 feet. The reduction in the noise level at a distance of 300 feet is -35.6 dBA resulting in a noise level below 36 dBA at the nearest property line from the Substation. Therefore, the proposed Substation will comply with the County's most restrictive property line standard of 45 dBA Leq and no additional analysis is needed for the Substation.

#### 3.2.2 Cumulative Operational Noise Levels

The location and relationships of the Substation, transformer/inverter and the nearest property line for the Project configuration is shown above in Figure 3-A above. To determine the cumulative noise levels at the property line, the noise levels of 58 dBA from the transformer, 65 dBA for the inverter, 61 dBA from the array tracker motor and 71 dBA for the larger transformer at the Substation were all combined and propagated out to the nearest property line without any shielding from the proposed buildings.

The results of the cumulative noise levels for are provided in Table 3-3. The combined noise levels at the nearest property line were projected to be 37.2 dBA Leq and no impacts are anticipated from the Substation located in the southern portion of the Project site. Therefore, the Substation in combination with the pad mounted transformer/inverters and array tracker motors will comply with the County's most restrictive property line standard of 45 dBA Leq as identified above Table 3-3 and no future analysis is needed and no impacts are anticipated.

**Table 3-3: Cumulative Operational Property Line Noise Levels**

Source	Measurement Distance from Source (Feet)	Measured Noise Level (dBA)	Distance to Nearest Property Line (Feet)	Noise Reduction due to distance (dBA)	Resultant Noise Level @ Property Line (dBA Leq)	Property Line Standard (dBA Leq)	Impact?
Transformer	5	58.0	269	-34.6	<b>23.4</b>	45	<b>No</b>
Inverter	5	65.0	269	-34.6	<b>30.4</b>	45	<b>No</b>
Array Tracker	5	61.0	269	-34.6	<b>26.4</b>	45	<b>No</b>
Substation	5	71.0	300+	-35.6	<b>35.4</b>	45	<b>No</b>
Cumulative Noise Level @ Property Line (dBA)					37.2	45	<b>No</b>

<sup>1</sup> Noise data provided as an attachment to this report



### 3.2.3 Corona Affect Noise Levels

The Corona Affect (Corona) is a phenomenon associated with the electrical ionization of the air that occurs near the surface of the energized conductor and suspension hardware due to very high electric field strength. This is audible power line noise that is generated from electric Corona discharge, which is usually experienced as a random crackling or hissing sound. The amount of Corona produced by a transmission line is a function of the voltage of the line, the diameter of the conductors, the locations of the conductors in relation to each other, the elevation of the line above sea level, the condition of the conductors and hardware, and the local weather conditions.

Corona increases at higher elevations where the density of the atmosphere is less than at sea level. Audible noise will vary with elevation with the relationship of  $X/300$  where  $X$  is the elevation of the transmission line above sea level measured in meters (EPRI 2005). Audible noise at 600 meters (~2,000 feet) in elevation will be twice the audible noise at 300 meters, all other things being equal. Typically for transmission lines the maximum Corona noise during wet weather conditions is usually less than 40 dBA at the edge of the right of way (ROW) (*Source: Miguel-Mission 230 kV #2 Project, Aspen Environmental Group, 2004*). Corona typically becomes a design concern for transmission lines at 345 kV and above and is less noticeable from lines like those proposed for the Project that are operated at lower voltages.

The electric field gradient is greatest at the surface of the conductor. Large-diameter conductors have lower electric field gradients at the conductor surface and, hence, lower Corona than smaller conductors. Irregularities, such as nicks and scrapes on the conductor surface, concentrate the electric field at these locations and increase the electric field gradient and thus the resulting Corona. Similarly, dust or insects on the conductor surface can cause irregularities and are a source for Corona along with moisture from fog or raindrops. Corona noise is primarily audible during wet weather conditions such as fog and rain. Heavy rain will typically generate a noise level from the falling rain drops hitting the ground that will be greater than the noise generated by Corona and thus mask the audible noise from the transmission lines. Corona produced by a transmission line can be reduced by changing the design of the transmission line and through the selection of the conductors and hardware used for the construction of the line. For instance the use of conductor hangers that have rounded rather than sharp edges and no protruding sharp edges will help reduce Corona.

To determine the Corona Affect of the proposed Gen-Tie transmission line, noise measurements were previously taken along an existing SDG&E transmission line in the Borrego Springs area for a different solar power Project. The short-term measurements were conducted by Ldn Consulting December 4, 2009. The noise measurements were conducted along an SDG&E easement south of Borrego Springs as depicted previously in Figure 1-C. Due to ambient noise

sources consisting of airplanes, automobiles and birds only one-minute measurements could be taken without the results being affected by factors other than the existing transmission lines. During the noise measurements, the crackling or hissing of the transmission lines was slightly audible and the weather conditions were dry and calm. The results of those short-term measurements are provided in Table 3-4 below.

As can be seen in Table 3-4, during the dry conditions the noise levels from the Corona were very low, below 20 dBA. Typically during moist or wet conditions the Corona noise can double. This would result in a noise level of 35-37 dBA which is consistent with previous studies and modeling efforts conducted by the Electric Power Research Institute (EPRI) and CH2M Hill for the Cross Valley Transmission Line Project conducted for Southern California Edison 2008. The Corona is based on the transmission lines at full capacity not just the Project related power but the cumulative transmission of power.

**Table 3-4: Measured Corona Noise Levels**

Location	Time	One Hour Noise Levels (dBA)						Property Line Standard (dBA Leq)	Impact?
		Leq	Lmin	Lmax	L10	L50	L90		
Transmission Lines Borrego Springs	9:35–9:36 a.m.	17.6	16.7	22.7	18.7	17.0	16.8	45	No
Transmission Lines Borrego Springs	9:37–9:38 a.m.	18.3	17.4	27.2	19.3	18.1	17.7	45	No

Source: Ldn Consulting, Inc. December 4, 2009

### 3.3 Conclusions

Based on the empirical data, the manufactures specifications and the distances to the property lines the unshielded noise levels and cumulative noise levels from the proposed transformers/inverters, array tracker motors and the proposed Substation were found to be below the County’s most restrictive nighttime property line standard of 45 dBA. No impacts are anticipated and no mitigation is required. The measured Corona Affect noise levels were found to be below the County’s most restrictive nighttime standard of 45 dBA. This was also consistent with previously measured and modeled noise levels on transmission line Projects throughout California operating at full capacity. No direct or cumulative impacts from the Corona are anticipated from the new transmission lines associated with the Project.

## 4.0 CONSTRUCTION ACTIVITIES

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### 4.1 County of Imperial Construction Standards

Construction noise, from a single piece of equipment or a combination of equipment, shall not exceed 75 dB  $L_{eq}$ , when averaged over an eight (8) hour period, and measured at the nearest sensitive receptor. This standard assumes a construction period, relative to an individual sensitive receptor of days or weeks. In cases of extended length construction times, the standard may be tightened so as not to exceed 75 dB  $L_{eq}$  when averaged over a one (1) hour period. Construction equipment operation shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m. Saturday. No commercial construction operations are permitted on Sunday or holidays.

### 4.2 Potential Project Construction Noise Impacts

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment includes haul trucks, water trucks, graders, dozers, loaders and scrapers can reach relatively high levels. Grading activities typically represent one of the highest potential sources for noise impacts and little or no grading will be necessary for this Project. The most effective method of controlling construction noise is through local control of construction hours and by limiting the hours of construction to normal weekday working hours.

The U.S. Environmental Protection Agency (U.S. EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment. Noise levels generated by heavy construction equipment at a distance of 50 feet can range from 60 dBA for a small tractor up to 100 dBA for rock breakers. However, these noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 87 dBA measured at 50 feet from the noise source would be reduced to 81 dBA at 100 feet from the source and be further reduced to 75 dBA at 200 feet from the source.

Using a point-source noise prediction model, calculations of the expected construction noise impacts were completed. The essential model input data for these performance equations include the source levels of each type of equipment, relative source to receiver horizontal and vertical separations, the amount of time the equipment is operating in a given day, also referred to as the duty-cycle and any transmission loss from topography or barriers. To determine the worst-case noise levels for the grading operations no topographic attenuation or barrier reductions were utilized.

The Project construction period is expected to be 12-24 months and includes all site preparation, installation of the PV panels and all utilities including the Gen-Tie line. The mass

grading and subsequent installation of the utilities and the installation of the PV panels are discussed separately below. The noise levels utilized in this analysis for the mass grading and trenching operations are based upon the anticipated list of equipment proved by the Project Applicant and is shown in Table 4-1 below. Most of the construction activities will consist of clearing and grubbing the site and the trenching of utilities for the preparation of the PV panels. The equipment is anticipated to be spread out over the entire site with some equipment potentially operating near the property line while the rest of the equipment may be located over 1,000-2,000 feet from the same property line. This would result in an acoustical center for the grading operation of more than 500 feet from the nearest property line.

**Table 4-1: Construction Grading Noise Levels**

Construction Equipment	Quantity	Duty Cycle (Hours/Day)	Source Level @ 50-Foot (dBA)	Cumulative Noise Level @ 50-Foot (dBA Leq-8h)
Graders	2	6.8	74	76.3
Rubber Tired Dozers	2	6.8	72	74.3
Water Trucks	4	6.8	70	75.3
Other Equipment	3	8	72	76.8
Rollers	2	6.8	75	77.3
Tractors/Loaders/Backhoes	2	6.8	73	75.3
Rough Terrain Forklifts	2	1.7	72	68.3
Cumulative Levels @ 50 Feet (dBA)				83.9
Distance To Property Line				140
Noise Reduction Due To Distance				-8.9
NEAREST PROPERTY LINE NOISE LEVEL				75.0
County of Imperial Threshold				75
<b>IMPACT?</b>				<b>NO</b>

As can be seen in Table 4-1, if all the equipment was operating in the same location, which is not physically possible, at a distance as close as 140 feet from the nearest property line the point source noise attenuation from construction activities is -8.9 dBA. This would result in an anticipated worst case eight-hour average combined noise level of less than 75 dBA at the property line. Given this and the spatial separation of the equipment, the noise levels will comply with the County of Imperial's 75 dBA standard at all Project property lines and no impacts are anticipated.

The installation of the PV panels will utilize a total of two small pile drivers to install the panel stands, two mobile cranes to move the PV panel in position and two pneumatic tools to secure the panels to the stands. The noise levels utilized for the installation of the PV panels in this analysis are based upon the anticipated list of equipment provided by the Project Applicant and are shown in Table 4-2 below. Based upon normal installation procedures the equipment is anticipated to be spread out over the entire site similar to the mass grading operation. Some equipment will be operating near the property line while the rest of the equipment may be located over 1,000-2,000 feet from the same property line. This would result in an acoustical center for the PV installation operation of more than 500 feet from the nearest property line. The distance to the property lines would increase as the interior panels are installed and the noise levels would decrease due to distance.

**Table 4-2: PV Panel Installation Noise Levels**

Construction Equipment	Quantity	Duty Cycle (Hours/Day)	Source Level @ 50-Foot (dBA)	Cumulative Noise Level @ 50-Foot (dBA Leq-8h)
Rough Terrain Forklifts	8	1.7	72	74.3
Cranes	4	1.8	75	74.5
Generator Sets	1	8	74	74.0
Tractors/Loaders/Backhoes	1	8	73	73.0
Air Compressors	2	4	76	76.0
Forklifts	2	7	72	74.4
Water Trucks	3	2	70	68.8
Aerial Lifts	1	8	70	70.0
Crawler Tractors	1	8	72	72.0
Cumulative Levels @ 50 Feet (dBA)				83.0
Distance To Property Line				130
Noise Reduction Due To Distance				-8.3
NEAREST PROPERTY LINE NOISE LEVEL				74.7
County of Imperial Threshold				75
<b>IMPACT?</b>				<b>NO</b>

As can be seen above in Table 4-2, if all the equipment was operating in the same location, which is not physically possible, at a distance as close as 130 feet from the nearest property line the point source noise attenuation from construction activities is -8.3 dBA. This would result in an

anticipated worst case eight-hour average combined noise level of less than 75 dBA at the property line. Given this and the spatial separation of the equipment, the noise levels will comply with the County of Imperial's 75 dBA standard at all Project property lines and no impacts are anticipated.

#### 4.3 Potential Cumulative Construction Noise Impacts

Results of the analysis indicate that the project will meet the County 75 dBA standard for grading activities at all project property lines without mitigation at a distance as 140 feet. If cumulative grading operations from other planned or approved Projects are simultaneously occurring at a shared property line noise levels may exceed the County threshold of 75 dBA. The two separate operations would be considered overlapping and would act as a single noise generator. To reduce the noise levels below the County's 75 dBA threshold the construction operations would need to be moved to a distance of 200 feet from the shared property line. This increase in distance would reduce the noise levels below the County's property line standard of 75 dBA. Cumulatively, the project would not be expected to incrementally add to the noise levels during construction to any "reasonably foreseeable" projects as they are either not going to coincide with the project with respect to construction phasing or their worst-case construction noise levels would be separated by enough distance and not cumulatively add to one another.

#### 4.4 Construction Conclusions

At a distance as close as 140 feet the point source noise attenuation from the grading activities and the nearest property line is -8.9 dBA. This would result in an anticipated worst case eight-hour average combined noise level of less than 75 dBA at the property line. During the installation of the PV panels at a distance of 130 feet would result in a noise level of less than 75 dBA. The mass grading and PV installation equipment is anticipated to average more than 500 feet from the nearest property line. Given this and the spatial separation of the equipment over the large site area, the noise levels of the grading and PV panel installation are anticipated to comply with the County of Imperial's 75 dBA standard at all Project property lines of each Phase and no impacts are anticipated.

Cumulatively, the project would not be expected to incrementally add to the noise levels during construction to any "reasonably foreseeable" projects as they are either not going to coincide with the project with respect to construction phasing or their worst-case construction noise levels would be separated by enough distance and not cumulatively add to one another.

## 5.0 TRAFFIC RELATED NOISE

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### 5.1 Off-site Traffic Related Noise Impacts

The off-site Project related roadway segment noise levels Projected in this report were calculated using the methods in the Highway Noise Model published by the Federal Highway Administration (FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108, December, 1978). The FHWA Model uses the traffic volume, vehicle mix and speed to compute the equivalent noise level. A spreadsheet calculation was used which computes equivalent noise levels for each of the time periods used in the calculation of CNEL. Weighting these equivalent noise levels and summing them gives the CNEL for the traffic Projections. The noise contours are then established by iterating the equivalent noise level until the distance to the desired noise contour(s) are found.

Because mobile/traffic noise levels are calculated on a logarithmic scale, a doubling of the traffic noise or acoustical energy results in a noise level increase of 3 dBA. Therefore the doubling of the traffic volume, without changing the vehicle speeds or mix ratio, results in a noise increase of 3 dBA. Mobile noise levels radiates in an almost oblique fashion from the source and drop off at a rate of 3 dBA for each doubling of distance under hard site conditions and at a rate of 4.5 dBA for soft site conditions. Hard site conditions consist of concrete, asphalt and hard pack dirt while soft site conditions exist in areas having slight grade changes, landscaped areas and vegetation. Soft site conditions, based on the existing ground conditions and agricultural use, were used to develop the noise contours and analyze noise impacts along all roadway segments. The future traffic noise model utilizes a typical, conservative vehicle mix of 95% Autos, 3% Medium Trucks and 2% Heavy Trucks for all analyzed roadway segments. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks and heavy trucks for input into the FHWA Model.

Project related roadway noise levels would be considered significant if the future noise level with the Project will be within the "normally acceptable" noise levels shown in the Noise/Land Use Compatibility Guidelines, but will result in an increase of 5 dBA CNEL or greater. If the future noise levels with the Project will be greater than the "normally acceptable" noise levels shown in the Noise/Land Use Compatibility Guidelines, a noise increase of 3 dBA CNEL or greater shall be considered a potentially significant noise impact and mitigation measures must be considered.

### 5.2 Project Related Traffic Noise Impacts

#### Direct Construction Traffic Noise Impacts

To determine if roadway noise level increases associated during the construction of the Project will create noise impacts, the noise levels for the existing conditions were compared with the noise

level increase from the Project' peak related construction traffic. The worst case construction related noise increases would occur when comparing the existing 2011 conditions prior to construction beginning in the year 2012. To be conservative, the construction phase's peak, one month, traffic volume was utilized. Utilizing the Project's traffic assessment (Source: LOS Engineering, Inc. 12/11) noise contours were developed for the following traffic scenarios:

Existing Year 2011: Current noise conditions without the construction of the Project.

Existing Year 2011 Plus Project: Current noise conditions plus the peak construction related traffic of the Project.

Existing Year 2011 vs. Existing Year 2011 Plus Project: Comparison of the Project construction traffic related noise level increases in the vicinity of the Project site.

The noise levels and the distances to the 60 dBA CNEL contours for the roadways in the vicinity of the Project site are given in Table 5-1 for the Existing Year 2011 Scenario without Project construction traffic and in Table 5-2 for the Existing Year 2011 Plus Project construction traffic Scenario. Note that the values given do not take into account the effect of any noise barriers or topography that may affect ambient noise levels. Table 5-3 presents the comparison of the Existing Year 2011 with and without Project related noise levels. The overall roadway segment noise levels will increase from 0.3 dBA CNEL to 12.9 dBA CNEL during the construction of the Project based on the anticipated Project related construction traffic.

**Table 5-1: Existing Traffic Noise Levels (Without Project)**

Roadway Segment	ADT <sup>1</sup>	Vehicle Speeds (MPH) <sup>1</sup>	Noise Level @ 50-Foot (dBA CNEL)	60 dBA CNEL Contour Distance (Feet)
<b>Diehl Road</b>				
Derrick Road to Drew Road	199	40	51.3	13
<b>Drew Road</b>				
Evan Hewes Highway to I-8	2,443	55	65.3	112
I-8 to Diehl Road	1,033	55	61.5	63
Diehl Road to SR-98	512	55	58.5	40
<b>Evan Hewes Highway</b>				
Derrick Road to Drew Road	2,954	40	63.0	79
Drew Road to Forrester Road	2,843	40	62.8	77
<b>Forrester Road</b>				
Evan Hewes Highway to I-8	5,551	55	68.8	194
<sup>1</sup> Source: Project Traffic study prepared by LOS Engineering, Inc. 12/11				



**Table 5-2: Existing + Project Traffic Noise Levels**

Roadway Segment	ADT <sup>1</sup>	Vehicle Speeds (MPH) <sup>1</sup>	Noise Level @ 50-Foot (dBA CNEL)	60 dBA CNEL Contour Distance (Feet)
<b>Diehl Road</b>				
Derrick Road to Drew Road	1,128	40	58.8	42
<b>Drew Road</b>				
Evan Hewes Highway to I-8	2,589	55	65.5	117
I-8 to Diehl Road	1,912	55	64.2	95
Diehl Road to SR-98	639	55	59.5	46
<b>Evan Hewes Highway</b>				
Derrick Road to Drew Road	3,142	40	63.3	83
Drew Road to Forrester Road	3,031	40	63.1	81
<b>Forrester Road</b>				
Evan Hewes Highway to I-8	6,145	55	69.3	208

<sup>1</sup> Source: Project Traffic study prepared by LOS Engineering, Inc. 12/11

**Table 5-3: Existing vs. Existing + Project Traffic Noise Levels**

Roadway Segment	Existing Noise Level @ 50-Foot (dBA CNEL)	Existing Plus Project Noise Level @ 50-Foot (dBA CNEL)	Project Related Noise Level Increase (dBA CNEL)	County Noise Increase Threshold	Potential Impact?
<b>Diehl Road</b>					
Derrick Road to Drew Road	51.3	58.8	<b>7.5</b>	5	<b>Yes</b>
<b>Drew Road</b>					
Evan Hewes Highway to I-8	65.3	65.5	0.3	3	No
I-8 to Diehl Road	61.5	64.2	2.7	3	No
Diehl Road to SR-98	58.5	59.5	1.0	5	No
<b>Evan Hewes Highway</b>					
Derrick Road to Drew Road	63.0	63.3	0.3	3	No
Drew Road to Forrester Road	62.8	63.1	0.3	3	No
<b>Forrester Road</b>					
Evan Hewes Highway to I-8	68.8	69.3	0.4	3	No

Sound Levels provided are worst-case and do not take into account topography or shielding from barriers.

The Project does create a short-term noise increases during the peak construction of more than 5 dBA CNEL on one roadway segment as can be seen in **bold** in the last column of Table 5-3 below.

The noise level is below the 60 dBA CNEL threshold and in the “normally acceptable” category. Additionally, no sensitive receptors exist along this roadway segment. No sensitive receptors would be directly impacted by construction traffic noise due to the proposed Project’s construction traffic and no mitigation would be required.

#### Cumulative Construction Traffic Noise Impacts

To determine if cumulative off-site noise level increases associated with the peak construction of the proposed project and other planned or permitted projects in the vicinity will create noise impacts, the noise levels for the peak construction period of the Project and other planned and permitted projects were compared with the existing opening year conditions. To be conservative, the construction phase’s peak, one month, traffic volume was utilized. Utilizing the project’s traffic assessment (Source: LOS Engineering, Inc. 12/11) noise contours were developed for the following traffic scenarios:

Existing Year 2011 Plus Project Plus Cumulative Projects: Current day noise conditions plus the peak construction period of the project and other permitted or planned projects.

Existing Year 2011 vs. Existing Year 2011 Plus Project Plus Cumulative: Comparison of the existing noise levels and the related noise level increases from the combination of the proposed project peak construction traffic and all other planned or permitted projects in the vicinity of the site.

The existing noise levels and the distances to the 60 dBA CNEL contours for the roadways in the vicinity of the Project site are given in Table 5-1 above for the Existing Year 2011 Scenario. The cumulative noise conditions are provided in Table 5-4 below. No noise barriers or topography that may affect noise levels were incorporated in the calculations. Table 5-5 presents the comparison of the Existing Year 2011 and the Existing Year 2011 plus Project and Cumulative noise levels.

Traffic related short-term noise increases during the peak construction of the Project and Cumulative Projects has the potential to increase noise levels more than the acceptable limit on three roadway segments as can be seen in **bold** in the last column of Table 5-5 below. Based on the list of cumulative projects, nearly all of the “reasonably foreseeable” projects in the area that affect the roadway noise levels are all photovoltaic projects. Thus, the traffic generation is due to short term construction traffic volumes. However, cumulatively, the project would not be expected to incrementally add to the roadway traffic noise levels to any “reasonably foreseeable” projects. This is because it is unlikely that the peak traffic from the construction of any other solar projects in the immediate area would coincide with the peak traffic period of the Project (a one-month period in the first quarter of 2013). Therefore, no impacts are anticipated during the proposed Project’s construction traffic and no mitigation would be required.

**Table 5-4: Existing + Project + Cumulative Traffic Noise Levels**

Roadway Segment	ADT <sup>1</sup>	Vehicle Speeds (MPH) <sup>1</sup>	Noise Level @ 50-Foot (dBA CNEL)	60 dBA CNEL Contour Distance (Feet)
<b>Diehl Road</b>				
Derrick Road to Drew Road	1,128	40	58.8	42
<b>Drew Road</b>				
Evan Hewes Highway to I-8	2,915	55	66.0	126
I-8 to Diehl Road	3,339	55	66.6	138
Diehl Road to SR-98	2,066	55	64.6	101
<b>Evan Hewes Highway</b>				
Derrick Road to Drew Road	3,529	40	63.8	89
Drew Road to Forrester Road	3,449	40	63.7	88
<b>Forrester Road</b>				
Evan Hewes Highway to I-8	6,996	55	69.8	227

<sup>1</sup> Source: Project Traffic study prepared by LOS Engineering, Inc. 12/11

**Table 5-5: Existing vs. Existing + Project + Cumulative Traffic Noise Levels**

Roadway Segment	Existing Noise Level @ 50-Foot (dBA CNEL)	Existing Plus Project Plus Cumulative Noise Level @ 50-Foot (dBA CNEL)	Cumulative Related Noise Level Increase (dBA CNEL)	County Noise Increase Threshold	Potential Impact?
<b>Diehl Road</b>					
Derrick Road to Drew Road	51.3	58.8	7.5	5	Yes
<b>Drew Road</b>					
Evan Hewes Highway to I-8	65.3	66.0	0.8	3	No
I-8 to Diehl Road	61.5	66.6	5.1	3	Yes
Diehl Road to SR-98	58.5	64.6	6.1	5	Yes
<b>Evan Hewes Highway</b>					
Derrick Road to Drew Road	63.0	63.8	0.8	3	No
Drew Road to Forrester Road	62.8	63.7	0.8	3	No
<b>Forrester Road</b>					
Evan Hewes Highway to I-8	68.8	69.8	1.0	3	No

Sound Levels provided are worst-case and do not take into account topography or shielding from barriers.

## Operational Traffic Noise Impacts

During operations and maintenance, the project will primarily operate during daylight hours and will require (on average) less than 10 fulltime personnel for operations and maintenance. Operations personnel include employees running the facility, security, and any other work associated with the operations. Maintenance personnel include employees addressing maintenance on a daily basis. On average, the operations and maintenance trip generation is estimated at about 20 ADT with approximately 10 AM and 10 PM peak hour trips. During a typical year, the project will require up to 10 daily water trucks for panel washing over approximately 15 business days; however, the washing frequency is estimated from one to four times a year. During the washing period, the total project daily traffic may increase to 40 or 50 ADT over a 15 business day period according to the Project's Traffic study (LOS Engineering, 2011).

Typically it requires a project to double (or add 100%) to the traffic volumes to have a noise level increase of 3 dBA CNEL. Since the operations and maintenance traffic generation is minimal compared to the existing traffic volumes. The Project's operational traffic will not result in a potentially significant direct or cumulative noise impact at existing or future noise sensitive land.

### 5.3 Conclusions

The Project does create a short-term noise increase during the peak construction of more than 5 dBA CNEL in the "normally acceptable" category on one roadway segments. No sensitive receptors exist along this roadway segments and therefore sensitive receptors would be impacted by construction traffic noise due to the proposed Project's construction traffic and no mitigation would be required.

Traffic related short-term noise increases during the peak construction of the Project and Cumulative Projects has the potential to increase noise levels more than the acceptable limits on up to three roadway segments. Along the segment of Diehl Road, no sensitive uses exist and no impacts are anticipated. The two segments along Drew Road have the potential to affect the existing sensitive uses (i.e., residential). Based on the list of cumulative projects, nearly all of the "reasonably foreseeable" projects in the area that affect the roadway noise levels are all photovoltaic projects. Thus, the traffic generation is due to short term construction traffic volumes. It is unlikely that the proposed Project would be expected to incrementally add to the roadway traffic noise levels to any "reasonably foreseeable" projects as they are either not going to coincide with the Project with respect to peak traffic period (first quarter of 2013 and only for a one month period). Therefore, no impacts are anticipated during the proposed Project's construction traffic and no mitigation would be required.

During the operations of the Project it is estimated that the Project would generate less than 50 trips per day and no noise impacts would occur as stated above. Therefore, the Project's operational traffic will not result in a potentially significant direct or cumulative noise impact at existing or future noise sensitive land uses.

## 6.0 CERTIFICATIONS

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The contents of this report represent an accurate depiction of the noise environment and impacts within and surrounding the Campo Verde Solar Energy Project. The information contained in this report was based on the best available data at the time of preparation.

### **DRAFT**

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Date February 10, 2012

**ATTACHMENT A**

MANUFACTURES SPECIFICATIONS AND NOISE DATA  
(Transformers and Inverters)

**NEMA Standards Publication No. TR 1-1993 (R2000)**

*Transformers, Regulators and Reactors*

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## FOREWORD

The standards appearing in this publication have been developed by the Transformer Section and have been approved for publication by the National Electrical Manufacturers Association. They are used by the electrical industry to promote production economies and to assist users in the proper selection of transformers.

The Transformer Section is working actively with the American National Standards Committee, C57, on Transformers, Regulators and Reactors, in the development, correlation and maintenance of national standards for transformers. This Committee operates under the procedures of the American National Standards Institute (ANSI).

It is the policy of the NEMA Transformer Section to remove material from the NEMA Standards Publication as it is adopted and published in the American National Standard C57 series. The NEMA Standards Publication for Transformers, Regulators and Reactors references these and other American National Standards applying to transformers, and is intended to supplement, without duplication, the American National Standards.

The NEMA Standards Publication for Transformers, Regulators and Reactors contains provision for the following:

- a. American National Standards adopted by reference and applicable exceptions approved by NEMA, if any.
- b. NEMA Official Standards Proposals. These are official drafts of proposed standards developed within NEMA or in cooperation with other interested organizations, for consideration by ANSI. They have a maximum life of five years, during which time they may be approved as American National Standards or adopted as NEMA Standards, or rescinded.
- c. Manufacturing Standards. These are NEMA Standards which are primarily of interest to the manufacturers of transformers and which are not yet included in an American National Standard.
- d. Standards Which Are Controversial. These are NEMA Standards, on which there is a difference of opinion within Committee C57. The NEMA version will be included in the NEMA Standards Publication until such time as the differences between ANSI and NEMA are resolved.

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National Electrical Manufacturers Association  
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Washington, D.C. 20037-1526

## SCOPE

This publication provides a list of all ANSI C57 Standards that have been approved by NEMA. In addition it includes certain NEMA Standard test methods, test codes, properties, etc., of liquid-immersed transformers, regulators, and reactors that are not American National Standards.

## PART 0 GENERAL

The following American National Standards have been approved as NEMA Standards and should be inserted in this Part 0:

ANSI/IEEE C57.12.00-1988	<i>General Requirements for Liquid-Immersed Distribution, Power and Regulating Transformers</i>
ANSI/IEEE C57.12.01-1989	<i>General Requirements for Dry Type Power and Distribution Transformers</i>
ANSI C57.12.10-1988	<i>Requirements for Transformers 230,000 volts and below, 833/958-8333/10,417 kVA single-phase 750/862-60,000/80,000/100,000 kVA three phase, including supplements</i>
ANSI C57.12.70-1993	<i>Terminal Markings and Connections for Distribution and Power Transformers</i>
ANSI/IEEE C57.12.90-1993	<i>Test Code for Liquid-immersed Distribution, Power &amp; Regulating Transformers and Guide for Short-Circuit Testing of Distribution &amp; Power Transformers</i>
ANSI/IEEE C57.19.00-1992	<i>General Requirements and Test Procedure for Outdoor Apparatus Bushings</i>
ANSI/IEEE C57.19.01-1992	<i>Standard Performance Characteristics &amp; Dimensions for Outdoor Apparatus Bushings</i>
ANSI/IEEE C57.92-1992	<i>Guide for Loading Mineral-oil-immersed Power Transformers up to and including 100 MVA with 55C or 65C Average Winding Rise</i>

The NEMA Standards TR 1-0.01 through TR 1-0.09 on the following pages (see Part 0 Pages 1-9) also apply generally to transformers.

### 0.01 PREFERRED VOLTAGE RATINGS

Preferred system voltages and corresponding transformer voltage ratings are given in the American National Standard for Electric Power Systems and Equipment--Voltage Ratings (60 Hz), C84.1-1989. It is recommended that these ratings be used as a guide in the purchase and operation of transformers.

### 0.02 FORCED-AIR (FA) AND FORCED-OIL (FOA) RATINGS

Under the conditions of par. 5.11 of American National Standard ANSI/IEEE C57.12.00-1988, the relationship between self-cooled ratings and forced-air-cooled or forced-oil-cooled ratings shall be in accordance with Table 0-1.

**Table 0-1  
FORCED-AIR AND FORCED-OIL RATINGS RELATIONSHIPS**

Class	Self-cooled Ratings* (kVA)		Percent of Self-Cooled Ratings With Auxillary Cooling	
	Single Phase	Three Phase	First Stage	Second Stage
OA/FA	501-2499	501-2499	115	--
OA/FA	2500-9999	2500-11999	125	--
OA/FA	10000 and above	12000 and above	133-1/3	--
OA/FA/FA	10000 and above	12000 and above	133-1/3	166-2/3
OA/FA/FOA	10000 and above	12000 and above	133-1/3	166-2/3
OA/FOA/FOA	10000 and above	12000 and above	133-1/3	166-2/3

\*In the case of multi-winding transformers or autotransformers, the ratings given are the equivalent two-winding ratings.

## PERFORMANCE

### 0.03 RADIO INFLUENCE VOLTAGE LEVELS

The following values apply to liquid-filled transformers. They do not apply to load tap changing during switching or to operation of auxiliary relays and control switches.

#### 0.03.1 Distribution Transformers

Radio influence voltage levels for distribution transformers, for systems rated 69 kV and less, shall not exceed 100 microvolts when measured in accordance with Section 7.01. The test voltage shall be the line-to-neutral voltage corresponding to 110 percent excitation of the transformer. This will be the coil voltage for wye connections and 1/3 times the coil voltage for delta connections.

### 0.04 POWER FACTOR OF INSULATION OF OIL-IMMERSED TRANSFORMERS

While the real significance which can be attached to the power factor of oil-immersed transformers is still a matter of opinion, experience has shown that power factor is helpful in assessing the probable conditions of the insulation when good judgement is used.

The proper interpretation of power factor of oil-immersed transformers is being given careful attention by manufacturers in connection with the problems of (1) selecting insulating materials, (2) sealing, and (3) processing the transformers. However, it is the comparative values which are guides for the successful solution for these problems rather than an absolute value of power factor.

The generally accepted factory tests for proving the insulation level are the prescribed low-frequency tests and impulse tests given in the American National Standard C57.12.90-1993.

When required, a factory power-factor test can be made, and this measurement will be of value for comparison with field power-factor measurements to assess the

probable condition of the insulation. It is not feasible to establish standard power-factor values for oil-immersed transformers because:

- a. Experience has definitely proved that little or no relation exists between power factor and the ability of the transformer to withstand the prescribed dielectric tests.
- b. Experience has definitely proved that the variation in power factor with temperature is substantial and erratic so that no single correction curve will fit all cases.

When a factory power-factor measurement of a transformer is required, the measurement should be made with the insulation at room temperature, preferably at or close to 20°C.

### 0.05 AUDIBLE SOUND LEVELS

Transformers shall be so designed that the average sound level will not exceed the values given in Tables 0-2 through 0-4 when measured at the factory in accordance with the conditions outlined in ANSI/IEEE C57.12.90-1993.

The guaranteed sound levels should continue to be per Tables 0-2 through 0-4 until such time as enough data on measured noise power levels becomes available.

Sound pressure levels are established and published in this document. Sound power may be calculated from sound pressure, using the method described in C57.12.90-1993.

Rectifier, railway, furnace, grounding, mobile and mobile unit substation transformers are not covered by the tables. The tables do not apply during the time that power switches are operating in load-tap-changing transformers and in transformers with integral power switches.

ble 0-2  
**AUDIBLE SOUND LEVELS FOR IMMERSSED POWER TRANSFORMERS**

nn 1 - Class OA, OW and FOW Ratings  
 nn 2 - Class FA and FOA First stage Auxiliary Cooling††  
 nn 3 - Straight FOA Ratings, FA FOA Second-stage Auxiliary Cooling††

Average Sound Level†, dB	Equivalent Two-winding Rating△																	
	350 kV BIL and Below			450, 550, 650 kV BIL			750 and 825 kV BIL			900 and 1050 kV BIL			1175 kV BIL			1300 kV BIL and Above		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
700	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1500	...	...	700	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2000	...	...	1000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2500	...	...	1500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3000	...	...	2000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4000	...	...	2500	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5000	...	...	3000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6000	...	...	4000	...	...	...	3000	...	...	...	...	...	...	...	...	...	...	...
7500	8250△△	...	5000	3750△△	...	4000	3125△△	...	...	...	...	...	...	...	...	...	...	...
10000	7500	...	6000	5000	...	5000	3750	...	...	...	...	...	...	...	...	...	...	...
12500	9375	...	7500	6250	...	6000	5000	...	...	...	...	...	...	...	...	...	...	...
15000	12500	...	10000	7500	...	7500	6250	...	...	...	...	...	...	...	...	...	...	...
20000	16667	...	12500	9375	...	10000	7500	...	...	...	...	...	...	...	...	...	...	...
25000	20000	20800	15000	12500	...	12500	9375	...	...	...	...	...	...	...	...	...	...	...
30000	26667	25000	20000	16667	...	15000	12500	...	12500	...	...	...	...	...	...	...	...	...
40000	33333	33333	25000	20000	20800	20000	16667	...	15000	...	...	12500	...	...	...	...	...	...
50000	40000	41667	30000	26667	25000	25000	20000	20800	20000	16667	...	15000	...	...	12500	...	...	...
60000	53333	60000	40000	33333	33333	30000	26667	25000	25000	20000	20800	20000	16667	...	15000	...	...	...
80000	66667	66667	50000	40000	41667	40000	33333	33333	30000	26667	25000	25000	20000	20800	20000	16667	...	...
100000	80000	83333	60000	53333	50000	50000	40000	41667	40000	33333	33333	30000	26667	25000	25000	20000	20800	...
...	106667	100000	80000	66667	66667	60000	53333	50000	40000	41667	40000	33333	33333	30000	26667	25000	20000	20800
...	133333	133333	100000	80000	83333	80000	66667	66667	60000	53333	50000	40000	41667	40000	33333	33333	30000	20800
...	...	166667	...	106667	100000	100000	80000	83333	80000	66667	66667	60000	53333	50000	40000	41667	40000	20800
2	...	...	200000	...	133333	133333	...	106667	100000	100000	80000	83333	80000	66667	66667	60000	53333	50000
3	...	...	250000	...	...	166667	...	133333	133333	...	106667	100000	100000	80000	83333	80000	66667	66667
4	...	...	300000	...	...	200000	...	166667	...	133333	133333	...	106667	100000	100000	80000	83333	83333
5	...	...	400000	...	...	250000	...	...	200000	...	166667	...	133333	133333	...	106667	100000	100000
6	...	...	...	...	...	300000	...	...	250000	...	...	200000	...	166667	...	133333	133333	133333
7	...	...	...	...	...	400000	...	...	300000	...	...	250000	...	...	200000	...	...	166667
8	...	...	...	...	...	...	...	...	400000	...	...	300000	...	...	250000	...	...	200000
9	...	...	...	...	...	...	...	...	...	...	...	400000	...	...	300000	...	...	250000
0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	400000	...	...	300000
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	400000

Classes of cooling (see 2.6.1 of American National Standard C57.12.00-1988.  
 First- and second-stage auxiliary cooling (see TR 1.0.02).  
 For column 2 and 3 ratings, the sound levels are with the auxiliary cooling equipment in operation.  
 †For intermediate kVA ratings, use the average sound level of the next larger kVA rating.  
 ††The equivalent two-winding 55°C or 65°C rating is defined as one-half the sum of the kVA rating of all windings.  
 △Sixty-seven decibels for all kVA ratings equal to this or smaller.

**Table 0-3**  
**AUDIBLE SOUND LEVELS FOR LIQUID-IMMERSED**  
**DISTRIBUTION TRANSFORMERS AND NETWORK TRANSFORMERS**

Equivalent Two-winding kVA	Average Sound Level, Decibels
0-50	48
51-100	51
101-300	55
301-500	56
750	57
1000	58
1500	60
2000	61
2500	62

Small Transformer

**Table 0-4**  
**AUDIBLE SOUND LEVELS FOR DRY-TYPE TRANSFORMERS 15000-VOLT**  
**NOMINAL SYSTEM VOLTAGE AND BELOW**

Equivalent Two-Winding kVA	Average Sound Level, Decibels		Equivalent Two-winding kVA	Average Sound Level, Decibels
	Self-cooled Ventilated*	Self-cooled Sealed*		Ventilated Forced Air Cooled **,†
0-50	50	50	...	...
51-150	55	55	...	...
151-300	58	57	3-300	67
301-500	60	59	301-500	67
501-700	62	61	501-833	67
701-1000	64	63	834-1167	67
1001-1500	65	64	1168-1667	68
1501-2000	66	65	1668-2000	69
2001-3000	68	66	2001-3333	71
3001-4000	70	68	3334-5000	73
4001-5000	71	69	5001-6667	74
5001-6000	72	70	6668-8333	75
6001-7500	73	71	8334-10000	76

Large  
Transformer

\* Class AA rating

\*\*Does not apply to sealed-type transformers

†Class FA and AFA ratings

## **Part 1 POWER TRANSFORMERS**

The American National Standard C57.12.10-1988 has been approved as a NEMA Standard for power transformers and should be inserted in this Part 1.

The ANSI/IEEE Standard C57.92-1992, has been approved by NEMA and should be inserted in this Part 1.

The following other parts of this NEMA Publication No. TR 1 shall also apply:

- a. Part 1 General
- b. Part 6 Terminology
- c. Part 7 Test Code
- d. Part 12 Underground-Type Three-Phase Distribution Transformer

### Unparalleled Performance

Satcon enables you to closely match array capacities to achieve maximum energy throughput.



#### Edge™ MPPT

Features a proprietary maximum power point tracking (MPPT) system

Provides rapid and accurate control

Improves performance by up to 20%, even in challenging climate conditions

Boosts overall PV plant kilowatt yield

Provides a wide range of operation across all photovoltaic cell technologies, including thin film, monocrystalline, and polycrystalline PV panels

#### Power Efficiency

Full array nameplate power rating maintained throughout the entire MPPT DC voltage range

Superior dynamic performance in cloudy conditions

#### Printed Circuit Board Durability

Wide thermal operating range: -40° C (-40° F) to 85° C (185° F)

Conformal coated to withstand extreme humidity and air-pollution levels

#### Proven Reliability

Rugged and reliable, PowerGate Plus PV inverters are engineered from the ground up to meet the demands of large-scale installations.

#### Low Maintenance

Modular components make service efficient

Dual cooling fans

#### Safety

Seismic Zone 4 compliant

Built-in DC and AC disconnect switches

Integrated DC two-pole disconnect switch isolates the inverter (with the exception of the GFDI circuit) from the photovoltaic power system to allow inspection and maintenance

Protective cover over exposed power connections

## PowerGate® Plus 1 MW Commercial Solar PV Inverter



PowerGate Plus 1 MW Specifications		UL/CSA	CE
<b>Input Parameters</b>			
Maximum Array Input Voltage	900V DC (CE)	•	•
Input Voltage Range (MPPT; Full Power)	420–850V DC	•	•
Maximum Input Current	2,397A DC	•	•
<b>Output Parameters</b>			
Nominal Output Voltage to Transformer	265V AC	•	•
Output Frequency Range	59.5–60.5 Hz	•	
	49.5–50.5 Hz		•
AC Voltage Range Set Points	-12%/+10%	•	•
Nominal Output Frequency	60 Hz	•	
	50 Hz		•
Number of Phases	3	•	•
Maximum Output Current per Phase	2,178A	•	•
Maximum Overcurrent Protection per Phase	2,614A	•	•
CEC-Weighted Efficiency	97%	•	•
Maximum Continuous Output Power	1000 kW (1000 kVA)	•	•
Power Factor at Full Load	>0.99	•	•
Harmonic Distortion	<3% THD	•	•
<b>Temperature</b>			
Operating Ambient Temperature Range (Full Power)	-20° C to +50° C	•	•
Storage Temperature Range	-30° C to +70° C	•	•
Cooling	Forced Air	•	•
<b>Noise</b>			
Noise Level	<65 dB(A)	•	•

• Standard • Optional





**PowerGate Plus 1 MW**

UL/CSA 265V AC Output

CE 265V AC Output

External transformer required.

**Streamlined Design**

With all components encased in a single, space-saving enclosure, PowerGate Plus PV inverters are easy to install, operate, and maintain.

**Single Cabinet with Small Footprint**

Convenient access to all components

Large in-floor cable glands make access to DC and AC cables easy

**Rugged Construction**

Engineered for outdoor environments

**Output Transformer (Optional)**

Provides galvanic isolation

Uses medium voltage output to accommodate long-distance power feeds to designated loads or substations

PowerGate Plus 1 MW Specifications		UL/CSA	CE
<b>Combiner</b>			
Number of Inputs and Fuse Rating	40 (160A DC) (Opt.)	○	○
	60 (100A DC) (Opt.)	○	○
<b>Transformer</b>			
External Transformer		○	○
<b>Inverter and Integrated External Transformer Cabinets</b>			
Enclosure Rating (Outdoor)	NEMA 3R, IP44	●	●
Enclosure Finish (16-Gauge, Powder-Coated Steel)	RAL-7032	●	●
Base and Door Finish (14-Gauge, Powder-Coated Steel)	RAL-7032	●	●
Cabinet Dimensions (Height x Width x Depth)	Inverter	107" x 148" x 84" (272 cm x 376 cm x 213 cm)	
Cabinet Weight	Inverter	12,000 lbs.	5,443 kg
<b>Testing and Certification</b>			
UL1741, CSA 107.1-01, IEEE 1547, IEEE C62.41.2		●	
CE Certification			●
Zone 4 Seismic Rating		●	●
<b>Warranty</b>			
Five Years		●	●
Extended Warranty (10, 15, or 20 years) (Optional)		○	○
Extended Service Agreement (Optional)		○	○
<b>Intelligent Monitoring</b>			
Satcon PV View® Plus (Optional)		○	○
Satcon PV Zone (Optional)		○	○
Third-Party Compatibility		○	○

- Standard
  - Optional
- Note: Specifications are subject to change.

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# **APPENDIX G**

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# **LESA MODEL**

# **Campo Verde Solar Energy Project Land Evaluation and Site Assessment**

Prepared for:

County of Imperial  
Planning and Development Services Department

by



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Encinitas, CA 92024  
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December 2011

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# 1.0 INTRODUCTION

Appendix G of the California Environmental Quality Act (CEQA) Guidelines identifies the California Agricultural Land Evaluation and Site Assessment (LESA) Model as an optional model to use in assessing impacts on agriculture and farmland. Based on the current use of the Campo Verde Solar Energy Facility project site as agricultural land, the LESA Model was prepared for the proposed Campo Verde Solar Energy Project (or Project).

The LESA Model describes an approach for rating the relative quality of land resources using specific measurable features. The LESA system is a point-based method composed of six different factors: Land Capability Classification, Storie Index, Project Size, Water Resource Availability, Surrounding Agricultural Land, and Surrounding Protected Resource Land.

The two Land Evaluation factors (Land Use Capability Classification and Store Index) are based on measures of soil resource quality. The four Site Assessment factors provide measures of a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands.

For a given project, each of these factors is separately rated on a 100-point scale. The factors are then weighted relative to one another and combined, resulting in a single numeric score for a given project. The maximum attainable score is 100 points. This project score becomes the basis for making a determination of a project's potential significance, based upon a range of established scoring thresholds (Department of Conservation, 1997).

## 2.0 PROJECT DESCRIPTION

### 2.1 ENVIRONMENTAL SETTING

The solar energy facility portion of the project site is located on approximately 1,990 gross acres of privately owned agricultural lands in Imperial County approximately 7 miles southwest of the community of El Centro. The Project does not include an easement through private property outside the solar project site but does include right-of-way through lands under the jurisdiction of the Bureau of Land Management (BLM) to accommodate the a single-circuit aboveground 230-kilovolt (kV) electrical generation line (Gen-Tie) approximately 1.0 miles long connecting the solar energy facility with the Imperial Valley Substation. Approximately 0.9 miles of the Gen-Tie Line are located on BLM land.

BLM land through which the Gen-Tie extends is designated in the California Desert Conservation Area Plan as a utility corridor (Corridor N) in the Yuha Desert (BLM, 1980). Aside from these BLM lands to the south and west, the project site is surrounded by agricultural lands. The Applicant has submitted a right-of-way application to BLM for the 0.9 mile segment of the Gen-Tie. This portion of the Gen-Tie located outside the boundaries of the solar energy facility site would not permanently remove agricultural land from production and is not considered in the LESA analysis.

The 1,990 gross acre size of the site was derived from data obtained from the Applicant (Campo Verde Energy, LLC, 2011). The total acreage was calculated using Assessor's parcel data overlaid on an aerial photograph. The data covered the parcels proposed to be used as the solar energy field portion of the Project. This acreage figure does not include the acreage of the Gen-Tie corridor on federal land.

The amount of farmland (i.e. agricultural fields within the solar energy facility site) that would be affected by the project was calculated to be 1,852 acres. This calculation excludes existing public roads, ditches and canals, but includes unnamed dirt access roads within the agricultural fields.

---

## 2.2 PROJECT CHARACTERISTICS

The proposed Project would use solar photovoltaic technology to convert sunlight directly into electricity. The Project would produce 140+ megawatts of electricity generated by converting sunlight directly into electricity. The Project includes a photovoltaic array field, combiner boxes, inverters, transformers, and a substation as well as meteorological stations, an Operations and Maintenance (O&M) Building with parking and other associated facilities, telecommunications equipment, lighting, security and a fire system.

Approximately 1.0 mile of the Gen-Tie is located on a single parcel (051-350-014) of the solar energy facility site. From the southern boundary of the solar energy facility site, the alignment extends approximately 0.9 miles to connect with the Imperial Valley Substation through land under the jurisdiction of the BLM. The Applicant controls the solar energy facility site through options to purchase.

## 3.0 LESA EVALUATION

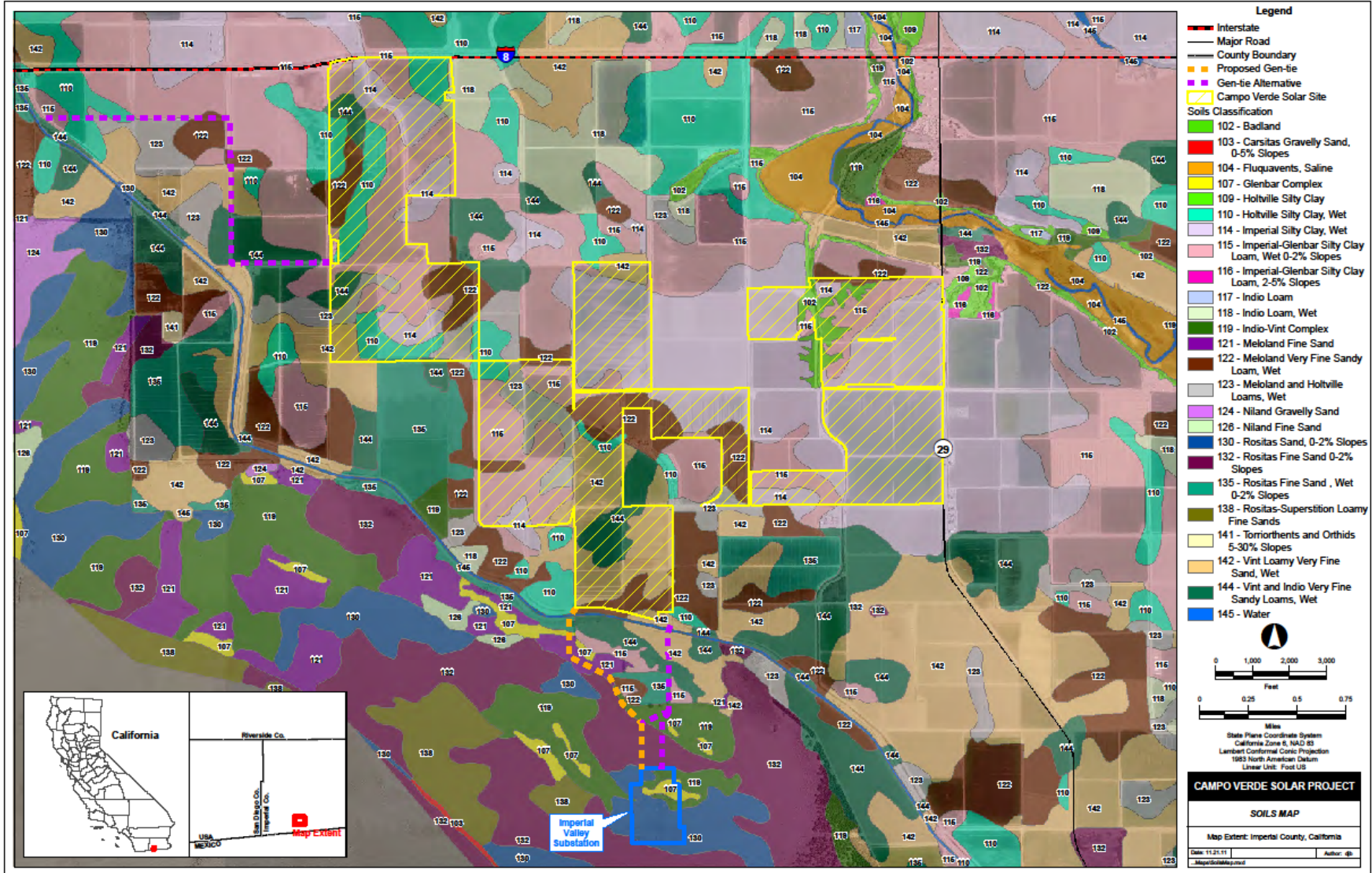
The LESA Model to rate the quality and availability of agricultural resources for the Project site. The LESA Model was also used to identify whether the proposed Project would meet the threshold criteria as a significant impact to Agricultural Resources under CEQA Guidelines. The LESA Model evaluates land use and site assessment factors to identify if the project would result in a significant impact on agricultural resources. The factors are evaluated in the following sections.

### 3.1 LAND EVALUATION

The Land Evaluation portion of the LESA Model focuses on two main components that are separately rated:

1. The Land Capability Classification (LCC) Rating: The LCC indicates the suitability of soils for most kinds of crops. Soils are rated on a scale from Class I to Class VIII. Soils having the fewest limitations receive the highest rating.
2. The Storie Index Rating: The Storie Index provides a numeric rating (based on a 100 point scale) of the relative degree of suitability or value of a given soil for intensive agriculture use. This rating is based on soil characteristics only.

The United States Department of Agriculture survey identified ten soil types on the solar energy facility site. These include Badland; Holtville silty clay, wet; Imperial silty clay, wet; Imperial-Glenbar silty clay loams, wet, 0 to 2% slopes; Indio Loam, wet; Meloland very fine sandy loam, wet; Meloland and Holtville loam, wet; Rositas fine sand, wet 0 to 2% slopes; Vint loamy very fine sand, wet; and, Vint and Indio very fine sandy loams, wet. **Figure 1** depicts the distribution of soil types on the Project site. **Table 1** details the varieties of soils found on the Project site, along with their Capability Class and Storie Index Rating.



Source: Campo Verde Solar, LLC, 2011.

Figure 1 – Soils Map

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**TABLE 1**  
**SOIL SUITABILITY - MAP SYMBOL MAPPING UNIT CAPABILITY**

Map Symbol	Mapping Unit	Capability Class	Storie Index Rating
102	Badland	VIIIe	<10
110	Holtville silty clay, wet	IIw-5	30
114	Imperial silty clay, wet	IIIw-6	22
115	Imperial-Glenbar silty clay loams, wet 0 to 2% slopes	IIIw-6	34
118	Indio Loam, Wet	IIw-1	60
122	Meloland very fine sandy loam, wet	IIIw-3	43
123	Meloland and Holtville loam, wet	IIIw-3	43
135	Rositas fine sand, wet 0 to 2% slopes	IIIw-4	36
142	Vint loamy very fine sand, wet	IIw-4	57
144	Vint and Indio very sandy loams, wet	IIw-3	60

Source: United States Department of Agriculture, 1981.

Notes:

IIw-1 capability rating indicates soils with moderate limitations that reduce the choice of plants, or that require moderate conservation practices, or both. This soil contains water in or on the soil that interferes with growth. This soil has a problem or limitation caused by slope or by actual or potential erosion hazard.

IIIw-3 capability rating indicates soils with moderate limitations that reduce the choice of plants, or that require moderate conservation practices, or both. This soil contains water in or on the soil that interferes with growth. The soil also has problems or limitations of slow or very slow permeability of the subsoil or substratum caused by a clayey subsoil or a substratum that is semi-consolidated.

IIw-5 capability rating indicates soils that have severe limitations that reduce the choice of plants, or that require special conservation practices, or both. This soil contains water in or on the soil that interferes with growth. The soil also has a problem or limitation caused by a fine textured or very fine textured surface layer.

IIIw-3 capability rating indicates soils that have severe limitations that reduce the choice of plants, or that require special conservation practices, or both. This soil contains water in or on the soil that interferes with growth. The soil also has problems or limitations of slow or very slow permeability of the subsoil or substratum caused by a clayey subsoil or a substratum that is semi-consolidated.

IIIw-4 capability rating indicates soils that have severe limitations that reduce the choice of plants, or that require special conservation practices, or both. This soil contains water in or on the soil that interferes with growth. The soil also has problems or limitations caused by sandy or gravelly soils with a low available water-holding capacity.

IIIw-6 capability rating indicates soils that have severe limitations that reduce the choice of plants, or that require special conservation practices, or both. This soil contains water in or on the soil that interferes with growth. The soil also has problems or limitations caused by salt or alkali.

VIIIe capability rating indicates soils and landforms have limitations that nearly preclude their use for commercial crop production. The main limitation is risk of erosion unless close-growing plant cover is maintained.

The LESA Model assigns ratings to each Land Capability Classification (LCC) and multiplies that number by the proportion of the project site that contains each soil class to find the LCC Score (Column C x Column E = Column F). A Storie Index score is calculated by multiplying the proportion of the project in each soil type by the soil type's Storie Index rating (Column C x Column G = Column H). **Table 2** provides a summary of the Land Evaluation (LE) scores. (The final LE and Site Assessment (SA) scores are entered into the Final LESA Score Sheet as shown in Table 6, below).

**TABLE 2  
LAND CAPABILITY CLASSIFICATION (LCC) AND STORIE INDEX SCORE**

A	B	C	D	E	F	G	H
Map Symbol - Soil	Acres	Portion of the Project Area	LCC*	LCC Rating	LCC Score	Storie Index	Storie Score
102 - Badland	26.87	1.45%	VIIIe	0	0.00	<10	-0
110 - Holtville silty clay, wet	141.99	7.67%	IIw-5	80	6.13	30	2.30
114 - Imperial silty clay, wet	456.82	24.67%	IIIw-6	60	14.80	22	5.43
115 - Imperial-Glenbar silty clay loams, wet, 0-2% slopes	671.58	36.26%	IIIw-6	60	21.76	34	12.33
118 - Indio Loam Wet	4.3	0.23%	IIw-1	80	0.19	60	0.14
122 - Meloland very fine sandy loam, wet	102.48	5.53%	IIIw-3	60	3.32	43	2.38
123 - Meloland and Holtville loam, wet	185.69	10.03%	IIIw-3	60	6.02	43	4.31
135 - Rositas sand, wet 0 to 2% slopes	1.99	0.11%	IVs-4	40	0.04	36	0.04
142 - Vint loamy very fine sand, wet	72.49	3.91%	IIw-4	80	3.13	57	2.23
144 - Vint and Indio very sandy loams, wet	187.82	10.14%	IIw-3	80	8.11	60	6.08
<b>TOTALS</b>	<b>1,852.03</b>	<b>100.00%</b>	--	--	<b>63.50</b>	--	<b>35.24</b>

Source: California Department of Conservation, 1997, pages 10, 11 and 12; Ericsson-Grant, Inc. 2011.

Notes: See Table 1 for a description of the soil's LCC rating.

### 3.2 SITE ASSESSMENT FACTORS

The LESA Model includes four Site Assessment factors that are separately rated: Project Size Rating, Water Resources Availability Rating, Surrounding Agricultural Land Rating, and Surrounding Protected Resource Land Rating.

#### PROJECT SIZE RATING

The project size rating recognizes the role of farm size in determining the viability of commercial agricultural operations. Larger farming operations generally can provide greater flexibility in farm management and marketing decisions. In addition, larger operations tend to have greater impacts upon the local economy through direct employment, as well as impacts upon supporting industries and food processing industries (California Department of Conservation, 1997).

With regard to agricultural productivity, the size of the farming operation can be considered not just from its total acreage, but the acreage of different quality lands that comprise the operation. Lands with higher quality soils lend themselves to greater management and cropping flexibility and have the potential to provide greater economic return per acre unit. For a given project, instead of relying on a single acreage figure in the Project Size rating, the project is divided into three acreage groupings based upon the LCC ratings that were previously determined in the Land Evaluation analysis. Under the Project Size rating, relatively fewer acres of high quality soils are required to achieve a maximum Project Size score. Alternatively, a maximum score on lesser quality soils could also achieve a maximum Project Size score. **Table 3** summarizes the Project Size score for the proposed Project.

**TABLE 3  
PROJECT SIZE SCORE**

Map Symbol - Soil	Acres	LCC	LCC Class I or II	LCC Class III	LCC Class IV-VIII
102 - Badland	26.87	VIIIe			26.87
110 - Holtville silty clay, wet	141.99	IIw-5	141.99		--
114 - Imperial silty clay, wet	456.82	IIIw-6	--	456.82	
115 - Imperial-Glenbar silty clay loams, wet 0 to 2% slopes	671.58	IIIw-6	--	671.58	--
118 - Indio Loam, wet	4.3	IIw-1	4.3	--	
122 - Meloland very fine sandy loam, wet	102.48	IIIw-3	--	102.48	--
123 - Meloland and Holtville loam, wet	185.69	IIIw-3	--	185.69	--
135 - Rositas fine sand, wet 0 to 2% slopes	1.99	IIIw-4		1.99	--
142 - Vint loamy very fine sand, wet	72.49	IIw-4	72.49	--	
144 - Vint and Indio very sandy loams, wet	187.82	IIw-3	187.82	--	--
<b>TOTAL ACRES</b>	<b>1,852.03</b>	--	<b>406.60</b>	<b>1,418.56</b>	<b>26.87</b>
<b>PROJECT SIZE SCORES</b>			<b>100</b>	<b>100</b>	<b>0</b>
<b>HIGHEST SCORE</b>			<b>100</b>		

Source: California Department of Conservation, 1997, page 13; Ericsson-Grant, Inc. 2011.

Notes: See Table 1 for a description of the soil's LCC rating.

#### WATER RESOURCES AVAILABILITY RATING

The Water Resource Availability Rating is based on the various water sources that may supply a given property, and then determining whether different restrictions in supply are likely to take place in years that are characterized as drought and non-drought. The proposed Project is completely served by irrigation water provided by the Imperial Irrigation District (IID). The proposed Project received the highest Water Resource Availability Rating based on the consistent water delivery provided by IID to the Project site. The proposed Project has no physical or economic restrictions that may alter water resource supply during either drought or non-drought years. **Table 4** summarizes the Water Resources Availability score.

**TABLE 4  
WATER RESOURCE AVAILABILITY**

Project Portion	Water Source	Proportion of Project Area	Water Availability Score	Weighted Availability Score
1	Irrigation Water	100%	100	100
Total Water Resource Score				100

Source: California Department of Conservation. 1997; Ericsson-Grant, Inc., 2011.

#### SURROUNDING AGRICULTURAL LAND RATING

The Surrounding Agricultural Land Rating is designed to provide a measurement of the level of agricultural land use for lands within the Zone of Influence (ZOI) of the project site. The "Zone of Influence" is the amount of surrounding lands up to a minimum of one-quarter mile from the project site boundary. Parcels that are intersected by the quarter-mile buffer are included in their entirety.

Based on the percentage of agricultural land in the ZOI, the project site is assigned a "Surrounding Agricultural Land" score.

The LESA Model rates the potential significance of the conversion of an agricultural parcel that has a large proportion of surrounding land in agricultural production more highly than one that has a relatively small percentage of surrounding land in agricultural production (California Department of Conservation, 1997). **Figure 2** depicts the distribution and amount of land used for agricultural uses within a quarter-mile of the proposed Project site. Lands used for agricultural production are located adjacent to the Project site to the north, south, east and west. The Surrounding Agricultural Land score for the proposed Project is provided in **Table 5**.

**TABLE 5  
SURROUNDING AGRICULTURAL LANDS**

Total Acres within "Zone of Influence"	Acres in Agricultural Production	Acres of Protected Resource Land	Percent in Agriculture	Percent Protected Resources Land	Surrounding Agricultural Land Score	Surrounding Protected Resource Land Score
<b>5,058.89</b>	4,115.63	487.60	81.35%	9.6%	100	0

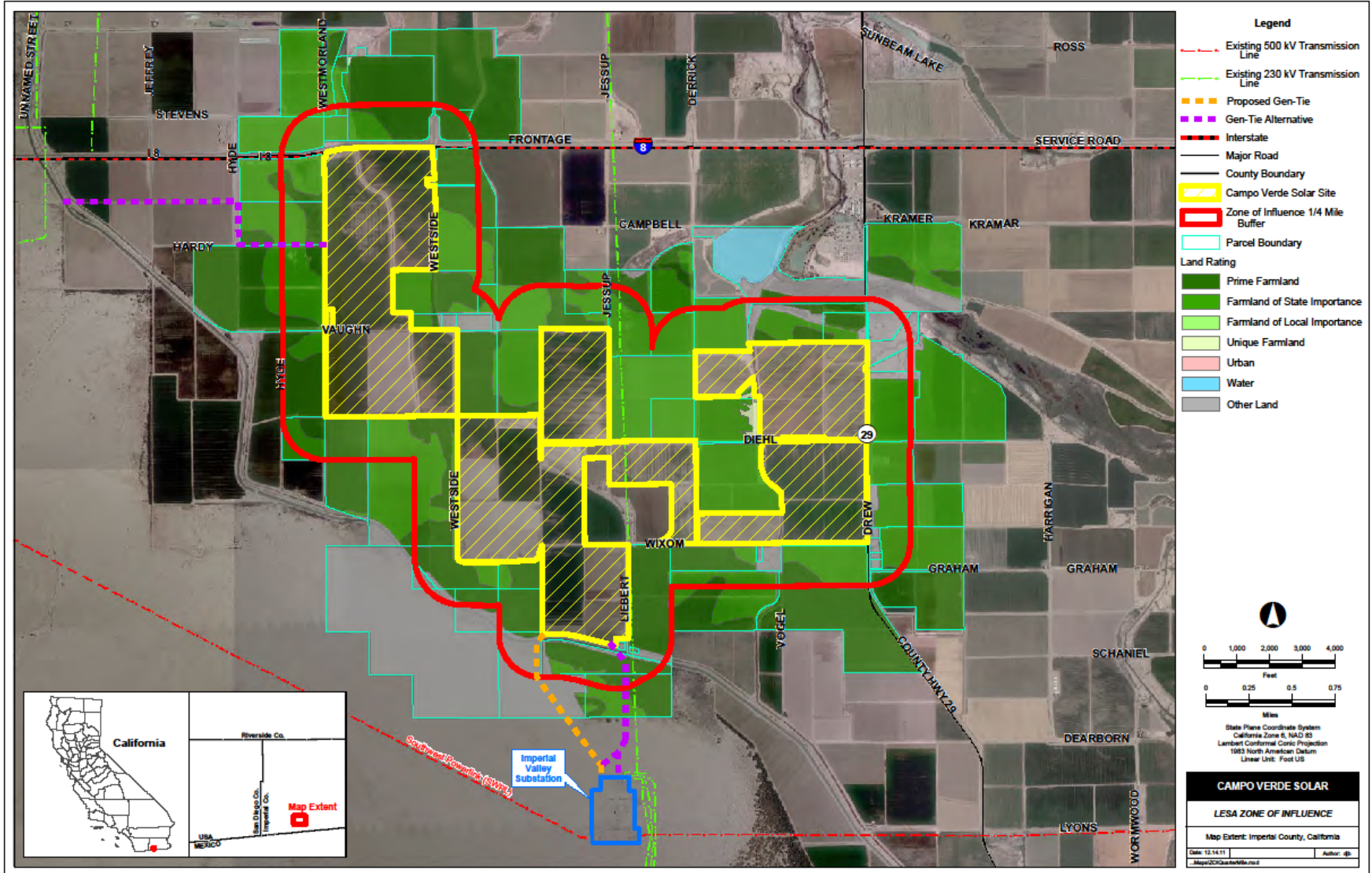
*Source: Department of Conservation. 1997, pages 24 and 25; Ericsson-Grant, Inc., 2011.*

#### SURROUNDING PROTECTED RESOURCE LAND RATING

The Surrounding Protected Resource Land Rating is essentially an extension of the Surrounding Agricultural Land Rating and is scored in a similar manner. Protected resource lands are those lands with long-term use restrictions that are compatible with or supportive of agricultural uses of land. Included among them are the following:

- Williamson Act contracted land;
- Publicly owned lands maintained as park, forest, or watershed resources; and,
- Lands with agricultural, wildlife habitat, open space, or other natural resource easements that restrict the conversion of such land to urban or industrial uses.

Approximately 487.60 acres of protected resource lands are located within the ZOI. These lands include six parcels under Williamson Act contract: Assessor's Parcel Numbers 051-300-008, 051-300-009, 051-260-031, 051-290-014, 051-300-005, 051-290-035, and 051-310-026. Because the percentage of protected land is less than 40%, the Surrounding Protected Resource Land Rating score is zero (Department of Conservation. 1997, page 28).



Source: Campo Verde Solar, LLC, 2011.

Figure 2 – Surrounding Land

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## 4.0 SUMMARY

The LESA Model is weighted so that half of the total LESA score of a given project is derived from the Land Evaluation and half from the Site Assessment. As shown in **Table 6**, the Land Evaluation subscore is 24.89, while the Site Assessment subscore is 45.0. The final LESA score is 69.89.

**TABLE 6  
FINAL LESA SCORE SHEET SUMMARY**

	Factor Rating (0 – 100 Points)	Factor Weighting (Total = 100)	Weighted Factor Rating <sup>1</sup>
<b>Land Evaluation (LE)</b>			
1. Land Capability Classification (LCC Rating)	63.50	0.25	15.88
2. Storie Index Rating	35.24	0.25	8.81
<i>Land Evaluation Subscore</i>			24.89
<b>Site Assessment (SA)</b>			
1. Project Size Rating	100	0.15	15
2. Water Resource Availability Rating	100	0.15	15
3. Surrounding Agricultural Land Rating	100	0.15	15
4. Surrounding Protected Resource Lands Rating	0	0.05	0
<i>Site Assessment Subscore</i>			45
<b>TOTAL</b>			<b>69.89</b>

Source: California Department of Conservation, 1997, page 31; Ericsson-Grant, Inc., 2011.

Notes: <sup>1</sup>Weighted Factor Rating calculated by multiplying Factoring Rating Points X Factory Weighting

As shown in **Table 7**, a final LESA score between 60 to 79 is considered significant unless either Land Evaluation or the Site Assessment subscore is less than 20 points. Therefore, with both subscores (Land Evaluation and Site Assessment) above 20, the proposed Project is considered to have a significant impact on agricultural resources.

**TABLE 7  
CALIFORNIA LESA MODEL SCORING THRESHOLD**

Total LESA Score	Scoring Decision
0 to 39 Points	Not considered significant
40 to 59 Points	Considered significant <u>only</u> . If Land Evaluation and Site Assessment subscores are greater than or equal to 20 points
60 to 79	Considered significant <u>unless</u> either Land Evaluation or Site Assessment subscore is <u>less</u> than 20 points
80 to 100	Considered significant

Source: California Department of Conservation, 1997.

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## References

Bureau of Land Management (BLM), 1980. California Desert Conservation Area Plan as Amended 1980.

California Department of Conservation, 1997. *California Agricultural Land Evaluation and Site Assessment (LESA) Model, Instruction Manual*. Prepared by the California Department of Conservation, Office of Land Conservation, 1997.

Campo Verde Energy, LLC, 2011. Response to items from 12/13/11 e-mail and GIS mapping.

United States Department of Agriculture, 1981. *Soil Survey of Imperial County California, Imperial Valley Area*. Prepared by the United States Department of Agriculture Soil Conservation Service in cooperation with the University of California Agricultural Experiment Station and Imperial Irrigation District. Issued October 1981.



# **APPENDIX H**

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## **PHASE I ENVIRONMENTAL ASSESSMENT AIR TRAFFIC HAZARDS ANALYSIS**

# **PHASE I ENVIRONMENTAL ASSESSMENT**

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# **PHASE I ENVIRONMENTAL SITE ASSESSMENT**

**FOR THE  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

**IMPERIAL COUNTY, CALIFORNIA**

**FIRST SOLAR PURCHASE ORDER 4800006859**

*Prepared for:*

**First Solar**

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San Francisco, CA 94111

*Prepared by:*

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URS Project Number 28907324

April 20, 2012 (Updated)

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

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**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

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**EXECUTIVE SUMMARY**

This report presents the results of a Phase I Environmental Site Assessment (ESA) update conducted by URS Corporation (URS) of the First Solar Campo Verde property, an approximately 2,400-acre project site and associated linear alignments located in Imperial County, California (property). The purpose of the Phase I ESA was to gather information concerning the property and surrounding areas in order to identify conditions indicative of releases or threatened releases of hazardous substances, pollutants, contaminants, petroleum or petroleum products, and controlled substances to identify and evaluate Recognized Environmental Conditions (RECs) affecting the property. This Phase I ESA was accomplished by, and limited to, a site reconnaissance, a site vicinity perimeter survey, a review of previous environmental investigations performed on the property, and review of agency databases and other reasonably ascertainable records regarding past and current land use for indications of the manufacture, generation, use, storage and/or disposal of hazardous substances at the property.

This Phase I ESA is an update to the previous Phase I ESA prepared by URS for the First Solar Project Sagebrush Site (the subject property for this Phase I ESA update includes the Project Sagebrush Site, as well as associated linear alignments and is now identified as the First Solar Campo Verde Project Site) on July 7, 2011, and is a stand-alone document that supersedes the previous Phase I ESA.

The Scope of Services performed was in accordance with the Technical Services Agreement dated November 24, 2009 between First Solar and URS, URS' proposal/scope of work dated January 17, 2012, and First Solar Purchase Order 4800006859. The format and content of this Phase I ESA update are in general accordance with the American Society of Testing Materials (ASTM) Standard Practice for *Environmental Site Assessments: Phase I Site Assessment Process E 1527-05* (ASTM 2005) and the U.S. Environmental Protection Agency *All Appropriate Inquiries Standards and Practices for All Appropriate Inquiries – Final Rule: [40 CFR Part 312]*, approved November 1, 2005.

At the time of the site reconnaissance, the property was observed to be approximately 2,400 acres of primarily undeveloped agricultural land. The property consists of the project site and four linear alignments that include the Non-BLM Off-site Gen-Tie Alignment, the Collector Line Alignment, the Western Off-site Gen-Tie Alignment and the Eastern Off-site Gen-Tie Alignment (See Figure 1, Topographic Map of Project Area). The property consists of 44 parcels of land (the linear alignments occupy only a portion of the associated parcels).and includes the following Assessor Parcel Numbers (APNs): 051-260-29, 051-260-30, 051-260-33, 051-270-27, 051-270-37, 051-270-47, 051-290-14, 051-290-38, 051-300-05, 051-300-08, 051-300-09, 051-300-25, 051-300-29, 051-300-30, 051-310-26, 051-310-40, 051-310-49, 051-310-50, 051-310-56, 051-310-57, 051-310- 58, 051-310-59, 051-310-60, 051-330-05, 051-330-15, 051-330-19, 051-330-20, 051-330-021, 051-330-022, 051-330-024, 051-350-05,

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051-350-08, 051-350-09, 051-350-10, 051-350-11, 051-350-012, 051-350-14, 051-360-01, 051-360-02, 051-360-03, 051-360-04, 051-360-18, 051-360-32, and 051-380-24.

The property is located in Sections 16, 20, 21, 22, 23, 24, 25, 26, 27, 28, 33, and 34, Township 16 South, Range 12 East, and Section 3, Township 16.5 South, Range 12 East San Bernardino Base and Meridian, (U.S. Geological Survey [USGS] Seeley and Mount Signal 7.5-minute quadrangles). The property is bounded by Interstate 8 and undeveloped/agricultural land to the north, undeveloped/agricultural land and the Westside Main Canal to the west and south, undeveloped land and Imperial Valley Substation to the south, and undeveloped/agricultural land to the east.

Historical data indicates that the property has remained primarily undeveloped land used for agricultural purposes for the production of alfalfa hay.

Based on the ESA results described herein, the following conclusions are made.

**ES.1 ON-SITE RECOGNIZED ENVIRONMENTAL CONDITIONS**

Based on URS' site reconnaissance and review of historical information, RECs from on-site sources were not identified.

**ES.2 OFF-SITE RECOGNIZED ENVIRONMENTAL CONDITIONS**

Based on URS' review of historical information and the environmental database search, RECs from off-site sources having the potential to affect the property were not identified.

This Executive Summary is not intended to be a "stand-alone" document, but a summary of findings as described in the Phase I ESA report. Its use is intended to be in conjunction with the findings and limitations described therein.



**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

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**SECTION 1.0  
INTRODUCTION**

Presented in this report are the results of the Phase I Environmental Site Assessment (ESA) update conducted by URS Corporation (URS) of the First Solar Campo Verde Project an approximately 2,400-acre property consisting of the project site and four linear alignments that include the Non-BLM Off-site Gen-Tie Alignment, the Collector Line Alignment, the Western Off-site Gen-Tie Alignment and the Eastern Off-site Gen-Tie Alignment (property). The property is located in an unincorporated area of Imperial County, California. This Phase I ESA is an update to the previous Phase I ESA prepared by URS for the First Solar Project Sagebrush Site (the subject property for this Phase I ESA update includes the Project Sagebrush Site, as well as associated linear alignments and is now identified as the First Solar Campo Verde Project Site) on July 7, 2011, and is a stand-alone document that supersedes the previous Phase I ESA.

This assessment was accomplished by, and limited to, a reconnaissance of the property, a perimeter survey of the site vicinity, a review of previous environmental investigations performed on the property and review of agency databases and other reasonably ascertainable information regarding past and current land use for indications of the manufacture, generation, use, storage, and/or disposal of hazardous substances at the property.

**1.1 AMERICAN SOCIETY OF TESTING MATERIALS STANDARD AND ALL APPROPRIATE INQUIRY**

The format and content of this Phase I ESA are in general accordance with the American Society of Testing Materials (ASTM) Standard Practice for *Environmental Site Assessments: Phase I Site Assessment Process E 1527-05* (ASTM 2005) and the U.S. Environmental Protection Agency (USEPA) All Appropriate Inquiries (AAI) *Standards and Practices for All Appropriate Inquiries – Final Rule: [40 CFR Part 312]*, approved November 1, 2005.

**1.1.1 All Appropriate Inquiry Standards**

The USEPA Rule on AAI was developed to establish landowner liability protections to property owners under the Comprehensive Environmental Response, Compensation, and Liability Act as innocent landowners, bona-fide prospective purchasers, and/or contiguous property owners. The AAI Rule expands the records review requirements by increasing the search distances beyond the recently superseded ASTM Standard E 1527-05, incorporating mandatory searches for engineering and institutional controls, and mandatory review of local government and tribal records. The records review also requires a search of reasonably ascertainable land title and lien records to identify environmental liens or activity and use limitations, if any, which are recorded against the property. The historical sources review requires that a search of the property go as far back in history as it can be shown that the

## **PHASE I ENVIRONMENTAL SITE ASSESSMENT FIRST SOLAR CAMPO VERDE PROJECT SITE**

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property contained structures or was first used for residential, agricultural, commercial, industrial, or governmental purposes. Data gaps for the property should be identified and their significance reported. The AAI Rule also requires taking into account commonly known or reasonably ascertainable information within a local community. AAI requires that inquiries be conducted by an environmental professional as specifically defined within the Rule.

### **1.1.2 American Society of Testing Materials Standard**

The ASTM Standard was approved November 18, 2005, and was established and updated to reflect industry requirements brought about by AAI.

The goal of the ASTM Standard is to identify Recognized Environmental Conditions (REC) (see Section 5.0 of this Phase I ESA). Under the ASTM Standard, “recognized environmental condition” is defined as the presence, or likely presence, of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water of the property. RECs include hazardous substances or petroleum products even under conditions in compliance with laws. RECs are not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not recognized environmental conditions.

## **1.2 PURPOSE**

The purpose of the Phase I ESA is to gather information concerning the property and surrounding areas in order to identify conditions indicative of releases or threatened releases of hazardous substances, pollutants and contaminants, petroleum or petroleum products, and controlled substances.

## **1.3 SCOPE OF SERVICES**

The Scope of Services performed was in accordance with the Technical Services Agreement dated November 24, 2009 between First Solar and URS, URS’ proposal/scope of work dated January 17, 2012, and First Solar Purchase Order 4800006859. The format and content of this Phase I ESA update are in general accordance with the ASTM Standard and the USEPA AAI.

The site reconnaissance included a driving and walking tour of the property and a perimeter survey of surrounding and accessible adjacent properties. To meet the objective of this Phase I ESA, URS completed the following tasks:

## **PHASE I ENVIRONMENTAL SITE ASSESSMENT FIRST SOLAR CAMPO VERDE PROJECT SITE**

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- Performed a reconnaissance survey of the property to make visual observations of existing site conditions and activities, and a perimeter survey of the area within 0.5 mile of the property (as practical) to observe types of general land use. Photographs of the property are provided in Appendix A.
- Reviewed and interpreted archival topographic maps of the property and the area within 0.5 mile of the property for information regarding historical land use potentially involving the manufacture, generation, use, storage and/or disposal of hazardous substances. Environmental Data Resources (EDR) historical topographic maps are included in Appendix B.
- Reviewed and interpreted available historical aerial photographs of the property and vicinity for evidence of previous site activities and development that would suggest the potential presence of hazardous substances at the property. A copy of the EDR Aerial Package is included in Appendix C.
- Reviewed pertinent, available documents and maps regarding local physiographic and hydrogeologic conditions in the property vicinity.
- Reviewed the federal, state, and local database list search provided by EDR of known or potential hazardous waste sites or landfills, and sites currently under investigation for environmental violations. The agency lists and area search results are provided in Appendix D.
- Conducted an environmental lien search through EDR databases to determine potential environmental liens or other activity and use limitations associated with the property. The EDR environmental lien search report is provided in Appendix E.
- Conducted inquiries in person, by telephone, or in writing to the appropriate regulatory agencies for information regarding environmental permits, violations or incidents, and/or the status of enforcement actions at the property.
- Conducted interviews with current property owners as available, to confirm information provided in the AAI User/Site History Questionnaires completed during the July, 2011 Phase I ESA. Copies of the AAI User/Site History Questionnaires as provided to URS are included as Appendix F.
- Prepared this report describing the research performed and presenting URS' findings and professional opinions regarding the potential for adverse environmental impacts to the property.

### **1.4 USER RELIANCE**

This report was prepared for use by First Solar, and shall not be relied upon by or transferred to any other party, or used for any other purpose, without the express written authorization of URS.

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## **1.5 LIMITATIONS AND EXCEPTIONS**

This report and the associated work were provided in accordance with the principles and practices generally employed by the local environmental consulting profession. This is in lieu of all warranties, expressed or implied.

Discussions of the ASTM Standard or AAI data gaps, if any, including sources reviewed, the significance of each data gap, and an opinion if the data gap inhibits the environmental professional's ability to reach an opinion about contamination at the property, are incorporated into the appropriate sections of the report.

It should be recognized that this Phase I ESA was not intended to be a definitive investigation of potential contamination at the property and the recommendations provided are not necessarily inclusive of all the possible conditions. This Phase I ESA is not a regulatory compliance audit or an evaluation of the efficiency of the use of any hazardous materials at the property. Soil and/or groundwater sampling was not undertaken as part of this investigation. Sampling for asbestos, radon, lead-based paint, and lead in drinking water was also not performed as part of this Phase I ESA. Given that the Scope of Services for this investigation was limited, it is possible that unobserved contamination might exist.

The conclusions presented are professional opinions based solely upon indicated data described in this report, visual site and vicinity observations, and the interpretation of the available historical information and documents reviewed, as described in this report. Unless URS has actual knowledge to the contrary, information obtained from interviews or provided to URS by the client was assumed to be correct and complete. URS does not assume any liability for information that was misrepresented to URS by others or for items not visible, accessible or present on the property during the time of the site reconnaissance. The conclusions are intended exclusively for the purpose outlined herein and the site location and project indicated. The executed Scope of Services may not be appropriate to satisfy the needs of other users, and any use or reuse of this document or the findings, conclusions, or recommendations presented herein is at the sole risk of said user.

Opinions and recommendations presented herein apply to the site conditions existing at the time of this assessment and cannot necessarily apply to site changes of which URS is not aware and has not had the opportunity to evaluate. Changes in the conditions of this property may occur with time due to natural processes or the works of man on the property or adjacent properties. Changes in applicable standards may also occur as a result of legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or in part, by changes beyond URS' control. Opinions and judgments expressed herein are based on URS' understanding and interpretation of current regulatory standards, and should not be construed as legal opinions.

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**SECTION 2.0  
SITE DESCRIPTION**

**2.1 LOCATION**

The property is located south of Interstate 8, in an unincorporated area of Imperial County. The property consists of approximately 2,400 acres of undeveloped agricultural land located in Sections 16, 20, 21, 22, 23, 24, 25, 26, 27, 28, 33, and 34, Township 16 South, Range 12 East, and Section 3, Township 16.5 South, Range 12 East San Bernardino Base and Meridian (U.S. Geological Survey [USGS] Seeley and Mount Signal 7.5-minute quadrangles). The property is bounded by Interstate 8 and undeveloped/agricultural land to the north, undeveloped/agricultural land and the Westside Main Canal to the west and south, the Imperial Valley Substation to the south, and undeveloped/agricultural land to the east.

A topographic map and an aerial photograph of the Project Area are included as Figures 1 and 2, respectively.

**2.2 INTERVIEWS AND SPECIALIZED USER KNOWLEDGE**

During the July, 2011 Phase I ESA, URS provided AAI User/Site History Questionnaires to Mr. Jake Stephens, site representative for the property. Mr. Stephens forwarded the AAI Questionnaires to all property owners to complete, and provided the Questionnaires that were completed. The property owners provided information regarding the history and current conditions of the property and indicated that the property consisted of farmed agricultural land. According to Mr. Jake Stephens and the property owners, there were no known environmental concerns associated with the property.

URS contacted current property owners during the 2012 Phase I ESA Update, to obtain information regarding the history and current conditions of the property. According to property owners that were available for interview, there were no changes to the AAI Questionnaires previously completed. Copies of the AAI User/Site History Questionnaires, as provided to URS during the July, 2011 Phase I ESA, are included as Appendix F. Property owners of the linear alignments were not available for interview.

**2.3 SITE RECONNAISSANCE**

On February 11 and March 5, 2012, Mr. Brendan Murphy of URS conducted an unescorted reconnaissance of the property. The reconnaissance consisted of the observation and documentation of existing site conditions and the nature of the neighboring property development within approximately 0.5 mile of the property. Photographs taken during the site reconnaissance are provided in Appendix A.

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The property was accessed by public roads and farm roads around the perimeter and bisecting the property.

Properties consisting of active irrigation canals owned by the Imperial Irrigation District (IID) are not part of the property and were not included in the site reconnaissance.

**2.3.1 Site Conditions**

At the time of the site reconnaissance, the property was observed to be approximately 2,400 acres of primarily undeveloped agricultural land. The property consists of the project site and four linear alignments that include the Non-BLM Off-site Gen-Tie Alignment, the Collector Line Alignment, the Western Off-site Gen-Tie Alignment and the Eastern Off-site Gen-Tie Alignment. The property consists of 44 parcels of land (the linear alignments occupy only a portion of the associated parcels).

The site generally consists of undeveloped agriculture land, with the majority of the site irrigated by a series of soil and concrete lined irrigation canals. These irrigation canals are owned and maintained by the IID and consist of the Westside Main Canal oriented in a northwest-southeast direction along the southern side of the site. This canal serves the minor Fern Canal, Fig Canal, and the Wormwood Canal oriented in a north-south direction from the west to east, respectively. Smaller laterals and irrigation ditches are utilized to deliver irrigation water to the crop fields. A series of agricultural- related gravity flow drainage canals also exist within the site. The irrigation and drainage canals that exist through property easements and that are maintained by the IID are not included in the project site evaluated in this Phase I ESA.

Two structures were observed within APNs 051-330-19 and 051-350-14. One residential structure and two garage structures were observed on APN 051-350-012.

**2.3.2 Hazardous Substances**

Several aboveground storage tanks (ASTs) were observed on the property for the storage of agricultural-related chemicals (see Section 2.3.3, Storage Tanks, for additional information).

Small containers of hazardous materials such as paint were observed on APN 051-350-012. No staining was observed beneath the containers.

**2.3.3 Storage Tanks**

Several ASTs were observed on the property for storage of agricultural-related chemicals. These ASTs were observed adjacent to irrigation canals and appear to be used to add agriculture fertilizers directly into the irrigation canals for eventual soil treatment during irrigation/flooding of fields.

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Fifteen approximately 500-gallon plastic ASTs were observed throughout the property to contain sulfuric acid. They were observed during the site visit at the following locations:

- APN 051-360-32: 1 AST on east central side of the parcel
- APN 051-310-40: 1 AST at southeast corner of the parcel; 1 AST on northwest side of the parcel; 1 AST at northeast corner of the parcel; and 1 AST on northeast side of the parcel
- APN 051-360-04: 2 AST on southern portion of parcel
- APN 051-310-56: 1 AST at southwest corner of parcel
- APN 051-300-09: 1 AST on central portion of parcel
- APN 051-309-09: 1 AST at southeast corner of parcel
- APN 051-300-08: 1 AST at southwest corner of parcel
- APN 051-300-30: 1 AST on western portion of parcel at Non-BLM Off-site Gen-Tie Alignment
- APN 051-260-29: 1 AST along Non-BLM Off-site Gen-Tie Alignment
- APN 051-290-12: 2 ASTs along Non-BLM Off-site Gen-Tie Alignment

**2.3.4 Polychlorinated Biphenyls, Lubrication Oil, and Mercury**

Electrical transformers, hydraulic equipment, capacitors, and similar equipment may contain polychlorinated biphenyls (PCBs) as operating or dielectric insulating fluids within the units. The Federal Toxic Substances Control Act generally prohibited the domestic manufacture of PCBs after 1976; therefore, there is a potential for the dielectric fluid in electrical and hydraulic equipment manufactured prior to that date to contain PCBs.

Electricity transmission lines were observed on the property along the improved roads.

Three electrical transformers were observed on the property during site reconnaissance. Leaks or stains were not observed beneath the transformers.

Other equipment, such as capacitors, that may contain PCBs, was not observed on the property during the site reconnaissance.

Two electric motors were observed adjacent to IID canals associated with apparent pumps for water piping distribution. Motors contain hydraulic oil or other fluids. Leaks or stains were not observed beneath the motors.

Mercury was used in the mining industry to separate precious metals from crushed ore. In addition, mercury is used in analog timers and data loggers that are common in oil field

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production and other industrial operations. Based on the site reconnaissance, conditions for the use of mercury were not evident.

### **2.3.5 Waste Disposal**

No waste disposal activities were observed on the property during the site reconnaissance.

### **2.3.6 Drums and Other Chemical Containers**

Small chemical containers were observed on the property at the time of the site reconnaissance as discussed in Section 2.3.2, Hazardous Substances. Various ASTs were observed on the property. ASTs are discussed in Section 2.3.3, Storage Tanks.

### **2.3.7 Dumping**

Small areas of debris that included concrete, wood, tires and equipment were located throughout the property.

### **2.3.8 Pits, Ponds, Lagoons, Septic Systems, Cisterns, Sumps, Drains, and Clarifiers**

Irrigation for the property agricultural land is provided by irrigation canals operated by the IID and serve smaller canals managed through flood gate systems to deliver irrigation water to the crop fields. A series of agricultural-related gravity flow drainage canals also exist within the site.

A portion of Fig Lagoon exists on the northern portion of APN 051-300-05.

There may be a septic system associated with the residential structure located on APN 051-350-012. URS was not able to verify whether a septic system is present.

No evidence of pits, ponds, cisterns, sumps, drains, and/or clarifiers was observed at the property during the reconnaissance.

### **2.3.9 Pesticide Use**

URS reviewed the California Department of Pesticide Regulation (DPR) Licensing and Certification Program database for licenses and/or certificates for pesticide applicators that use or supervise the use of restricted pesticides. The property owner was not listed in the DPR database.

Plastic ASTs containing agricultural chemicals were observed on the property. Based on the historical agricultural use of the property, chemical retention in surface and subsurface soils could be of concern. Most agricultural chemicals degrade rapidly in the presence of ultraviolet light from the sun and most newer-formulated chemicals have lower retention



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time especially at the lower application concentrations directed by regulatory agencies. Based on the historical agricultural use of the property, there is the potential for residual pesticide concentrations in the surface and subsurface soils.

**2.3.10 Staining and Discolored Soil**

Stained soil was observed at the base of two utility poles where it appeared that wood treatment was dripping from the base of the utility poles at the northeast corner of APN 051-360-02.

No other staining or discolored soil was observed during the site reconnaissance.

**2.3.11 Stressed Vegetation**

Stressed vegetation was not observed during the site reconnaissance.

**2.3.12 Unusual Odors**

No unusual odors were detected during the site reconnaissance.

**2.3.13 On-site Wells**

Monitoring wells, water wells, or oil wells were not observed on the property.

URS reviewed the California Division of Oil, Gas, and Geothermal Resources (DOGGR) database to evaluate oil and gas exploration in the vicinity of the property.

One abandoned geothermal temperature observation well was identified on the DOGGR database. Chevron U.S.A., Inc. Well C-283 (API 02590354) was identified on the southwest corner of the property in APN 051-350-05. The well was reported to have been drilled in 1980 and abandoned in 1981. The well was 6 inches in diameter and 487 feet deep and was used to insert temperature instrumentation to log temperatures to determine geothermal gradient. Approval for the well was granted by DOGGR on November 28, 1980 and well abandonment was approved on February 24, 1982. The well was reported to have been abandoned with a cement surface plug within the upper 10 feet below the ground surface.

**2.3.14 Asbestos**

An asbestos survey was not included in the Scope of Services performed for this Phase I ESA. The use of asbestos was primarily discontinued after the late 1970s. The residential structure and associated garages have the potential to contain asbestos-containing materials.

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**2.3.15 Lead-based Paint**

A lead-based paint (LBP) survey was not included in the Scope of Services performed for this Phase I ESA. Concern for LBP is primarily related to older structures. The residential structure and associated garages have the potential to contain LBP. In addition, equipment and canal lift gates observed on the property may contain LBP.

**2.3.16 Radon**

A USEPA survey by state and county of indoor radon concentrations indicated the radon zone level for Imperial County is 3. Zone 3 areas are predicted to have an indoor radon screening potential of less than 2.0 picocuries per liter of air (pCi/l). The USEPA action level for radon is 4.0 pCi/l. Further assessment for radon appears unwarranted based on regional background levels.

**2.3.17 Other Concerns**

A memorial consisting of a headstone, concrete footing, wooden cross, and other memorial material was observed on-site on the northwestern edge of APN 051-310-40. It is not known if there is anything buried associated with this memorial.

Other concerns were not identified during the site reconnaissance.

**2.4 SITE VICINITY AND ADJACENT PROPERTIES**

The site is located within an area that is primarily developed for agriculture and rural residences in a rural portion of Imperial County. In general, prominent adjoining land uses are as follows:

- North: one residence, a school/residential complex, undeveloped/agricultural land, and Interstate 8 border the site:
  - The residence at 1651 Westside Road is located on the northern boundary of the property. This location was identified by EDR on the Haznet database. This database consists of hazardous waste manifests received by the California Department of Toxic Substance Control. The database reports that household waste was generated and disposed of from this address in 2009 consisting of 0.025 and 0.375 tons. Waste material is not reported. This property was not part of the site survey conducted for this Phase I ESA.
  - The Westside School is located north of APN 051-300-09 and consists of buildings and a play area. Adjacent to the school is a residential complex to the east. These locations were not part of the site survey.

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- Agricultural land is the dominant land type adjacent on the north side of the property and consists of agricultural fields and canals that are similar in type to those on the site.
- Interstate 8 is adjacent to the site on the northwest corner and consists of a 4-lane highway that is built up slightly from the adjacent agricultural land.
- South: undeveloped/agricultural land, Westside Main Canal, and residences:
  - The Westside Main Canal is adjacent to the site on the south-central portion of the site and consists of an irrigation canal and distribution canals.
  - Residential complexes are adjacent to the site on the southern side and consist of multiple residential and agriculture related buildings. These locations were not part of the site survey.
  - Agricultural land is the dominant land type adjacent on the south side of the property and consists of agricultural fields and canals that are similar in type to those on the site.
  - The Imperial Valley Substation is located to the south of the Western Off-site Gen-Tie Alignment and the Eastern Off-site Gen-tie Alignment.
- East: undeveloped/agricultural land and Drew Road:
  - Drew Road is adjacent to the site on the east side and separates the site from additional agricultural land and residences.
- West: one residence complex and undeveloped/agricultural land:
  - A residential complex is located on the west side of APN 051-300-30 and consists of two buildings, a barn, and an apparent agricultural maintenance and storage area. Three apparent ASTs were observed on the eastern side of the barn. These locations were not part of the site survey.
  - Agricultural land is the dominant land type adjacent on the west side of the property and consists of agricultural fields and canals that are similar in type to those on the site.

URS did not observe activities that would indicate the potential for surface or subsurface impacts to the property from adjoining properties.

### **2.5 HISTORICAL USE**

URS reviewed readily available historical data pertaining to the property. These references were reviewed for evidence of activities that would suggest the potential presence of hazardous substances at the property and to evaluate the potential for the property to be

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impacted by off-property sources of contamination. The following subsections present a summary of the review results.

### **2.5.1 Historic Topographic Maps**

URS reviewed the following USGS 7.5-minute Quadrangle maps of California provided in the EDR Historical Topographic Map Report: Heber (1947, 1957), Brawley (1948, 1957), Seeley (1957, 1979) and Mount Signal (1957, 1976). These provide topographic map coverage of the property and site vicinity (see Appendix B). The maps depict the property as undeveloped and agricultural land within Imperial County. The following is a summary of the review:

- 1947** The map presents only the southern half of the property, and appears to be undeveloped and agricultural land. The Fern, Fig, and West Side Main Canals are visible. Drew Road and Diehl Road are visible through the property. Multiple apparent farm structures are depicted on the map.
- 1948** The map presents only the northern half of the property, and depicts Fern, Fig, and other unnamed canals and drainages. Westside School is depicted and Westside Road, Derrick Road, and Drew Road are visible oriented north-south through the property.
- 1957** The maps depict the property to be undeveloped and agricultural land. Multiple canals, laterals, and drainages and apparent farm structures are visible on the map. There are no significant changes since the previous map. The United States/Mexico Border is depicted to the south of the property.
- 1976** The maps present only the southern half of the property, and depict the property to be undeveloped and agricultural land. Multiple canals, laterals, and drainages and apparent farm structures are visible on the map. There are no significant changes since the previous map.
- 1979** The maps present only the northern half of the property. Interstate 8 along the northern edge of the property is visible. There are no significant changes since the previous map.

### **2.5.2 Historic Aerial Photographs**

The general type of activity and land use can often be discerned from the type and layout of structures visible in an aerial photograph; however, specific elements of a property operation cannot normally be determined from the photographs. Considering these conditions, URS reviewed historical aerial photographs dated 1953, 1954, 1971, 1973, 1978, 1984, 1996, 2002, 2005, 2006 and 2009 that were provided by EDR (see Appendix C). The following is a summary of the review:

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- 1953** The 1953 photograph depicts the southern portion of the property. The area of the Western Off-site Gen-Tie and the Eastern Off-site Gen-Tie appears to be undeveloped land.
- 1954** The property appears to be used dominantly for agricultural purposes. The current grid of roads and canals and drainage channels, including Fern, Fig, and West Side Main Canals are visible. The Westside School and multiple apparent farm structures are visible on the aerial photograph. The area around Fig Lagoon in the northeast portion of the property appears to be dominated by the river and drainage system and appears to have not been graded yet for agriculture usage. The adjacent properties and surrounding area appear to be primarily undeveloped land or developed as farmland.
- 1971** Interstate 8 appears along the northern edge of the property. No other significant changes are observed to the property, adjacent properties, or site vicinity since the previous photograph.
- 1973** No significant changes are observed to the property, adjacent property or site vicinity.
- 1978** The Non-BLM Off-site Linear appears to run through agricultural land. The Westside Canal is observed to the west of the property. No significant changes are observed to the property.
- 1984** Grading of the borrow area (northern edge of APNs 051-330-19 and 051-330-15) and realignment of the Fern Canal appears to have taken place since the last photograph. What appears to be a residence and associated structures is observed on APN 051-350-12. The Imperial Valley Substation is now observed to the south of the property. No other significant changes are observed to the property, adjacent properties, or site vicinity since the previous photograph.
- 1996** No significant changes are observed to the property, adjacent properties, or site vicinity since the previous photograph.
- 2002** No significant changes are observed to the property, adjacent properties, or site vicinity since the previous photograph.
- 2005** No significant changes are observed to the property, adjacent properties, or site vicinity since the previous photograph.
- 2006** No significant changes are observed to the property, adjacent properties, or site vicinity since the previous photograph.
- 2009** No significant changes are observed to the property, adjacent properties, or site vicinity since the previous photograph.

### **2.5.3 Sanborn Fire Insurance Maps**

URS contracted with EDR to obtain Sanborn Fire Insurance Maps for the property. Based on EDR's search, Sanborn Fire Insurance Maps were not available for the property.

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### **2.5.4 Previous Environmental Investigations**

URS reviewed a Phase I Environmental Site Assessment for the Imperial Valley Solar Project dated June 2010, and prepared by Mathis and Associates, Inc. The Phase I ESA covered an approximately 2,400-acre property which included the majority of the property. The Phase I ESA reported the use of the property and the site vicinity as agricultural use. Hazardous materials were not identified on the site during the Phase I ESA. Mathis and Associates identified RECs as the potential for chemical storage and the potential for ACM in the on-site structures (not part of the subject property for this Phase I ESA).

URS prepared a Phase I ESA for the First Solar Project Sagebrush Site (consists of the subject property with additional linear alignments and now identified as First Solar Campo Verde Project), dated July 7, 2011. A site reconnaissance was performed on the property on June 23, 2011. The property was observed to be agricultural land. No RECs were identified.

### **2.5.5 Title Records/Environmental Liens or Activity and Use Limitations**

URS requested EDR to perform an Environmental Lien Search for the Project Site. Results of the EDR Lien Search indicate that there are no reported environmental liens or activity and use limitations associated with the property:

- APNs 051-270-27, 051-270-37, 051-270-47, 051-290-38, 051-300-25, 051-300-29, 051-300-30, 051-330-05, 051-330-015, 051-330-020, 051-350-05, 051-360-01, 051-360-02, 051-360-03, and 051-360-18 are reportedly vested in Imperial 1585, LLC, a Nevada limited liability company.
- APNs 051-310-049, 051-310-050, 051-310-056, 051-310-057, 051-310-059 are vested in Mary N. Fitzurka, a married woman as her sole and separated property.
- APNs 051-360-004 and 051-310-040 are reportedly vested in Mary Fitzurka, Successor Trustee.
- APN 051-360-32 is reportedly vested in McVey Properties, LLC.
- APNs 051-330-19 and 051-350-14 are reportedly vested in Tierra Partners, LLC, an Arizona limited liability company.
- APNs 051-260-029, 051-260-030, 051-300-005, 051-300-008, and 051-310-026 and are reportedly vested in J.R. Preece, Inc., a California corporation.
- APN 051-260-033 is reportedly vested in J.R. Preece, Inc., a California corporation and Melvin Jerry Preece, Jr., an unmarried man.
- APN 051-290-014 is reportedly vested in Jerry Preece, Jr., an unmarried man.
- APN 051-300-09 is reportedly vested in Melvin Jerry Preece, Jr.

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- APNs 051-310- 58 and 051-310-60 are reportedly vested in Imperial Irrigation District.
- APNs 051-350-09 and 051-380-024 are reportedly vested in the United States of America.
- APN 051-350-010 and 051-350-011 is reportedly vested in Rabley Holdings, a Delaware corporation.
- APN 051-350-008 is reportedly vested in Theodore L. Whitmer and Carolyn J. Whitmer, as trustees of the Whitmer Family Trust created on 12/15/2006, and Randall R. Whitmer, a married man as his sole and separate property, as tenants in common.
- APN 051-330-021 is reportedly vested in Paul C. Rodriguez and Alice L. Rodriguez, husband and wife, as joint tenants.
- APN 051-330-022 is reportedly vested in Carolyn Marie Rhoads, an unmarried woman (as to an undivided ½ interest) and Cathleen Eleanor Whiting, a married woman, as her sole and separate property (as to an undivided ½ interest).
- APN 051-330-024 is reportedly vested in Delieu Scopesi, a married woman, as her sole and separate property.
- APN 051-350-012 is reportedly vested in Federal National Mortgage Association.

Copies of the EDR Environmental Lien Reports are included in Appendix E, Environmental Lien Reports.

#### **2.5.6 Valuation Reduction for Environmental Issues**

URS was not provided information to indicate that the value of the property decreased due to environmental issues.

#### **2.5.7 Data Gaps**

URS was not able to obtain information regarding current or historic conditions from all property owners. Based on the site reconnaissance, a review of historical information, the database search report, and an environmental lien search conducted by EDR, URS does not consider the data gaps identified herein to be significant.

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**SECTION 3.0  
PHYSICAL SETTING**

URS reviewed pertinent maps and readily available literature for information on the physiography and hydrogeology of the property. A summary of this information is presented in the following subsections.

**3.1 TOPOGRAPHY**

The property is located 16, 20, 21, 22, 23, 24, 25, 26, 27, 28, 33, and 34, Township 16 South, Range 12 East, and Section 3, Township 16.5 South, Range 12 East San Bernardino Base and Meridian (U.S. Geological Survey [USGS] Seeley and Mount Signal 7.5-minute quadrangles). The topography of the property is relatively flat and ranges from mean sea level (msl) at the southern edge of the site to 40 feet below msl at the northern edge of the site. Figure 1 presents the site topography using recent USGS data.

The property is located on the edge of the irrigated agricultural land of the Imperial Valley to the east and the undeveloped desert region to the west.

**3.2 AREA GEOLOGY**

The property is located within the Salton Trough, an area of topographic and geologic depression due to regional faulting. The area is bounded by the San Andreas Fault to the northeast and the San Jacinto Fault Zone to the southwest. The property is within the former ancient Lake Coahuilla.

According to the Geologic Map of California – San Diego-El Centro Sheet, dated 1962, the property is underlain by Quaternary (recent) Lake deposits and dominated by interbedded clay, silt, and sand (California Division of Mines and Geology 1962).

The property is located within the DOGGR Geothermal District 2 and west of the Heber Geothermal Field of Imperial County which contains numerous production geothermal wells in the region.

**3.3 GROUNDWATER**

The property is located in the Imperial Valley Groundwater Basin, Imperial County. Based on review of groundwater contour maps prepared by Tetra Tech, groundwater elevation in the area of the property is approximately 40 feet below msl. With a site elevation ranging from approximately 24 to 40 feet below msl, depth to groundwater is expected to be within approximately 16 feet below ground surface (Tetra Tech 1999).



**SECTION 4.0  
AGENCY RECORDS REVIEW**

URS reviewed readily available records regarding past and current property use, contacted applicable agencies regarding potential environmental concerns at the property, and reviewed the agency database list search for potential environmental concerns at surrounding properties. The information obtained during the records review is provided in the following sections.

**4.1 DATABASE LIST SEARCH**

URS contracted with EDR to conduct a search for facilities listed by regulatory agencies as potentially having environmental concerns. The complete list of databases reviewed is provided in the EDR DataMap Area Study, included as Appendix D, and is summarized in Sections 4.1.1 and 4.1.2. It should be noted that this information is reported as received by URS from EDR, which in turn reports information as provided in various government databases. It is not possible for either URS or EDR to verify the accuracy or completeness of information contained in these databases. However, the use of and reliance on this information is a generally accepted practice in the conduct of environmental due diligence.

**4.1.1 Property**

The property was not identified on any of the databases searched by EDR. A summary of agency databases searched can be found in the EDR DataMap Area Study provided as Appendix D.

**4.1.2 Site Vicinity**

Miles Preservation at 1651 Westside Road was identified on the northeastern boundary of the property. However, based on the URS site reconnaissance, the facility is not located within the property boundaries. The facility was identified on the HAZNET database and was reported to generate household waste. Based on the regulatory status of this facility, it is not expected to impact the property.

Other facilities in the site vicinity were not identified on any of the databases searched by EDR.

**4.1.3 Orphan Sites**

URS reviewed EDR's Orphan Summary, which is a listing of sites that have not been geo-coded (coded and plotted on EDR maps) based on lack of sufficient data regarding their exact location within the general area. The property was not identified as an Unmapped Site. No additional Unmapped Sites identified on the Orphan Summary appear to be located

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within the ASTM-designated radii of the property, and, therefore, URS has no evidence that any orphan sites have had an impact on the property.

#### **4.2 AGENCY CONTACTS**

During the performance of an environmental assessment, state and local regulatory agencies having jurisdiction over the property are contacted to assess the following information: the status of relevant environmental permits; whether there has been any violations, or other similar correspondence from such agencies; whether corrective action or remediation is planned, currently taking place, or was completed at the property; whether there were any reported violations or complaints that the property is not in compliance with environmental laws, regulations, or standards, and whether the property is under investigation for such non-compliance; whether the property is listed on any of the regulatory databases; and whether there is any other pertinent documentation on file with such regulatory agencies regarding the property or surrounding sites of concern. URS contacted the following agencies:

- The Imperial County, California Department of Toxic Substances Control (DTSC) was contacted. The DTSC is not able to search for files by APN. No cases were cited in the EnviroStor database at or near the property.
- The Colorado River Regional Water Quality Control Board (RWQCB) was contacted. The RWQCB is not able to search for files by APN. No cases were cited in the GeoTracker database at or near the property.
- The Imperial County Air Pollution Control District (ICAPCD) was contacted. The ICAPCD is not able to search for files by APN.

As noted above, none of the agencies contacted are able to perform file searches based on APNs. However, as discussed in Section 4.1, the property was not identified on any of the databases searched by EDR.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

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**SECTION 5.0  
CONCLUSIONS**

**5.1 ON-SITE RECOGNIZED ENVIRONMENTAL CONDITIONS**

Based on URS' site reconnaissance and review of historical information, RECs from on-site sources were not identified.

**5.2 OFF-SITE RECOGNIZED ENVIRONMENTAL CONDITIONS**

Based on URS' review of historical information and the environmental database search, RECs from off-site sources were not identified.

**5.3 RECOMMENDATIONS**

Should future development be planned near the area of the historic abandoned geothermal well, the well would require inspection and possible re-abandonment according to DOGGR standards. Historic geothermal wells potentially impacting development that are not constructed or abandoned to current standards, may be required to be re-abandoned under the direction of DOGGR. Site development in the vicinity of the abandoned geothermal well may need to be set back from the well location and permanent access rights may need to be provided.

Farmland debris and equipment was observed on the property. This debris should be removed from the property and disposed of in accordance with appropriate regulations, prior to any land use changes. Should hazardous materials or impacts to soil be identified on the property during removal of debris, additional investigation would be required.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

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**SECTION 6.0  
PREPARER SIGNATURES AND QUALIFICATIONS**

This section includes qualification statements of the environmental professionals responsible for conducting the Phase I ESA update and preparing this report.

Ms. Tricia Winterbauer of the URS Santa Barbara, California office directed the site reconnaissance by qualified URS personnel, conducted the data review for the project, and wrote the Phase I ESA report. Ms. Winterbauer has 15 years of experience in environmental site investigations, characterizations, and assessments.

The work conducted and the report written by Ms. Winterbauer was reviewed by Mr. David Bernal, PG. Mr. Bernal has over 20 years of experience with Phase I Environmental Site Assessments.

Ms. Winterbauer declares that, to the best of her professional knowledge and belief, she meets the definition of Environmental Professional as defined in §312.10 of 40 CFR 312.

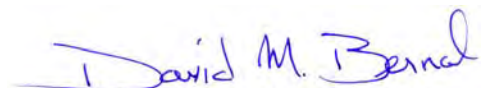
Mr. Bernal declares that, to the best of his professional knowledge and belief, he meets the definition of Environmental Professional as defined in §312.10 of 40 CFR 312.

Ms. Winterbauer has the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of this property. With the assistance of Mr. Bernal, they have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



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Tricia Winterbauer  
Senior Environmental Specialist



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David Bernal, PG #5554  
Principal Geologist

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

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**SECTION 7.0  
REFERENCES**

- American Society of Testing Materials (ASTM) International. 2005. Standard E 1527-05, “*Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process.*” November 1.
- California Department of Pesticide Regulation. 2012. Database of registered and certified users program. From their web page: <http://www.cdpr.ca.gov/index.htm>. March.
- California Division of Mines and Geology. 1962. Geologic Map of California: San Diego-El Centro Sheet.
- California Division of Oil, Gas, and Geothermal Resources (DOGGR). 2012. *Database of Oil and Gas maps.* March.
- California Regional Water Quality Control Board (RWQCB). 2012. GeoTracker database from the RWQCB web page: <http://geotracker.swrcb.ca.gov/>. March.
- Environmental Data Resources, Inc. (EDR). 2012a. EDR DataMap Area Study, Inquiry Number 3256771.1s. February 13
- 2012b. EDR USGS Aerial Photo Decade Package, Inquiry Number: 3257576.1 February 15.
- 2012c. EDR USGS Aerial Photo Decade Package, Inquiry Number: 3256771.2. February 13.
- 2012d. EDR Environmental Lien Report, Inquiry Number: 3256771.3S, February 29.
- 2012e. EDR Environmental Lien and AUL Search, Inquiry Number: 3276025.1. March 14.
- 2011a. EDR Historical Topographic Map Report, Inquiry Number: 3101318.3 June 22.
- 2011b. EDR USGS Aerial Photo Decade Package, Inquiry Number: 3101318.4 June 27.
- Federal Register. 2005. Vol. 70, No. 210. U.S. Environmental Protection Agency. *Standards and Practices for All Appropriate Inquiries; Final Rule* (40 CFR Part 312). November 1.
- Mathis and Associates, Inc. 2010. Phase I Environmental Site Assessment, Imperial Valley Solar Project. June.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

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Tetra Tech, Incorporated. 1999. A Study on Seepage and Subsurface Inflows to Salton Sea and Adjacent Wetlands. Prepared for Salton Sea Authority, July 9, 1999.

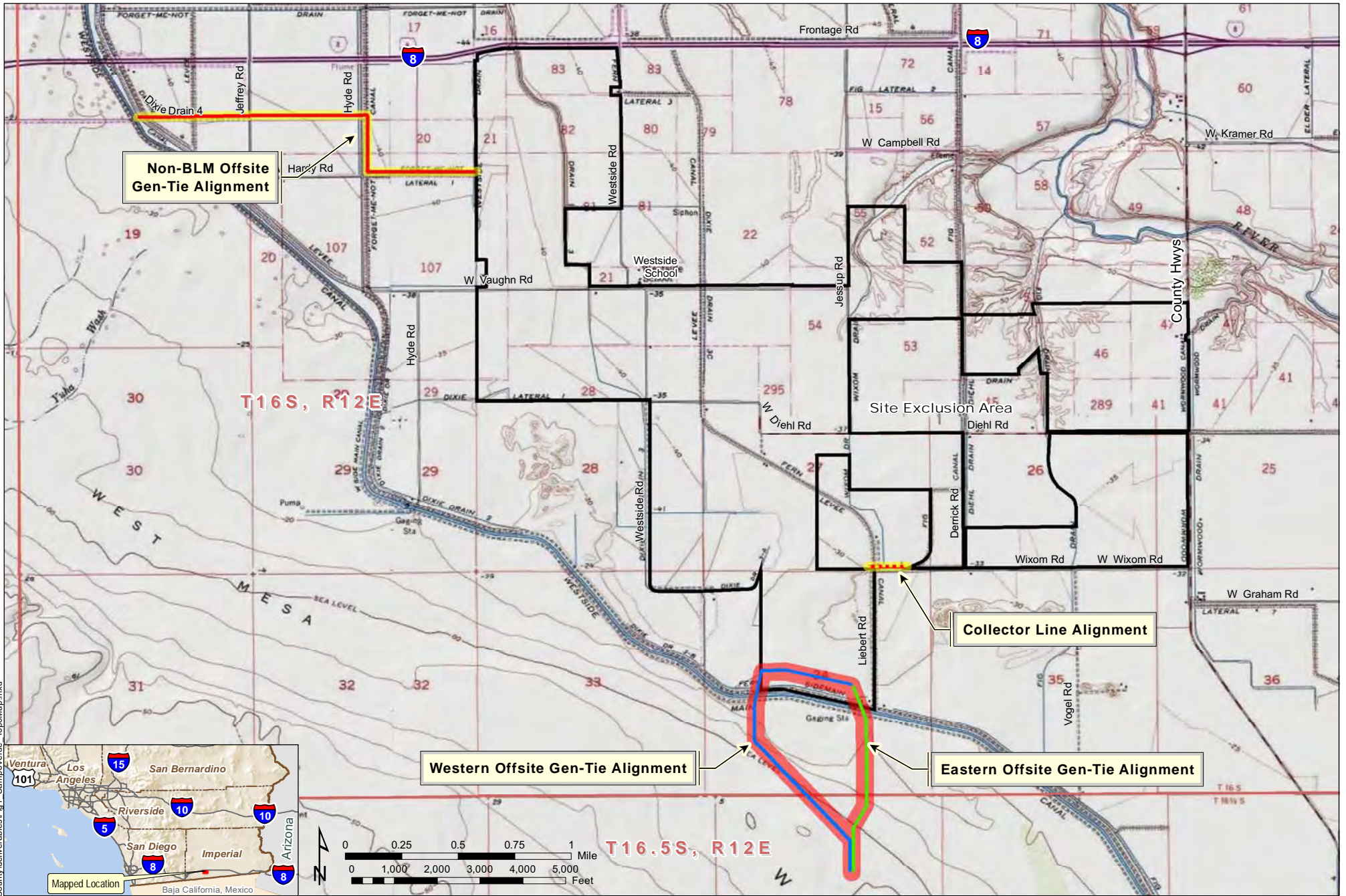
URS. 2011. Phase I Environmental Site Assessment, First Solar Project Sagebrush Site. July 7.

U.S. Environmental Protection Agency (USEPA). 2011. *California Map of Radon Zones*. From the USEPA web page: <http://www.epa.gov/iaq/radon/zonemap.html>. June.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

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**FIGURES**

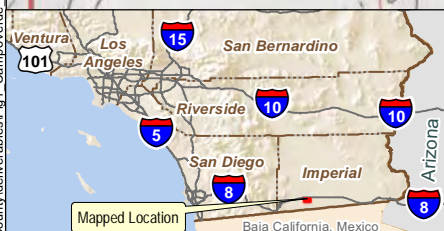


Non-BLM Offsite Gen-Tie Alignment

Collector Line Alignment

Western Offsite Gen-Tie Alignment

Eastern Offsite Gen-Tie Alignment



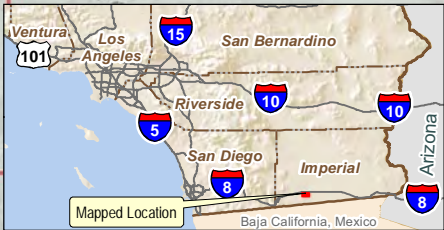
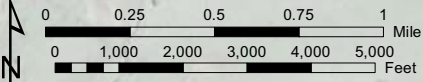
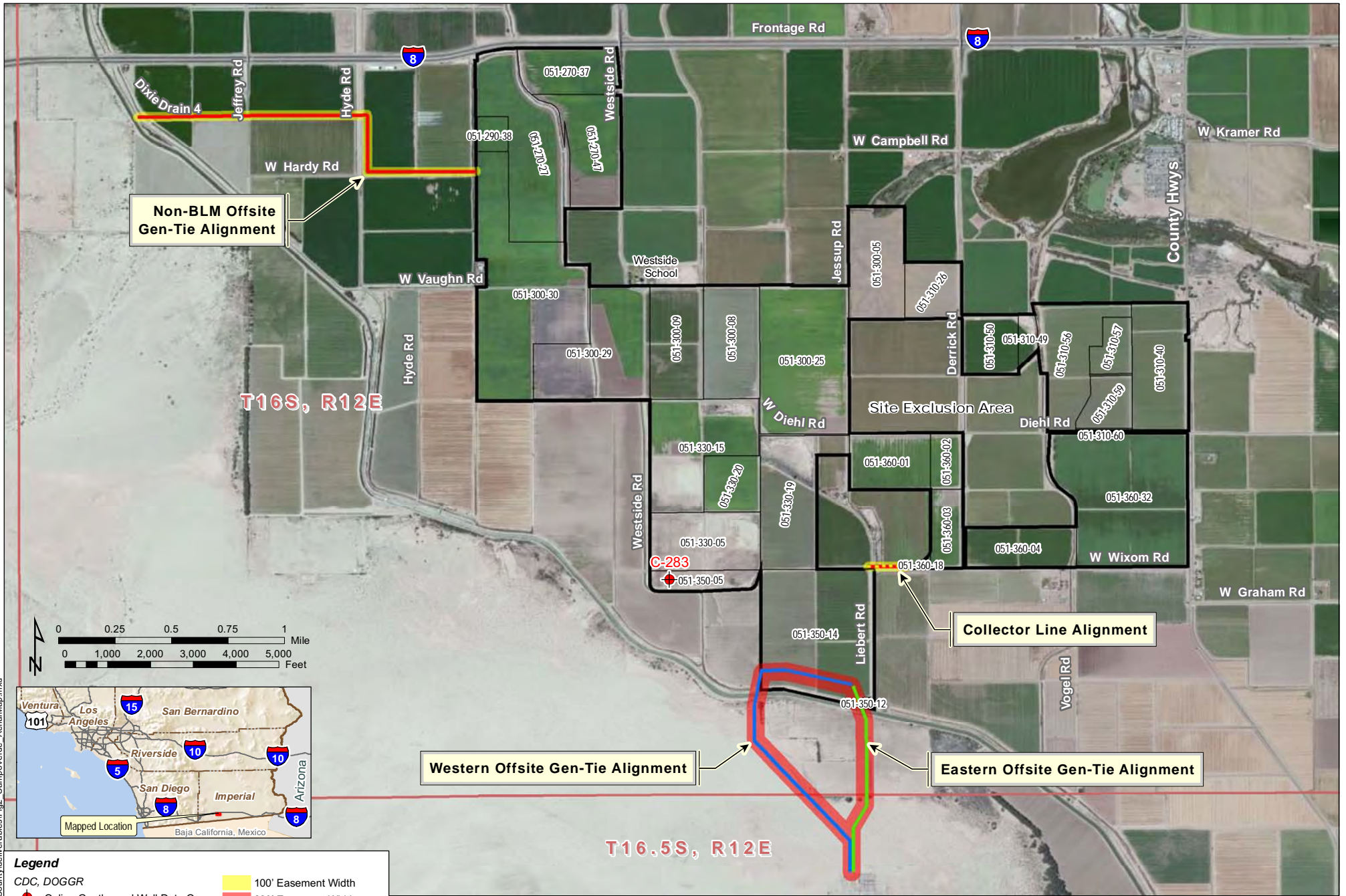
	Eastern Offsite Gen-Tie Alignment		100' Easement Width
	Western Offsite Gen-Tie Alignment		200' Easement Width
	Non-BLM Offsite Gen-Tie Alignment		Campo Verde Project Site
	Collector Line Alignment		Township-Range Grid

**First Solar - Phase I ESA  
Campo Verde Project Site  
Imperial County**  
URS Corporation

Source: [1] Seamless, scanned images of United States Geological Survey (USGS) paper topographic 1:24,000-scale maps by National Geographic TOPOI, [2] California Geospatial Information Library PLS, [3] Imperial County Office of the Assessor, [4] ESRI StreetMap USA (2007).

**Figure 1. TOPOGRAPHIC MAP OF PROJECT AREA**





Legend	
<ul style="list-style-type: none"> <li>Online Geothermal Well Data Query</li> <li>Eastern Offsite Gen-Tie Alignment</li> <li>Western Offsite Gen-Tie Alignment</li> <li>Non-BLM Offsite Gen-Tie Alignment</li> <li>Collector Line Alignment</li> </ul>	<ul style="list-style-type: none"> <li>100' Easement Width</li> <li>200' Easement Width</li> <li>Campo Verde Project Site</li> <li>County Assessor's Parcel Boundaries</li> <li>Township-Range Grid</li> </ul>

**First Solar - Phase I ESA  
Campo Verde Project Site  
Imperial County**

URS Corporation

Source: [1] Bing Maps Aerial Imagery Web Mapping Service - (c) 2010 Microsoft Corporation and its data suppliers (Image Date: May, 2011), [2] California Geospatial Information Library PLS, [3] Imperial County Office of the Assessor. [4] ESRI StreetMap USA (2007).

**Figure 2. AERIAL MAP OF PROJECT AREA**

2012

T:\FirstSolar\Imperial\County\deliverables\Fig2\_CampoVerde\_AerialMap.mxd

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

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**APPENDIX A  
SITE PHOTOGRAPHS**

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**



**Photograph 1**

**Comments:**

APN: 051-310-40

Facing south from the eastern boundary of the property.



**Photograph 2**

**Comments:**

APN: 051-310-40

Facing west from the eastern boundary of the property.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**



Photograph 3

Comments:

APN: 051-310-40

View of monument facing west on western boundary of parcel.



Photograph 4

Comments:

APN: 051-360-32

View of AST and agricultural chemical application.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**



**Photograph 5**

**Comments:**

APN: 051-310-56

Facing south along electric transmission lines from the north-west portion of the property.



**Photograph 6**

**Comments:**

APN: 051-310-26

Facing north toward shade structure and corral.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**



**Photograph 7**

**Comments:**

APN: 051-300-25

Facing south from the northeast corner of the parcel.



**Photograph 8**

**Comments:**

APN: 051-309-09

Facing west from the central portion of the parcel.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**



Photograph 9

Comments:

APN: 051-310-09

View facing north along Westside Road in the central portion of the property.



Photograph 10

Comments:

APN: 051-300-30

Facing east from the southwest corner of the parcel.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**



**Photograph 11**

**Comments:**

APN 051-260-29

View of Non-BLM  
Off-site Gen-Tie  
Alignment, facing  
west.



**Photograph 12**

**Comments:**

APN: 051-290-14

Debris along Non-  
BLM Off-site Gen-  
Tie Alignment,  
facing northwest.



**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**



Photograph 13

Comments:

APN: 051-270-37

Facing west from the northern edge of project. US Highway 8 is visible to the north of the property.



Photograph 14

Comments:

APN: 051-270-47

Facing north from the southwest corner of the parcel.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**



**Photograph 15**  
**Comments:**  
APN: 051-350-14  
View facing northwest toward shade/shelter structure in central portion of property.



**Photograph 16**  
**Comments:**  
APN: 051-350-14  
View facing north of bee box shade structure on southern side of parcel.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**



Photograph 17

Comments:

APN: 051-350-12

View of residential structure and garage, facing north.



Photograph 18

Comments:

APN: 051-360-04

View of agricultural ASTs.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**



**Photograph 19**

**Comments:**

APN: 051-350-09

View from  
Western Off-site  
Gen-Tie Alignment  
facing southwest.



**Photograph 20**

**Comments:**

APN: 051-350-11

View from Eastern  
Off-site Gen-Tie  
alignment facing  
south.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**



Photograph 21

Comments:

APN: 051-380-24

View facing north from Eastern Off-site Gen-Tie Alignment.



Photograph 22

Comments:

APN: 051-380-24

View facing south from Eastern Off-site Gen-Tie Alignment

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**



Photograph 23

Comments:

APN: 051-360-18

View facing east  
along Collector  
Line Alignment

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

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**APPENDIX B  
EDR HISTORICAL TOPOGRAPHIC MAP REPORT**



**First Solar Project Sagebrush**

First Solar Project Sagebrush

El Centro, CA 92243

Inquiry Number: 3101318.3

June 22, 2011

# EDR Historical Topographic Map Report



# EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

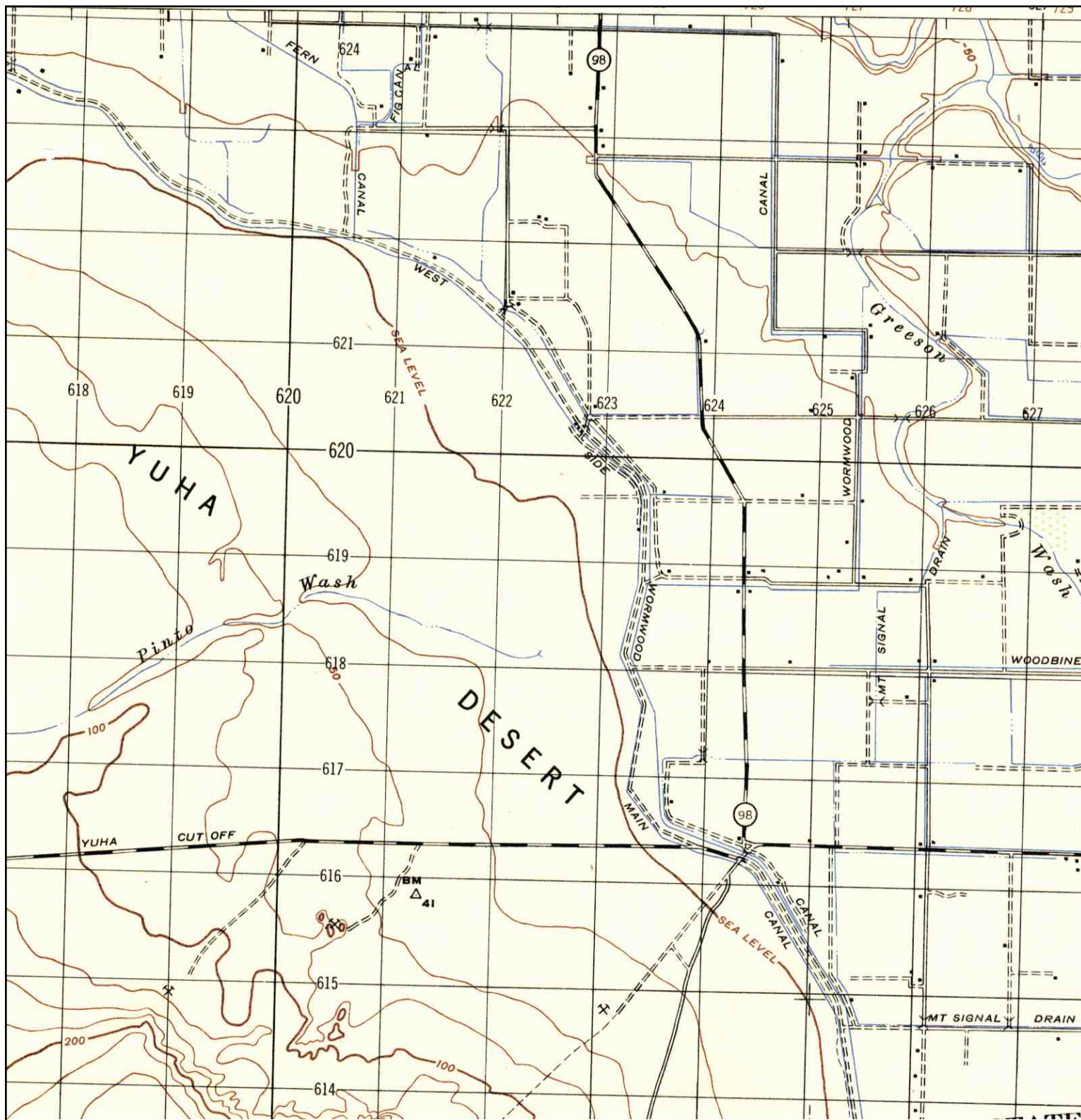
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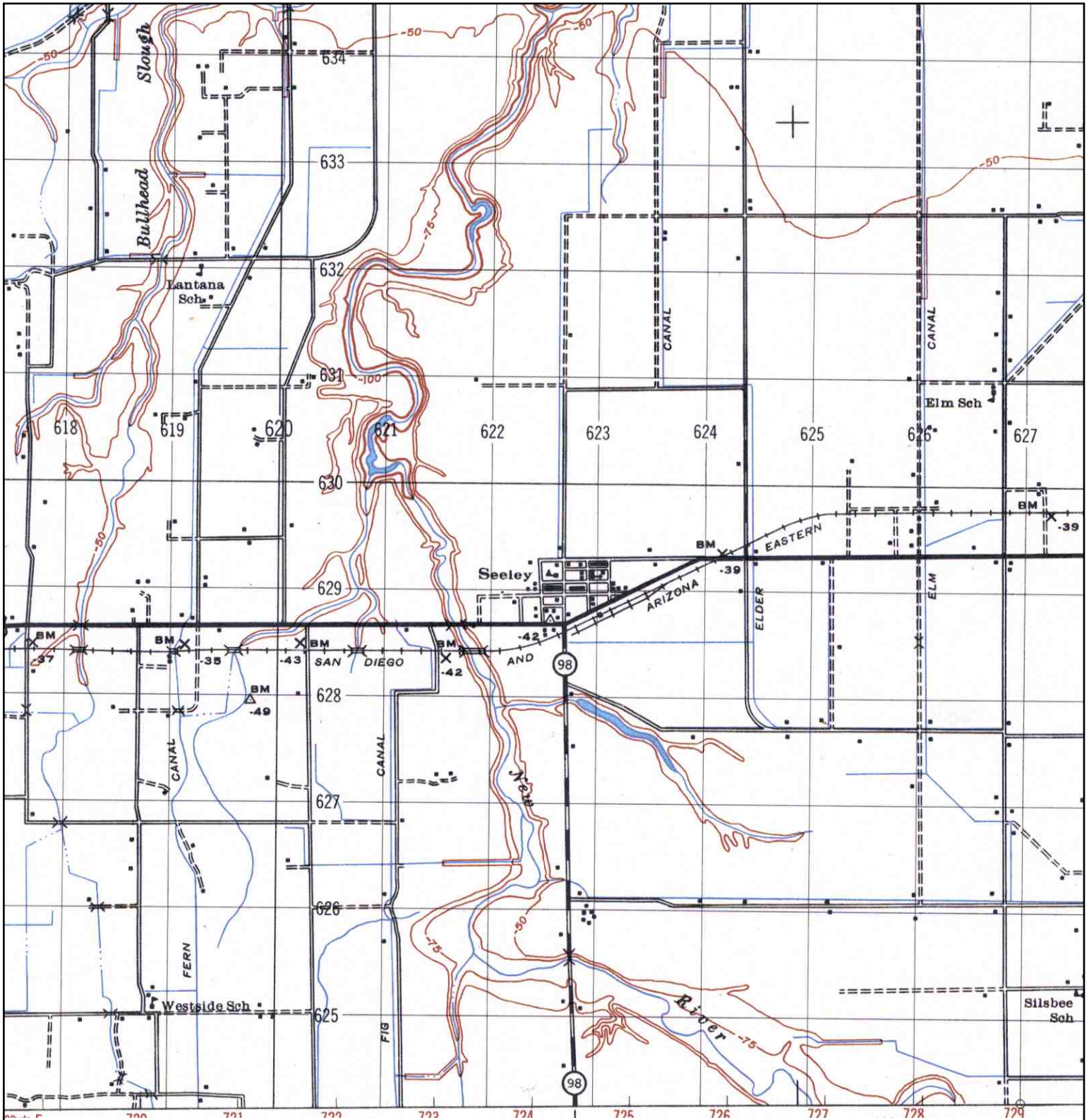
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# Historical Topographic Map



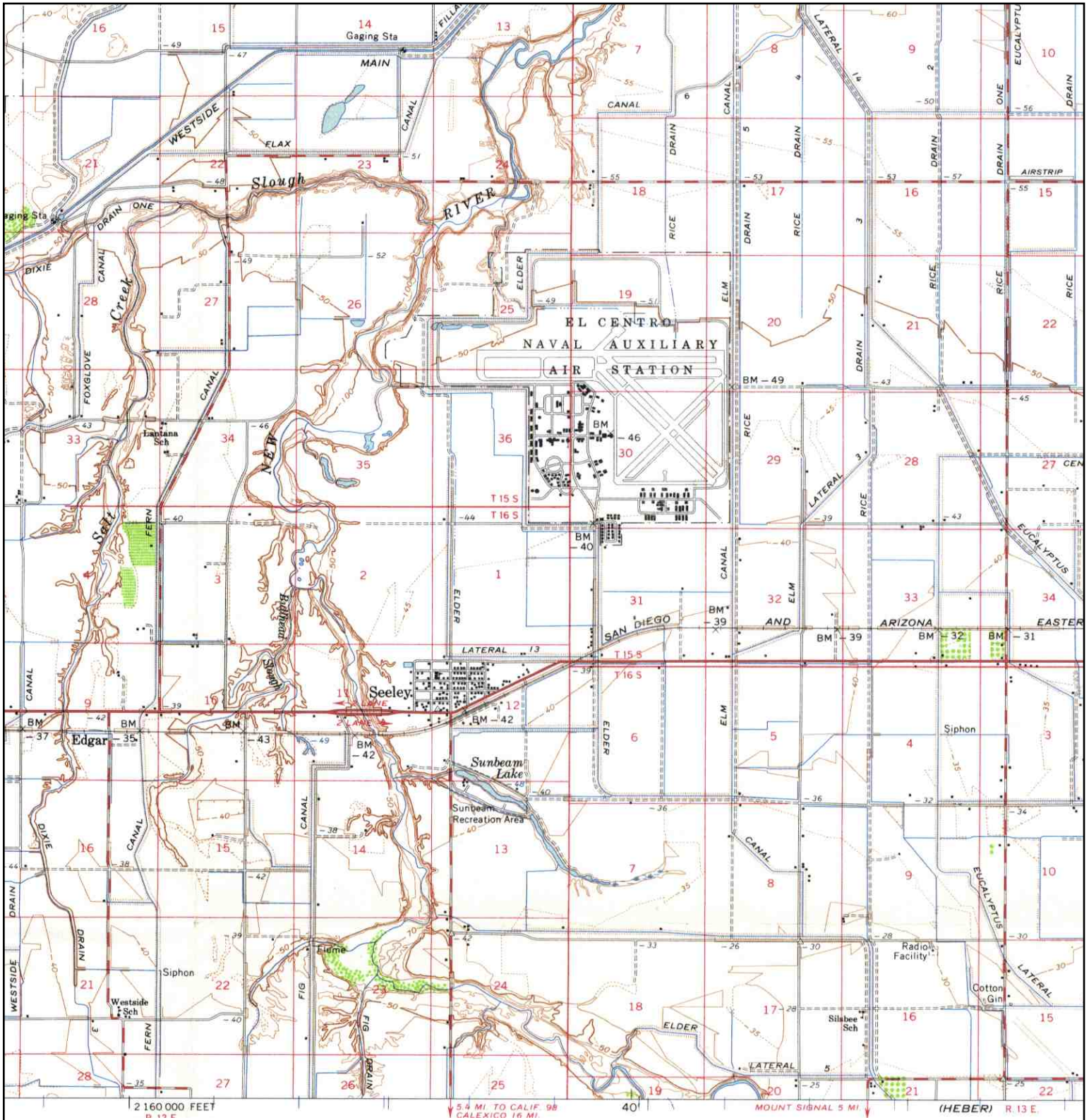
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	<p><b>SERIES:</b> 15  <b>SCALE:</b> 1:50000</p>		

# Historical Topographic Map



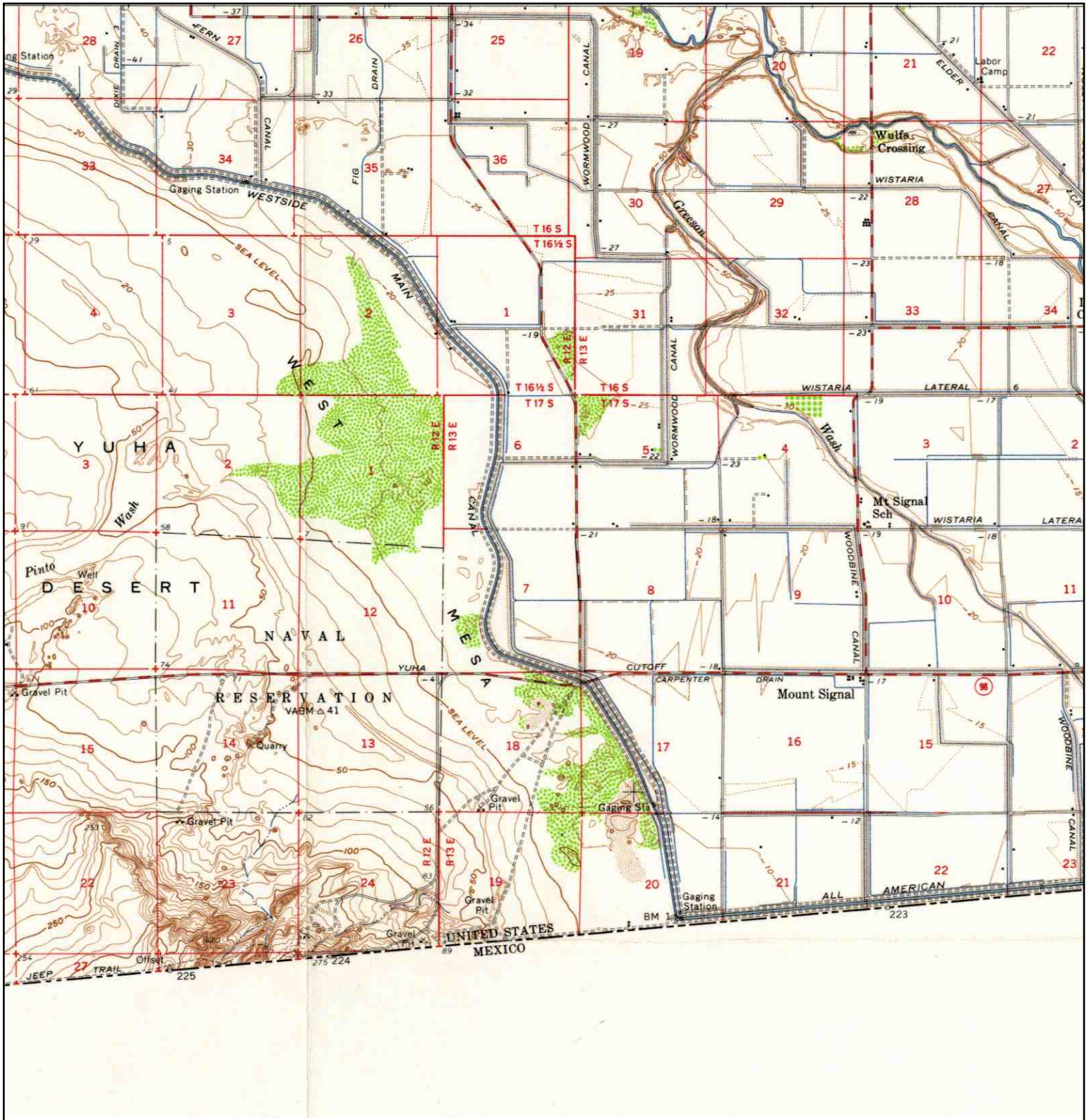
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	SERIES: 15 SCALE: 1:50000		

# Historical Topographic Map



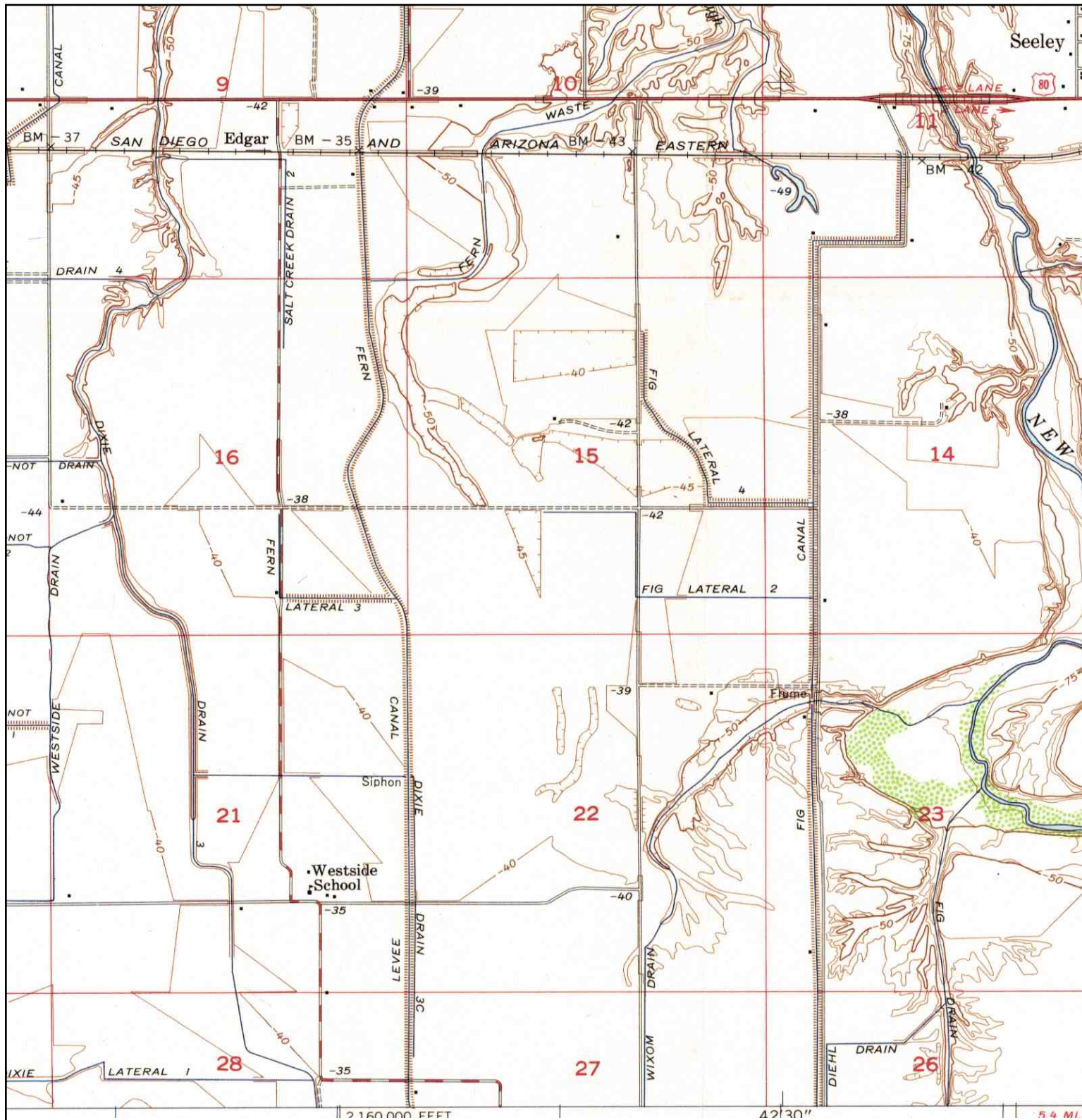
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	<b>MAP YEAR:</b> 1957	<b>EL CENTRO, CA 92243</b>	<b>INQUIRY#:</b> 3101318.3
	<b>SERIES:</b> 15	<b>LAT/LONG:</b> 32.752 / -115.7182	<b>RESEARCH DATE:</b> 06/22/2011
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# Historical Topographic Map



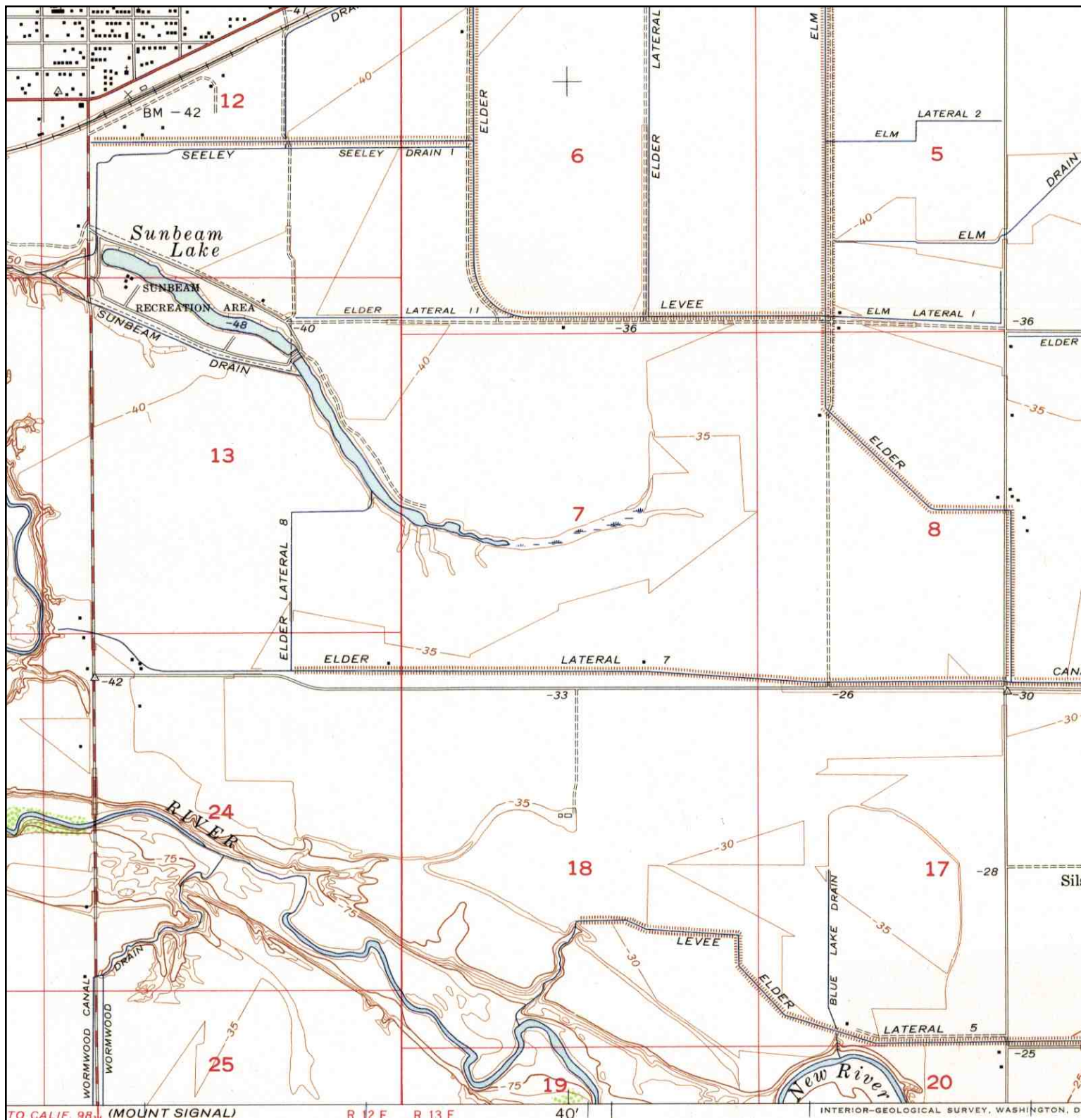
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# Historical Topographic Map



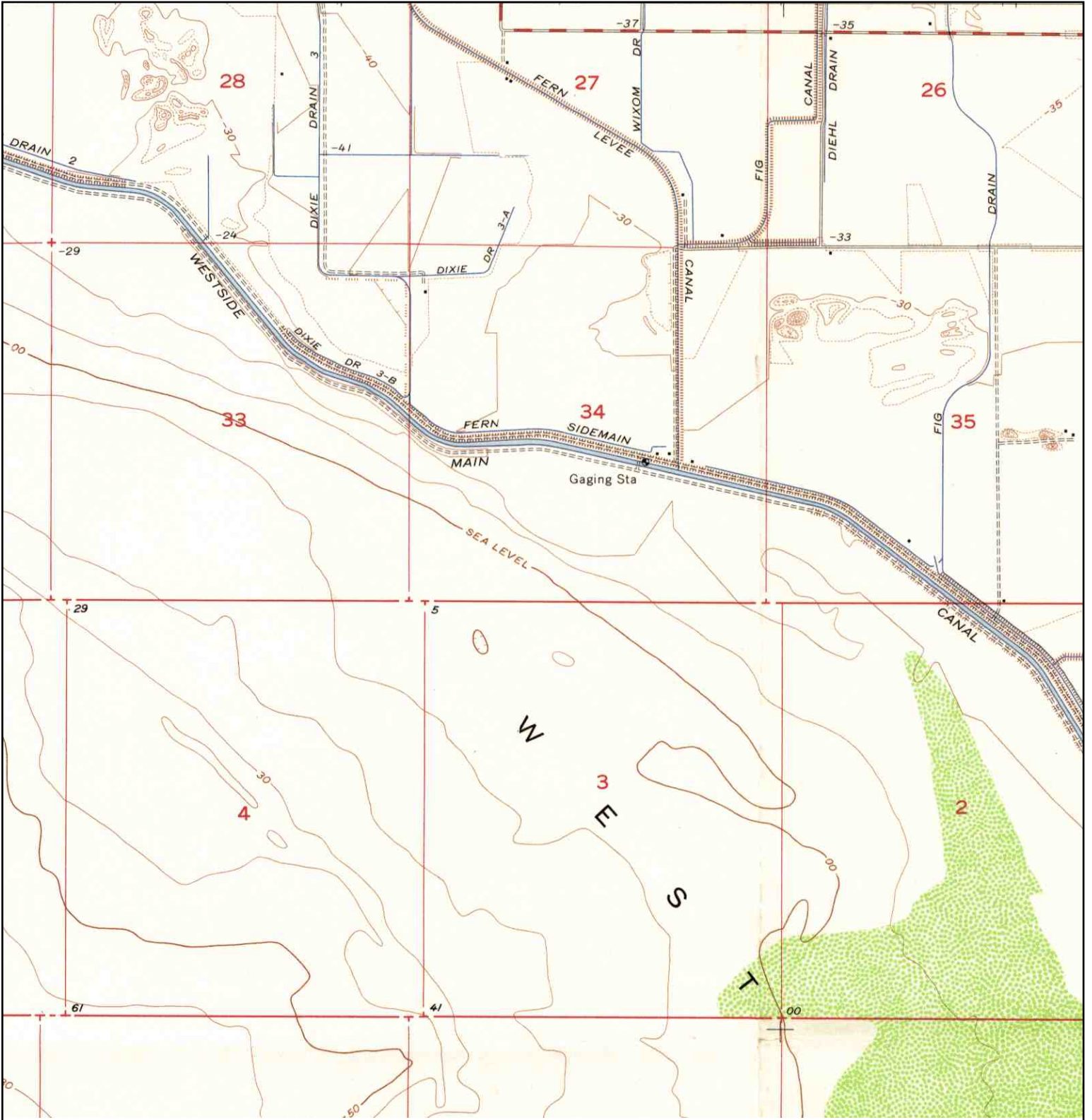
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	SERIES: 7.5 SCALE: 1:24000		


# Historical Topographic Map



	<b>TARGET QUAD</b>	<b>SITE NAME:</b> First Solar Project Sagebrush	<b>CLIENT:</b> URS Corporation
	NAME: SEELEY	ADDRESS: First Solar Project Sagebrush	CONTACT: Tricia Winterbauer
	MAP YEAR: 1957	LAT/LONG: 32.752 / -115.7182	INQUIRY#: 3101318.3
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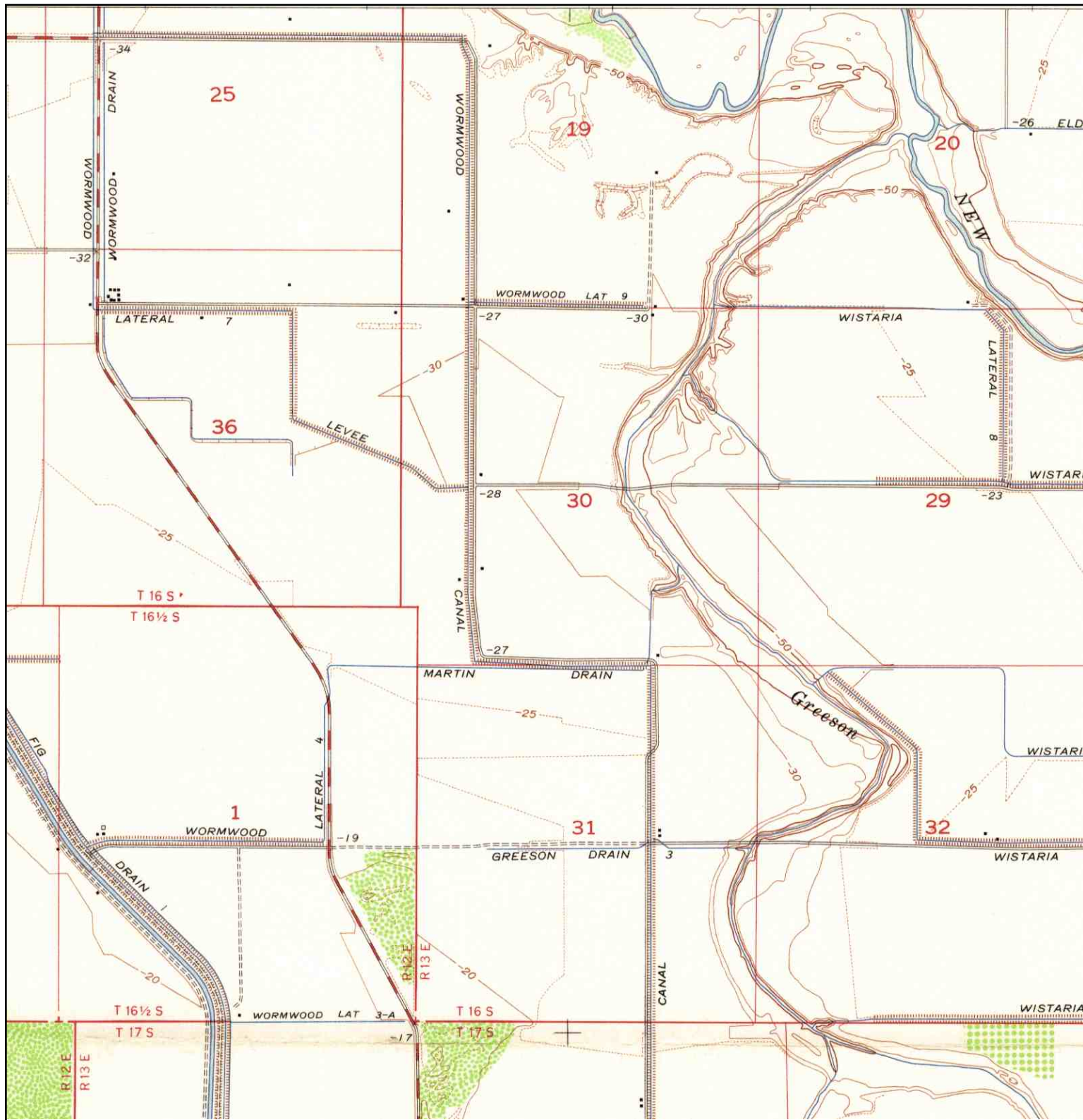
# Historical Topographic Map



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	SERIES: 7.5 SCALE: 1:24000		

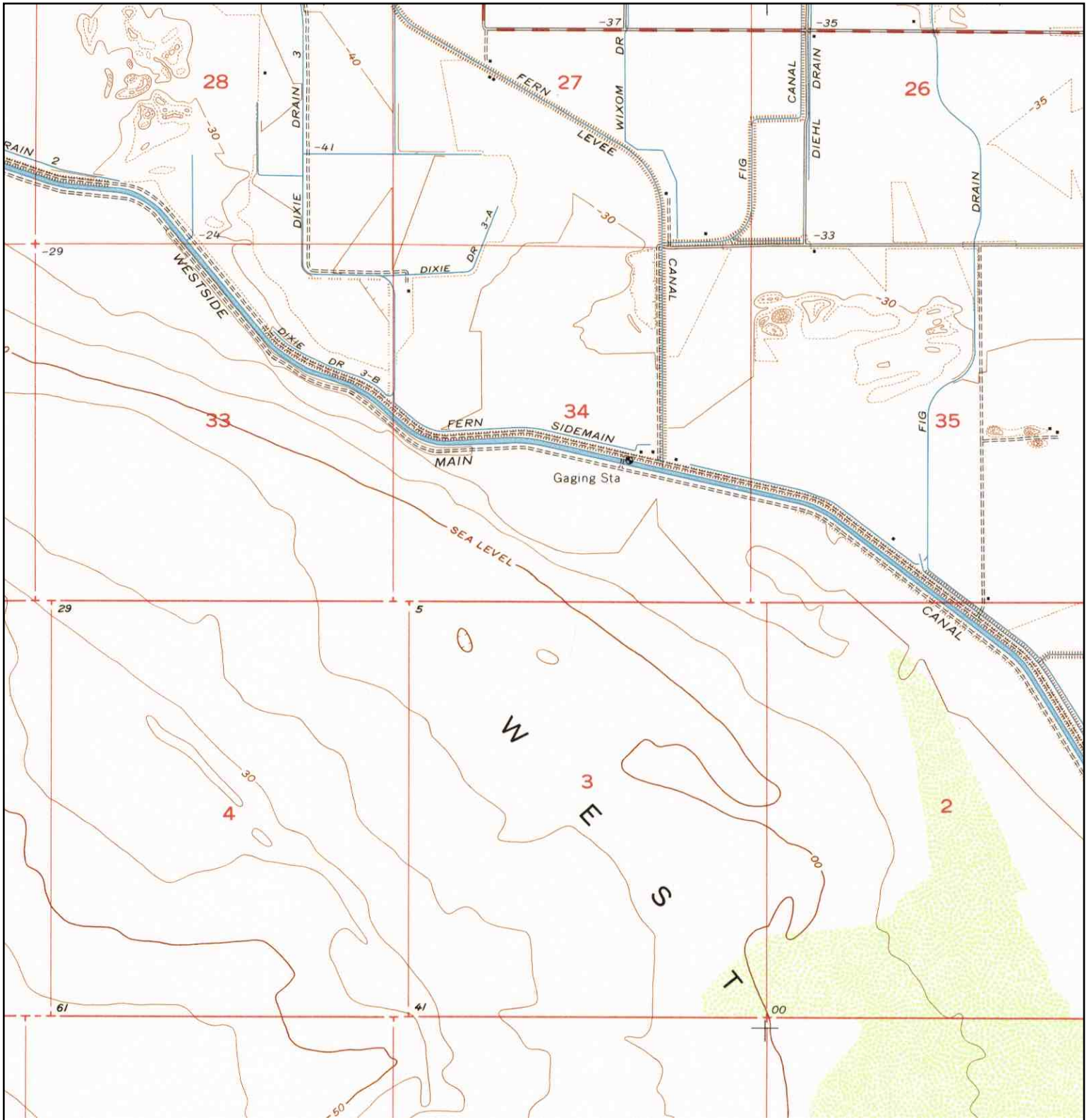


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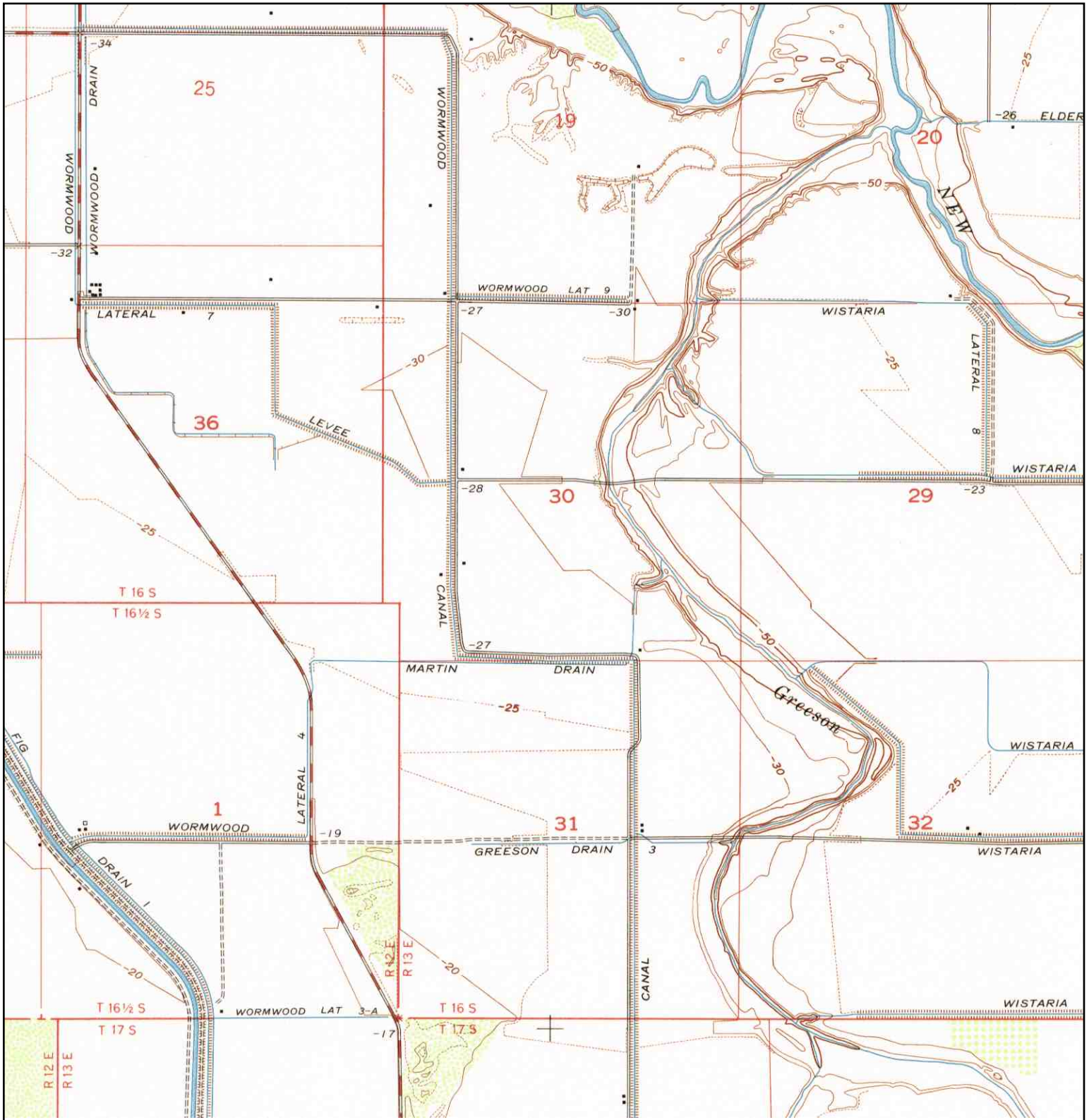
	<b>TARGET QUAD</b> NAME: MOUNT SIGNAL MAP YEAR: 1957	SITE NAME: First Solar Project Sagebrush ADDRESS: First Solar Project Sagebrush El Centro, CA 92243 LAT/LONG: 32.752 / -115.7182	CLIENT: URS Corporation CONTACT: Tricia Winterbauer INQUIRY#: 3101318.3 RESEARCH DATE: 06/22/2011
	SERIES: 7.5 SCALE: 1:24000		

# Historical Topographic Map



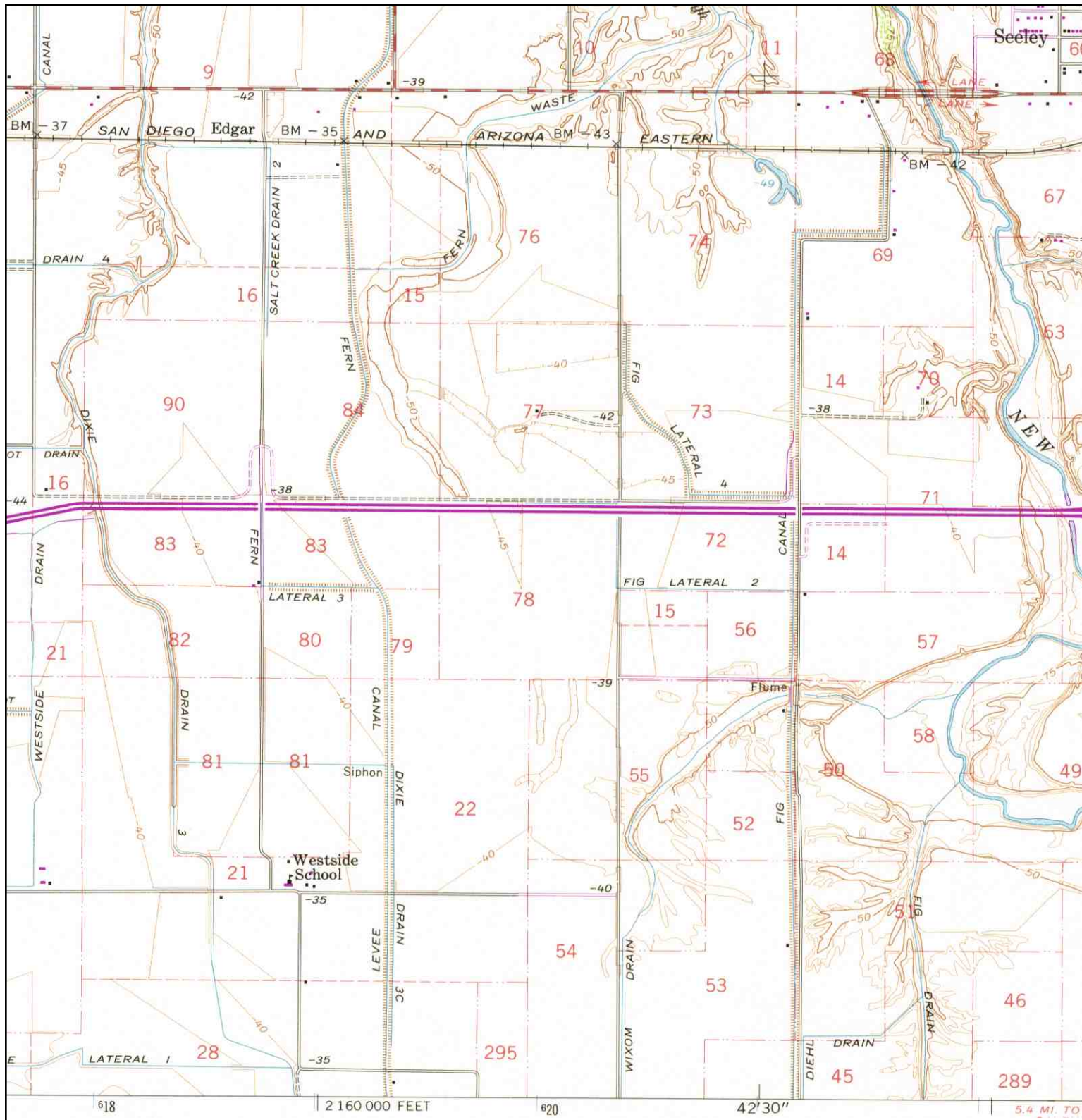
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	MAP YEAR: 1976	El Centro, CA 92243	<b>INQUIRY#:</b> 3101318.3
	PHOTOINSPECTED: 1957	<b>LAT/LONG:</b> 32.752 / -115.7182	<b>RESEARCH DATE:</b> 06/22/2011
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# Historical Topographic Map



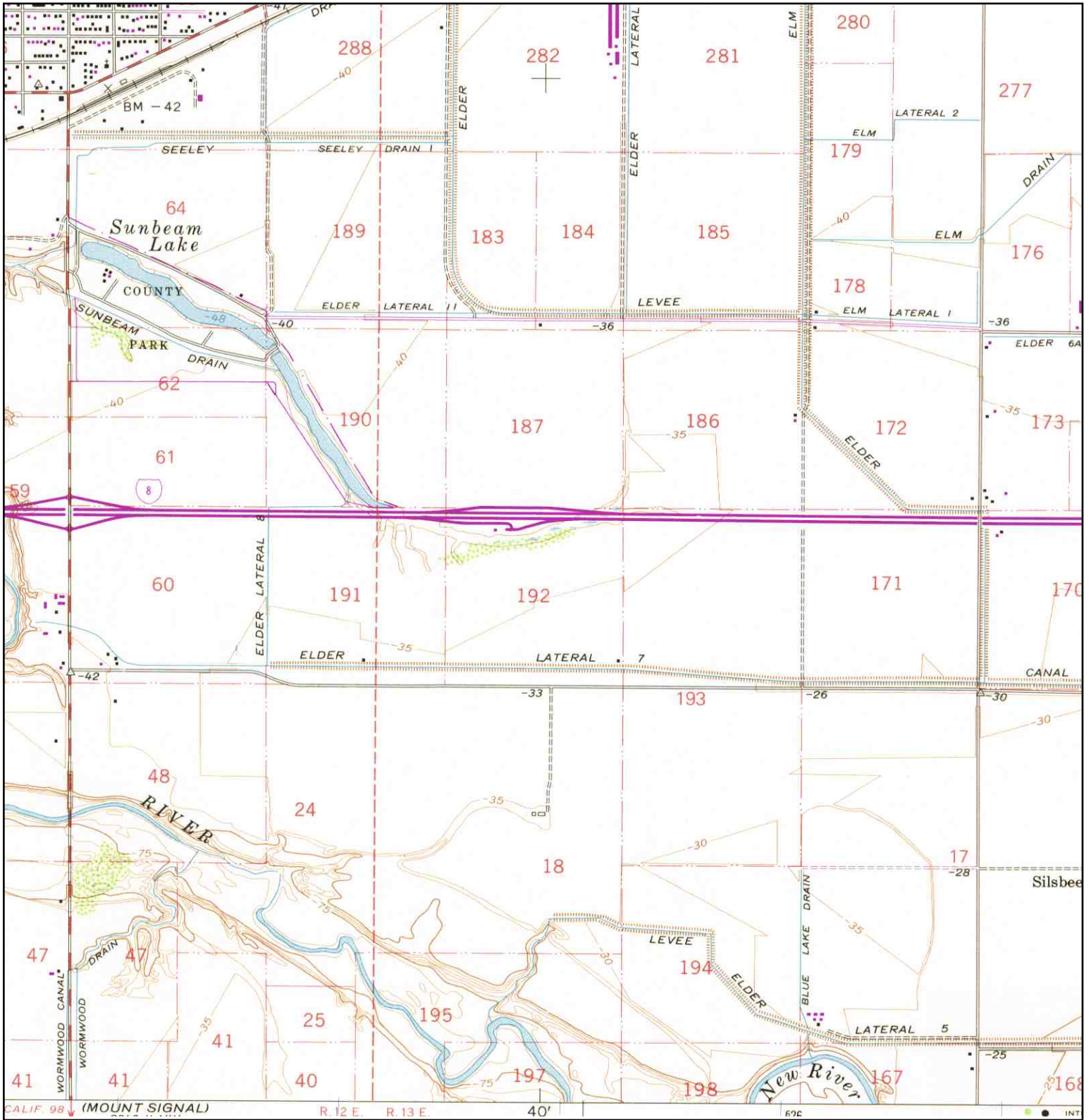
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	NAME: MOUNT SIGNAL	<b>ADDRESS:</b> First Solar Project Sagebrush	<b>CONTACT:</b> Tricia Winterbauer
	MAP YEAR: 1976	El Centro, CA 92243	<b>INQUIRY#:</b> 3101318.3
	PHOTOINSPECTED: 1957	<b>LAT/LONG:</b> 32.752 / -115.7182	<b>RESEARCH DATE:</b> 06/22/2011
	SERIES: 7.5		
	SCALE: 1:24000		


# Historical Topographic Map



	<b>TARGET QUAD</b>	<b>SITE NAME:</b> First Solar Project Sagebrush	<b>CLIENT:</b> URS Corporation
	NAME: SEELEY	<b>ADDRESS:</b> First Solar Project Sagebrush	<b>CONTACT:</b> Tricia Winterbauer
	MAP YEAR: 1979	El Centro, CA 92243	<b>INQUIRY#:</b> 3101318.3
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	SERIES: 7.5		
	SCALE: 1:24000		

# Historical Topographic Map



	<b>TARGET QUAD</b>	<b>SITE NAME:</b> First Solar Project Sagebrush	<b>CLIENT:</b> URS Corporation
	NAME: SEELEY	<b>ADDRESS:</b> First Solar Project Sagebrush	<b>CONTACT:</b> Tricia Winterbauer
	MAP YEAR: 1979	El Centro, CA 92243	<b>INQUIRY#:</b> 3101318.3
	PHOTOREVISED: 1957	<b>LAT/LONG:</b> 32.752 / -115.7182	<b>RESEARCH DATE:</b> 06/22/2011
	SERIES: 7.5		
	SCALE: 1:24000		

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

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**APPENDIX C  
EDR AERIAL PHOTO DECADE PACKAGE**



**First Solar Project Sagebrush**

First Solar Project Sagebrush

El Centro, CA 92243

Inquiry Number: 3101318.4

June 27, 2011

## The EDR Aerial Photo Decade Package

# EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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**Date EDR Searched Historical Sources:**

Aerial Photography June 27, 2011

**Target Property:**

First Solar Project Sagebrush

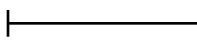
El Centro, CA 92243

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
1954	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1954	Army
1954	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1954	Army
1954	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1954	Army
1971	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1971	Nasa
1971	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1971	Nasa
1971	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1971	Nasa
1984	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1984	USGS
1984	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1984	USGS
1984	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1984	USGS
1996	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1996	USGS
1996	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1996	USGS
1996	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1996	USGS
2002	Aerial Photograph. Scale: 1"=1000'	Flight Year: 2002	USGS
2002	Aerial Photograph. Scale: 1"=1000'	Flight Year: 2002	USGS
2002	Aerial Photograph. Scale: 1"=1000'	Flight Year: 2002	USGS
2005	Aerial Photograph. Scale: 1"=604'	Flight Year: 2005	EDR
2006	Aerial Photograph. Scale: 1"=604'	Flight Year: 2006	EDR



**INQUIRY #:** 3101318.4

**YEAR:** 1954

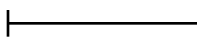
 = 1000'





**INQUIRY #:** 3101318.4

**YEAR:** 1954

 = 1000'





INQUIRY #: 3101318.4

YEAR: 1954

| = 1000'





INQUIRY #: 3101318.4

YEAR: 1971

|—————| = 1000'





INQUIRY #: 3101318.4

YEAR: 1971

| = 1000'





INQUIRY #: 3101318.4

YEAR: 1971

|-----| = 1000'





**INQUIRY #:** 3101318.4

**YEAR:** 1984

| = 1000'







**INQUIRY #:** 3101318.4

**YEAR:** 1984

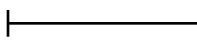
| = 1000'





**INQUIRY #:** 3101318.4

**YEAR:** 1984

 = 1000'





**INQUIRY #:** 3101318.4

**YEAR:** 1996

| = 1000'





**INQUIRY #:** 3101318.4

**YEAR:** 1996

**| = 1000'**





**INQUIRY #:** 3101318.4

**YEAR:** 1996

| = 1000'





**INQUIRY #:** 3101318.4

**YEAR:** 2002

| = 1000'





**INQUIRY #:** 3101318.4

**YEAR:** 2002

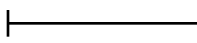
| = 1000'





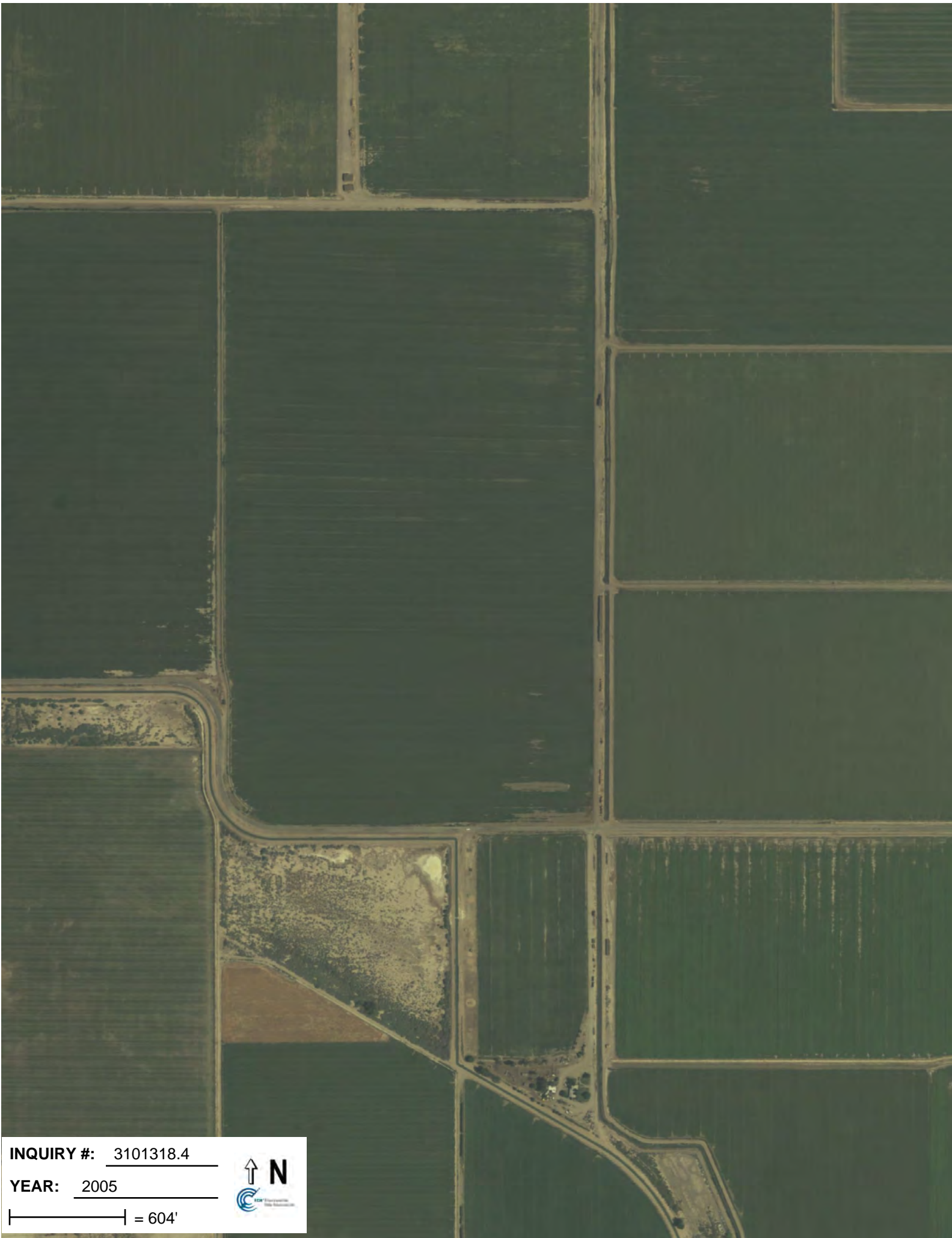
**INQUIRY #:** 3101318.4

**YEAR:** 2002

 = 1000'







**INQUIRY #:** 3101318.4

**YEAR:** 2005

| = 604'





**INQUIRY #:** 3101318.4

**YEAR:** 2006

| = 604'





**First Solar Campo Verde Project Site**

First Solar Campo Verde Project Site  
Thermal, CA 92274

Inquiry Number: 3257576.1

February 15, 2012

## The EDR Aerial Photo Decade Package

# EDR Aerial Photo Decade Package

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**Date EDR Searched Historical Sources:**

Aerial Photography February 15, 2012

**Target Property:**

First Solar Campo Verde Project Site

Thermal, CA 92274

<u><i>Year</i></u>	<u><i>Scale</i></u>	<u><i>Details</i></u>	<u><i>Source</i></u>
1953	Aerial Photograph. Scale: 1"=655'	Flight Year: 1953	Army
1973	Aerial Photograph. Scale: 1"=533'	Flight Year: 1973 Best Copy Available from original source	NASA
1984	Aerial Photograph. Scale: 1"=690'	Flight Year: 1984	USGS
1996	Aerial Photograph. Scale: 1"=666'	Flight Year: 1996	USGS
2002	Aerial Photograph. Scale: 1"=500'	/Composite DOQQ - acquisition dates: 2002	EDR
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	EDR
2006	Aerial Photograph. Scale: 1"=500'	Flight Year: 2006	EDR



INQUIRY #: 3257576.1

YEAR: 1953

| = 655'





INQUIRY #: 3257576.1

YEAR: 1973

| = 533'





**INQUIRY #:** 3257576.1

**YEAR:** 1984

| = 690'

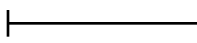






**INQUIRY #:** 3257576.1

**YEAR:** 1996

 = 666'





INQUIRY #: 3257576.1

YEAR: 2002

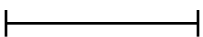
| = 500'





**INQUIRY #:** 3257576.1

**YEAR:** 2005

 = 500'





INQUIRY #: 3257576.1

YEAR: 2006

| = 500'





**First Solar Campo Verde Project Site**

First Solar Campo Verde Project Site  
El Centro, CA 92243

Inquiry Number: 3256771.2  
February 13, 2012

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# EDR Aerial Photo Decade Package

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**Date EDR Searched Historical Sources:**

Aerial Photography February 13, 2012

**Target Property:**

First Solar Campo Verde Project Site

El Centro, CA 92243

<u><i>Year</i></u>	<u><i>Scale</i></u>	<u><i>Details</i></u>	<u><i>Source</i></u>
1978	Aerial Photograph. Scale: 1"=666'	Flight Year: 1978	NASA
1984	Aerial Photograph. Scale: 1"=666'	Flight Year: 1984	USGS
1996	Aerial Photograph. Scale: 1"=666'	Flight Year: 1996	USGS
2002	Aerial Photograph. Scale: 1"=500'	/Composite DOQQ - acquisition dates: 2002	EDR
2002	Aerial Photograph. Scale: 1"=666'	Flight Year: 2002	USGS
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	EDR
2006	Aerial Photograph. Scale: 1"=500'	Flight Year: 2006	EDR



**INQUIRY #:** 3256771.2  
**YEAR:** 1978  
|-----| = 666'

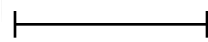






**INQUIRY #:** 3256771.2

**YEAR:** 1984

 = 666'



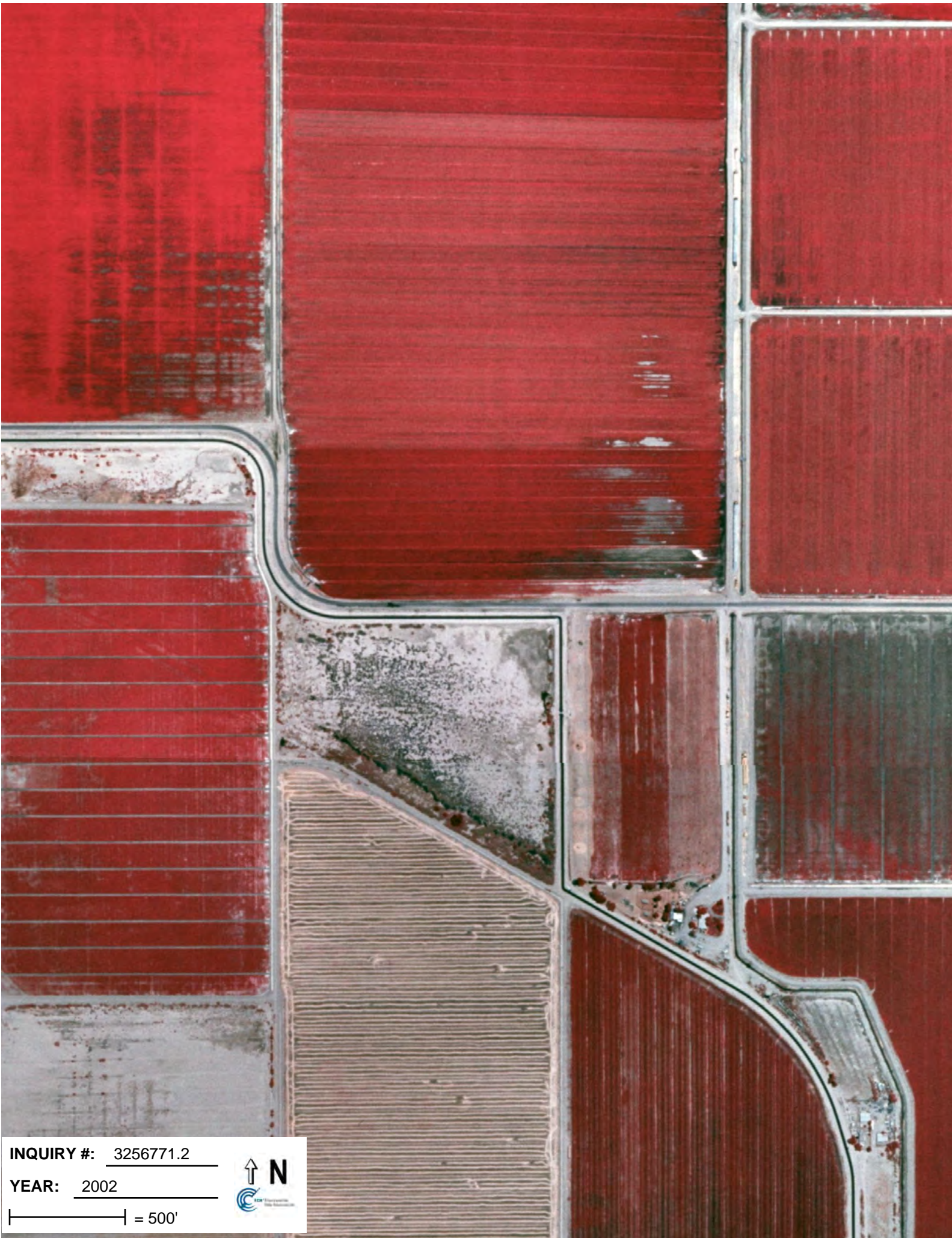


**INQUIRY #:** 3256771.2

**YEAR:** 1996

| = 666'





INQUIRY #: 3256771.2

YEAR: 2002

| = 500'





INQUIRY #: 3256771.2

YEAR: 2002

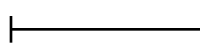
| = 666'





**INQUIRY #:** 3256771.2

**YEAR:** 2005

 = 500'





INQUIRY #: 3256771.2

YEAR: 2006

| = 500'



















**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

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**APPENDIX D  
EDR DATAMAP AREA STUDY**

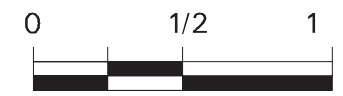
# EDR DataMap® Area Study

First Solar Campo Verde Project Site

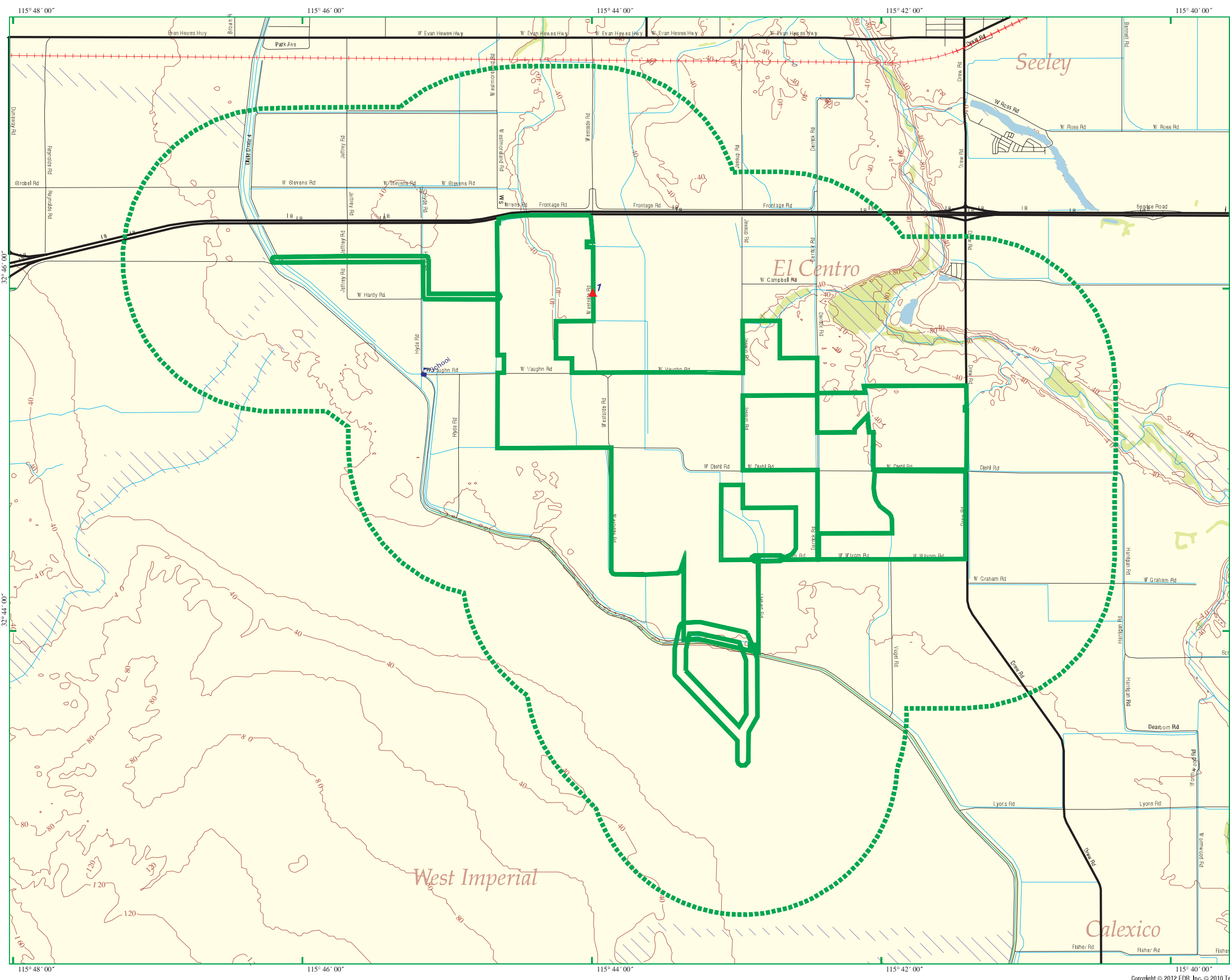
-  Listed Sites
-  Earthquake Epicenters (Richter 5 or greater)
-  Search Boundary
-  Roads
-  Major Roads
-  Waterways
-  Railroads
-  Contour Lines
-  Pipelines
-  Powerlines
-  Fault Lines
-  Water
-  Superfund Sites
-  Federal DOD Sites
-  Indian Reservations BIA
-  100-Yr Flood Zones
-  National Wetland Inventory



El Centro, CA



Scale in Miles





**First Solar Campo Verde Project Site**  
El Centro, CA 92243

Inquiry Number: 3256771.1s  
February 13, 2012

## EDR DataMap™ Area Study

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# EXECUTIVE SUMMARY

## TARGET PROPERTY INFORMATION

### ADDRESS

EL CENTRO, CA 92243  
EL CENTRO, CA 92243

## DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records within the requested search area for the following databases:

## FEDERAL RECORDS

NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
Delisted NPL	National Priority List Deletions
NPL LIENS	Federal Superfund Liens
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
LIENS 2	CERCLA Lien Information
CORRACTS	Corrective Action Report
RCRA-TSDF	RCRA - Treatment, Storage and Disposal
RCRA-LQG	RCRA - Large Quantity Generators
RCRA-SQG	RCRA - Small Quantity Generators
RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generator
RCRA-NonGen	RCRA - Non Generators
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
DOT OPS	Incident and Accident Data
US CDL	Clandestine Drug Labs
US BROWNFIELDS	A Listing of Brownfields Sites
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
LUCIS	Land Use Control Information System
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
ODI	Open Dump Inventory
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems

## EXECUTIVE SUMMARY

ICIS.....	Integrated Compliance Information System
PADS.....	PCB Activity Database System
MLTS.....	Material Licensing Tracking System
RADINFO.....	Radiation Information Database
FINDS.....	Facility Index System/Facility Registry System
RAATS.....	RCRA Administrative Action Tracking System
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
US HIST CDL.....	National Clandestine Laboratory Register
PCB TRANSFORMER.....	PCB Transformer Registration Database
FEDERAL FACILITY.....	Federal Facility Site Information listing
COAL ASH DOE.....	Sleam-Electric Plan Operation Data
FEMA UST.....	Underground Storage Tank Listing
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List

### **STATE AND LOCAL RECORDS**

HIST Cal-Sites.....	Historical Calsites Database
CA BOND EXP. PLAN.....	Bond Expenditure Plan
SCH.....	School Property Evaluation Program
Toxic Pits.....	Toxic Pits Cleanup Act Sites
SWF/LF.....	Solid Waste Information System
WDS.....	Waste Discharge System
WMUDS/SWAT.....	Waste Management Unit Database
NPDES.....	NPDES Permits Listing
Cortese.....	"Cortese" Hazardous Waste & Substances Sites List
HIST CORTESE.....	Hazardous Waste & Substance Site List
SWRCY.....	Recycler Database
LUST.....	Geotracker's Leaking Underground Fuel Tank Report
CA FID UST.....	Facility Inventory Database
SLIC.....	Statewide SLIC Cases
UST.....	Active UST Facilities
HIST UST.....	Hazardous Substance Storage Container Database
LIENS.....	Environmental Liens Listing
SWEEPS UST.....	SWEEPS UST Listing
CHMIRS.....	California Hazardous Material Incident Report System
LDS.....	Land Disposal Sites Listing
AST.....	Aboveground Petroleum Storage Tank Facilities
MCS.....	Military Cleanup Sites Listing
Notify 65.....	Proposition 65 Records
DEED.....	Deed Restriction Listing
VCP.....	Voluntary Cleanup Program Properties
DRYCLEANERS.....	Cleaner Facilities
WIP.....	Well Investigation Program Case List
CDL.....	Clandestine Drug Labs
ENF.....	Enforcement Action Listing
RESPONSE.....	State Response Sites
EMI.....	Emissions Inventory Data
ENVIROSTOR.....	EnviroStor Database
HAULERS.....	Registered Waste Tire Haulers Listing
HWP.....	EnviroStor Permitted Facilities Listing
MWMP.....	Medical Waste Management Program Listing
PROC.....	Certified Processors Database
HWT.....	Registered Hazardous Waste Transporter Database

### **TRIBAL RECORDS**

INDIAN RESERV.....	Indian Reservations
--------------------	---------------------

## EXECUTIVE SUMMARY

INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands  
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land  
INDIAN UST..... Underground Storage Tanks on Indian Land  
INDIAN VCP..... Voluntary Cleanup Priority Listing

### EDR PROPRIETARY RECORDS

Manufactured Gas Plants..... EDR Proprietary Manufactured Gas Plants

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

### STATE AND LOCAL RECORDS

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency

A review of the HAZNET list, as provided by EDR, and dated 12/31/2010 has revealed that there is 1 HAZNET site within the searched area.

<u>Site</u>	<u>Address</u>	<u>Map ID</u>	<u>Page</u>
MILES PRESERVATION LLC	1651 WESTSIDE RD	1	3

## **EXECUTIVE SUMMARY**

Please refer to the end of the findings report for unmapped orphan sites due to poor or inadequate address information.

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Total Plotted</u>
<b><u>FEDERAL RECORDS</u></b>	
NPL	0
Proposed NPL	0
Delisted NPL	0
NPL LIENS	0
CERCLIS	0
CERC-NFRAP	0
LIENS 2	0
CORRACTS	0
RCRA-TSDF	0
RCRA-LQG	0
RCRA-SQG	0
RCRA-CESQG	0
RCRA-NonGen	0
US ENG CONTROLS	0
US INST CONTROL	0
ERNS	0
HMIRS	0
DOT OPS	0
US CDL	0
US BROWNFIELDS	0
DOD	0
FUDS	0
LUCIS	0
CONSENT	0
ROD	0
UMTRA	0
DEBRIS REGION 9	0
ODI	0
MINES	0
TRIS	0
TSCA	0
FTTS	0
HIST FTTS	0
SSTS	0
ICIS	0
PADS	0
MLTS	0
RADINFO	0
FINDS	0
RAATS	0
SCRD DRYCLEANERS	0
US HIST CDL	0
PCB TRANSFORMER	0
FEDERAL FACILITY	0
COAL ASH DOE	0
FEMA UST	0
COAL ASH EPA	0
<b><u>STATE AND LOCAL RECORDS</u></b>	
HIST Cal-Sites	0

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Total Plotted</u>
CA BOND EXP. PLAN	0
SCH	0
Toxic Pits	0
SWF/LF	0
WDS	0
WMUDS/SWAT	0
NPDES	0
Cortese	0
HIST CORTESE	0
SWRCY	0
LUST	0
CA FID UST	0
SLIC	0
UST	0
HIST UST	0
LIENS	0
SWEEPS UST	0
CHMIRS	0
LDS	0
AST	0
MCS	0
Notify 65	0
DEED	0
VCP	0
DRYCLEANERS	0
WIP	0
CDL	0
ENF	0
RESPONSE	0
HAZNET	1
EMI	0
ENVIROSTOR	0
HAULERS	0
HWP	0
MWMP	0
PROC	0
HWT	0
 <b><u>TRIBAL RECORDS</u></b>	
INDIAN RESERV	0
INDIAN ODI	0
INDIAN LUST	0
INDIAN UST	0
INDIAN VCP	0
 <b><u>EDR PROPRIETARY RECORDS</u></b>	
Manufactured Gas Plants	0

NOTES:

Sites may be listed in more than one database



MAP FINDINGS

Map ID			EDR ID Number
Direction			
Distance			
Distance (ft.)Site		Database(s)	EPA ID Number

<b>1</b>	<b>MILES PRESERVATION LLC</b>	<b>HAZNET</b>	<b>S110369381</b>
	<b>1651 WESTSIDE RD</b>		<b>N/A</b>
	<b>EL CENTRO, CA 92243</b>		

HAZNET:

Year: 2009  
 Gepaid: CAC002641261  
 Contact: ADAM MILES  
 Telephone: 9518083346  
 Mailing Name: Not reported  
 Mailing Address: 29960 CENTRAL AVE  
 Mailing City,St,Zip: NUEVO, CA 92567  
 Gen County: Imperial  
 TSD EPA ID: CAD982444481  
 TSD County: San Bernardino  
 Waste Category: Household waste  
 Disposal Method: Not reported  
 Tons: 0.025  
 Facility County: Imperial

Year: 2009  
 Gepaid: CAC002641261  
 Contact: ADAM MILES  
 Telephone: 9518083346  
 Mailing Name: Not reported  
 Mailing Address: 29960 CENTRAL AVE  
 Mailing City,St,Zip: NUEVO, CA 92567  
 Gen County: Imperial  
 TSD EPA ID: CAD982444481  
 TSD County: San Bernardino  
 Waste Category: Household waste  
 Disposal Method: STORAGE, BULKING, AND/OR TRANSFER OFF SITE--NO TREATMENT/RECOVERY (H010-H129) OR (H131-H135)  
 Tons: 0.0375  
 Facility County: Imperial

## ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CALEXICO	S102266876	CALEXICO CLS III WMF 02-104	HWY	92243	WDS, WMUDS/SWAT, Cortese, HIST CORTESE, ENF
EL CENTRO	S111023581	SCG - EL CENTRO TOWNE SITE	4TH ST	92243	Cortese, ENF
EL CENTRO	1000386792	PRESSLEY PETERBILT	HWY 8 & DOGWOOD	92243	RCRA-SQG, FINDS, HAZNET
EL CENTRO	S105023618	HOFER (ABANDONED)	1305 HWY 86	92243	HIST CORTESE, LUST
EL CENTRO	S105181112	NAF EL CENTRO TANK 117	AREA 6/AREA 8		LUST
EL CENTRO	S105181130	NAF EL CENTRO TANK 214A	AREA 8		LUST
EL CENTRO	S105180687	NAF EL CENTRO TANK 221	AREA 8		LUST
EL CENTRO	S108935394	CRUICKSHANK ROAD - IMPERIAL COUNTY SITE	CRUICKSHANK RD & HWY 111 NW		SWF/LF
EL CENTRO	S100676262	JR SIMPLOT, EL CENTRO	50 W DANNENBERG RD	92243	Toxic Pits
EL CENTRO	S106388980	IMPERIAL IRRIGATION DISTRICT	DATE CANAL DITCH EAST OF HWY 86		SLIC
EL CENTRO	1000399364	OSTER KAMP TRUCKING INC	3810 W EVAN HEWES HWY	92243	RCRA-SQG, FINDS, WDS, CA FID UST, HIST UST, SWEEPS UST, HAZNET
EL CENTRO	S100227619	CENTRAL IMPLEMENT COMPANY	526 W EVAN HEWES HWY	92243	LUST, Notify 65
EL CENTRO	A100325336	US GYPSUM CO.	3810 W EVAN HEWES HWY.	92243	AST
EL CENTRO	U001573888	EL CENTRO HOT PLANT	51 EAST HIGHWAY 80	92243	HIST UST
EL CENTRO	S105023617	OREPEZA SANITATION COMPANY	207 E HWY 80	92243	HIST CORTESE, LUST
EL CENTRO	S102434724	OREPEZA SANITATION COMPANY	207 E HWY 80	92243	LUST
EL CENTRO	S108937549	ONE ELEVEN TRUCK STOP	1963 S HWY 111	92243	SLIC, HAZNET
EL CENTRO	S109448685	LINE 6914 LOOP IMPERIAL VALLEY PROJECT	KERSHAW UN	92243	NPDES
EL CENTRO	S109689881	IR SITE 1 MAGAZINE RD LF	MAGAZINE RD		SWF/LF
EL CENTRO	S105180758	NAF EL CENTRO TKS 601-610, SITE 14/ 15, FUEL FARM	SOUTH OF ANTIETEM ST		LUST
EL CENTRO	S105023598	EL CENTRO NAVAL AIR STATI	OFF OLD HWY 80 7 MI W. OF	92243	HIST CORTESE
EL CENTRO	S106800170	NAVAL AIR FACILITY EL CENTRO	OFF OLD HWY 80 7 MILES W OF EL	92243	HIST Cal-Sites, Cortese, RESPONSE, ENVIROSTOR
EL CENTRO	1006833788	ROSS ROAD & SPRR DISPOSAL SITE	ROSS RD NEXT TO VALLEY STOCKYA	92243	FINDS
EL CENTRO	S109287959	EL CENTRO NAF - NAF EL CENTRO IR SITE 7, ABANDONDED FUEL FAR	RUNWAY 08 & 26 AND TAXIWAY		MCS
EL CENTRO	S105693795	NAF EL CENTRO IR SITE 7, ABANDONDED FUEL FARM	RUNWAY 08/26 / TAXIWAY "G"		LUST
EL CENTRO	1000857413	EL CENTRO MOTORS	422 STATE ST	92243	RCRA-SQG, FINDS, HAZNET
EL CENTRO	S105023603	BANK OF AMERICA (VACANT L	444 STATE	92243	HIST CORTESE
EL CENTRO	U000032025	GREYHOUND BUS DEPOT	460 STATE ST	92243	HIST CORTESE, LUST, Notify 65
EL CENTRO	S100676358	IMPERIAL IRR DIST, EL CENTRO	STEAM PLANT/ DOGWOOD ROAD		Toxic Pits
EL CENTRO	1003879891	VALLEY IRON AND METAL (EDMAN CORP.)	2004 STHY 111	92243	CERC-NFRAP
IMPERIAL	S110732991	DOGWOOD AVE IMPROVEMENTS PROJECT	DOGWOOD AVENUE FROM TO ST	92243	NPDES
IMPERIAL	S110737310	WALNUT AVE IMPROVEMENTS PROJECT	WALNUT AVE	92243	NPDES
OASIS	S101631107	ALAMO DISCOUNT MARKET	81050 HIGHWAY 86	92274	CA FID UST, SWEEPS UST
PLASTER	S105756785	U.S. GYPSUM CO.	SOUTH SIDE OF EVAN HEWES HIGHWAY (HIGHWAY 80)	92243	SLIC
SALTON CITY	S110654214	T&G GAS COMPANY	FRONTAGE RD & MARINO DR S	92274	LUST
THERMAL	S105027062	JPH ENTERPRISES	HWY 111/AVENUE 60	92274	HIST CORTESE

## ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
THERMAL	U001574202	HORNUNG RANCH	92-770 HWY 86	92274	HIST UST
THERMAL	U001574231	TINACHI RANCH	HIGHWAY 86	92274	HIST UST
THERMAL	U003802011	ALAMO DISCOUNT MARKET	81050 HWY 86	92274	LUST, UST
THERMAL	S105025336	SALS TIRES	81050 HWY 86	92274	HIST CORTESE, LUST, HAULERS
THERMAL	S110654952	JPH ENTERPRISES	HWY 86 & AVE 60	92274	LUST
THERMAL	U001574217	PETER RABBIT FARMS	AVE 58 BETWEEN HWY 86 / VAN	92274	HIST UST
THERMAL	1011552944	AUCLAIR DUMP SITE	FILMORE AND 69TH STREET THERMAL CA 92274	92274	ICIS
THERMAL	1010034795	AUCLAIR DUMP SITE	FILMORE AND 69TH STREET	92274	FINDS
THERMAL	1010313704	DESERT MOBILE HOME PARK INC	68 800 HWY 195	92274	RCRA-CESQG
THERMAL	S110711864	PRESUMED BOMBING SITE SAFETY AREA	MILES WEST OF CALIFORNIA	92274	ENVIROSTOR
THERMAL	S111292961	THERMAL TOWN STREET IMPROVEMENT PROJECT	ST SAINT CHURCH DATE ST AND MARKE ST	92274	NPDES
THERMAL	S107736881	NEW OASIS ELEMENTARY SCHOOL	SEC OLD HIGHWAY 86	92274	SCH, ENVIROSTOR
THERMAL	S106660326	COACHELLA VALLEY MOSQUITO & VECTOR CONTR(	SOUTH SIDE OF AVE. 55, 1/4 MILE OF CALHOUN ST. 8	92274	SLIC
		DISTRIC			
THERMAL	U003802948	OASIS STATION	80705 STATE HIGHWAY 86	92274	UST
THERMAL	S108723504	OASIS STATION	80705 STATE HIGHWAY 86	92274	LUST
THERMAL	U002095291	CHAPALLA MARKET	66351 STATE HIGHWAY 86	92274	CA FID UST, SWEEPS UST
THERMAL	U001967915	OASIS STATION	80705 STATE HIGHWAY 86	92274	CA FID UST, SWEEPS UST

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

## FEDERAL RECORDS

### NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 06/30/2011	Source: EPA
Date Data Arrived at EDR: 07/12/2011	Telephone: N/A
Date Made Active in Reports: 09/29/2011	Last EDR Contact: 01/11/2012
Number of Days to Update: 79	Next Scheduled EDR Contact: 04/23/2012
	Data Release Frequency: Quarterly

### NPL Site Boundaries

#### Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)  
Telephone: 202-564-7333

EPA Region 1  
Telephone 617-918-1143

EPA Region 6  
Telephone: 214-655-6659

EPA Region 3  
Telephone 215-814-5418

EPA Region 7  
Telephone: 913-551-7247

EPA Region 4  
Telephone 404-562-8033

EPA Region 8  
Telephone: 303-312-6774

EPA Region 5  
Telephone 312-886-6686

EPA Region 9  
Telephone: 415-947-4246

EPA Region 10  
Telephone 206-553-8665

### Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 06/30/2011	Source: EPA
Date Data Arrived at EDR: 07/12/2011	Telephone: N/A
Date Made Active in Reports: 09/29/2011	Last EDR Contact: 01/11/2012
Number of Days to Update: 79	Next Scheduled EDR Contact: 04/23/2012
	Data Release Frequency: Quarterly

### DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 06/30/2011	Source: EPA
Date Data Arrived at EDR: 07/12/2011	Telephone: N/A
Date Made Active in Reports: 09/29/2011	Last EDR Contact: 01/10/2012
Number of Days to Update: 79	Next Scheduled EDR Contact: 04/23/2012
	Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 08/15/2011
Number of Days to Update: 56	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: No Update Planned

## CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/25/2011	Source: EPA
Date Data Arrived at EDR: 03/01/2011	Telephone: 703-412-9810
Date Made Active in Reports: 05/02/2011	Last EDR Contact: 11/29/2011
Number of Days to Update: 62	Next Scheduled EDR Contact: 03/12/2012
	Data Release Frequency: Quarterly

## CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 02/25/2011	Source: EPA
Date Data Arrived at EDR: 03/01/2011	Telephone: 703-412-9810
Date Made Active in Reports: 05/02/2011	Last EDR Contact: 11/29/2011
Number of Days to Update: 62	Next Scheduled EDR Contact: 03/12/2012
	Data Release Frequency: Quarterly

## LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 09/09/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/16/2011	Telephone: 202-564-6023
Date Made Active in Reports: 09/29/2011	Last EDR Contact: 01/30/2012
Number of Days to Update: 13	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Varies

## CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 08/19/2011	Source: EPA
Date Data Arrived at EDR: 08/31/2011	Telephone: 800-424-9346
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 02/13/2012
Number of Days to Update: 132	Next Scheduled EDR Contact: 05/28/2012
	Data Release Frequency: Quarterly

## RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/15/2011  
Date Data Arrived at EDR: 07/07/2011  
Date Made Active in Reports: 08/08/2011  
Number of Days to Update: 32

Source: Environmental Protection Agency  
Telephone: (415) 495-8895  
Last EDR Contact: 01/05/2012  
Next Scheduled EDR Contact: 04/16/2012  
Data Release Frequency: Quarterly

## RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011  
Date Data Arrived at EDR: 07/07/2011  
Date Made Active in Reports: 08/08/2011  
Number of Days to Update: 32

Source: Environmental Protection Agency  
Telephone: (415) 495-8895  
Last EDR Contact: 01/05/2012  
Next Scheduled EDR Contact: 04/16/2012  
Data Release Frequency: Quarterly

## RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/15/2011  
Date Data Arrived at EDR: 07/07/2011  
Date Made Active in Reports: 08/08/2011  
Number of Days to Update: 32

Source: Environmental Protection Agency  
Telephone: (415) 495-8895  
Last EDR Contact: 01/05/2012  
Next Scheduled EDR Contact: 04/16/2012  
Data Release Frequency: Quarterly

## RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011  
Date Data Arrived at EDR: 07/07/2011  
Date Made Active in Reports: 08/08/2011  
Number of Days to Update: 32

Source: Environmental Protection Agency  
Telephone: (415) 495-8895  
Last EDR Contact: 01/05/2012  
Next Scheduled EDR Contact: 04/16/2012  
Data Release Frequency: Varies

## RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/15/2011  
Date Data Arrived at EDR: 07/07/2011  
Date Made Active in Reports: 08/08/2011  
Number of Days to Update: 32

Source: Environmental Protection Agency  
Telephone: (415) 495-8895  
Last EDR Contact: 01/05/2012  
Next Scheduled EDR Contact: 04/16/2012  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 12/30/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/30/2011	Telephone: 703-603-0695
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 12/09/2011
Number of Days to Update: 11	Next Scheduled EDR Contact: 03/26/2012
	Data Release Frequency: Varies

## US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 12/30/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/30/2011	Telephone: 703-603-0695
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 12/09/2011
Number of Days to Update: 11	Next Scheduled EDR Contact: 03/26/2012
	Data Release Frequency: Varies

## ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 10/03/2011	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 10/04/2011	Telephone: 202-267-2180
Date Made Active in Reports: 11/11/2011	Last EDR Contact: 01/18/2012
Number of Days to Update: 38	Next Scheduled EDR Contact: 04/16/2012
	Data Release Frequency: Annually

## HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 10/04/2011	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 10/04/2011	Telephone: 202-366-4555
Date Made Active in Reports: 11/11/2011	Last EDR Contact: 01/03/2012
Number of Days to Update: 38	Next Scheduled EDR Contact: 04/16/2012
	Data Release Frequency: Annually

## DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/29/2011	Source: Department of Transportation, Office of Pipeline Safety
Date Data Arrived at EDR: 08/09/2011	Telephone: 202-366-4595
Date Made Active in Reports: 11/11/2011	Last EDR Contact: 02/07/2012
Number of Days to Update: 94	Next Scheduled EDR Contact: 05/21/2012
	Data Release Frequency: Varies

## US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/07/2011  
Date Data Arrived at EDR: 12/09/2011  
Date Made Active in Reports: 01/10/2012  
Number of Days to Update: 32

Source: Drug Enforcement Administration  
Telephone: 202-307-1000  
Last EDR Contact: 12/05/2011  
Next Scheduled EDR Contact: 03/19/2012  
Data Release Frequency: Quarterly

## US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/27/2011  
Date Data Arrived at EDR: 06/27/2011  
Date Made Active in Reports: 09/13/2011  
Number of Days to Update: 78

Source: Environmental Protection Agency  
Telephone: 202-566-2777  
Last EDR Contact: 12/27/2011  
Next Scheduled EDR Contact: 04/09/2012  
Data Release Frequency: Semi-Annually

## DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005  
Date Data Arrived at EDR: 11/10/2006  
Date Made Active in Reports: 01/11/2007  
Number of Days to Update: 62

Source: USGS  
Telephone: 888-275-8747  
Last EDR Contact: 01/20/2012  
Next Scheduled EDR Contact: 04/30/2012  
Data Release Frequency: Semi-Annually

## FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2009  
Date Data Arrived at EDR: 08/12/2010  
Date Made Active in Reports: 12/02/2010  
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers  
Telephone: 202-528-4285  
Last EDR Contact: 12/09/2011  
Next Scheduled EDR Contact: 03/26/2012  
Data Release Frequency: Varies

## LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005  
Date Data Arrived at EDR: 12/11/2006  
Date Made Active in Reports: 01/11/2007  
Number of Days to Update: 31

Source: Department of the Navy  
Telephone: 843-820-7326  
Last EDR Contact: 11/22/2011  
Next Scheduled EDR Contact: 03/05/2012  
Data Release Frequency: Varies

## CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/01/2011  
Date Data Arrived at EDR: 11/18/2011  
Date Made Active in Reports: 01/10/2012  
Number of Days to Update: 53

Source: Department of Justice, Consent Decree Library  
Telephone: Varies  
Last EDR Contact: 12/27/2011  
Next Scheduled EDR Contact: 04/16/2012  
Data Release Frequency: Varies



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/28/2011	Source: EPA
Date Data Arrived at EDR: 12/14/2011	Telephone: 703-416-0223
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 12/14/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 03/26/2012
	Data Release Frequency: Annually

## UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010	Source: Department of Energy
Date Data Arrived at EDR: 10/21/2010	Telephone: 505-845-0011
Date Made Active in Reports: 01/28/2011	Last EDR Contact: 11/29/2011
Number of Days to Update: 99	Next Scheduled EDR Contact: 03/12/2012
	Data Release Frequency: Varies

## DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009	Source: EPA, Region 9
Date Data Arrived at EDR: 05/07/2009	Telephone: 415-947-4219
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 12/21/2011
Number of Days to Update: 137	Next Scheduled EDR Contact: 04/09/2012
	Data Release Frequency: No Update Planned

## ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/2004	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2004	Last EDR Contact: 06/09/2004
Number of Days to Update: 39	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

## MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/18/2011	Source: Department of Labor, Mine Safety and Health Administration
Date Data Arrived at EDR: 09/08/2011	Telephone: 303-231-5959
Date Made Active in Reports: 09/29/2011	Last EDR Contact: 12/07/2011
Number of Days to Update: 21	Next Scheduled EDR Contact: 03/19/2012
	Data Release Frequency: Semi-Annually

## TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2009	Source: EPA
Date Data Arrived at EDR: 09/01/2011	Telephone: 202-566-0250
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 12/02/2011
Number of Days to Update: 131	Next Scheduled EDR Contact: 03/12/2012
	Data Release Frequency: Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006	Source: EPA
Date Data Arrived at EDR: 09/29/2010	Telephone: 202-260-5521
Date Made Active in Reports: 12/02/2010	Last EDR Contact: 12/27/2011
Number of Days to Update: 64	Next Scheduled EDR Contact: 04/09/2012
	Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)  
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 11/28/2011
Number of Days to Update: 25	Next Scheduled EDR Contact: 03/12/2012
	Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)  
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 11/28/2011
Number of Days to Update: 25	Next Scheduled EDR Contact: 03/12/2012
	Data Release Frequency: Quarterly

## HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

## HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009	Source: EPA
Date Data Arrived at EDR: 12/10/2010	Telephone: 202-564-4203
Date Made Active in Reports: 02/25/2011	Last EDR Contact: 01/30/2012
Number of Days to Update: 77	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Annually

## ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/20/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/10/2011	Telephone: 202-564-5088
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 12/21/2011
Number of Days to Update: 61	Next Scheduled EDR Contact: 04/09/2012
	Data Release Frequency: Quarterly

## PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2010	Source: EPA
Date Data Arrived at EDR: 11/10/2010	Telephone: 202-566-0500
Date Made Active in Reports: 02/16/2011	Last EDR Contact: 01/20/2012
Number of Days to Update: 98	Next Scheduled EDR Contact: 04/30/2012
	Data Release Frequency: Annually

## MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/21/2011	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 07/15/2011	Telephone: 301-415-7169
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 12/12/2011
Number of Days to Update: 60	Next Scheduled EDR Contact: 03/26/2012
	Data Release Frequency: Quarterly

## RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/11/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/13/2011	Telephone: 202-343-9775
Date Made Active in Reports: 02/16/2011	Last EDR Contact: 01/12/2012
Number of Days to Update: 34	Next Scheduled EDR Contact: 04/23/2012
	Data Release Frequency: Quarterly

## FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/02/2011  
Date Data Arrived at EDR: 09/13/2011  
Date Made Active in Reports: 01/10/2012  
Number of Days to Update: 119

Source: EPA  
Telephone: (415) 947-8000  
Last EDR Contact: 12/13/2011  
Next Scheduled EDR Contact: 03/26/2012  
Data Release Frequency: Quarterly

## RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995  
Date Data Arrived at EDR: 07/03/1995  
Date Made Active in Reports: 08/07/1995  
Number of Days to Update: 35

Source: EPA  
Telephone: 202-564-4104  
Last EDR Contact: 06/02/2008  
Next Scheduled EDR Contact: 09/01/2008  
Data Release Frequency: No Update Planned

## BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2009  
Date Data Arrived at EDR: 03/01/2011  
Date Made Active in Reports: 05/02/2011  
Number of Days to Update: 62

Source: EPA/NTIS  
Telephone: 800-424-9346  
Last EDR Contact: 11/30/2011  
Next Scheduled EDR Contact: 03/12/2012  
Data Release Frequency: Biennially

## FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/10/2010  
Date Data Arrived at EDR: 01/11/2011  
Date Made Active in Reports: 02/16/2011  
Number of Days to Update: 36

Source: Environmental Protection Agency  
Telephone: 703-603-8704  
Last EDR Contact: 01/13/2012  
Next Scheduled EDR Contact: 04/23/2012  
Data Release Frequency: Varies

## US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007  
Date Data Arrived at EDR: 11/19/2008  
Date Made Active in Reports: 03/30/2009  
Number of Days to Update: 131

Source: Drug Enforcement Administration  
Telephone: 202-307-1000  
Last EDR Contact: 03/23/2009  
Next Scheduled EDR Contact: 06/22/2009  
Data Release Frequency: No Update Planned

## PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011  
Date Data Arrived at EDR: 10/19/2011  
Date Made Active in Reports: 01/10/2012  
Number of Days to Update: 83

Source: Environmental Protection Agency  
Telephone: 202-566-0517  
Last EDR Contact: 02/03/2012  
Next Scheduled EDR Contact: 05/14/2012  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## COAL ASH DOE: Sleam-Electric Plan Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005	Source: Department of Energy
Date Data Arrived at EDR: 08/07/2009	Telephone: 202-586-8719
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 01/18/2012
Number of Days to Update: 76	Next Scheduled EDR Contact: 04/30/2012
	Data Release Frequency: Varies

## FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010	Source: FEMA
Date Data Arrived at EDR: 02/16/2010	Telephone: 202-646-5797
Date Made Active in Reports: 04/12/2010	Last EDR Contact: 01/16/2012
Number of Days to Update: 55	Next Scheduled EDR Contact: 04/30/2012
	Data Release Frequency: Varies

## COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/03/2011	Telephone: N/A
Date Made Active in Reports: 03/21/2011	Last EDR Contact: 12/08/2011
Number of Days to Update: 77	Next Scheduled EDR Contact: 03/26/2012
	Data Release Frequency: Varies

## SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/09/2011	Telephone: 615-532-8599
Date Made Active in Reports: 05/02/2011	Last EDR Contact: 02/06/2012
Number of Days to Update: 54	Next Scheduled EDR Contact: 05/07/2012
	Data Release Frequency: Varies

## STATE AND LOCAL RECORDS

### HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 08/03/2006	Telephone: 916-323-3400
Date Made Active in Reports: 08/24/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 21	Next Scheduled EDR Contact: 05/25/2009
	Data Release Frequency: No Update Planned

### CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989	Source: Department of Health Services
Date Data Arrived at EDR: 07/27/1994	Telephone: 916-255-2118
Date Made Active in Reports: 08/02/1994	Last EDR Contact: 05/31/1994
Number of Days to Update: 6	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 12/13/2011	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 12/14/2011	Telephone: 916-323-3400
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 02/07/2012
Number of Days to Update: 36	Next Scheduled EDR Contact: 05/21/2012
	Data Release Frequency: Quarterly

## TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/30/1995	Telephone: 916-227-4364
Date Made Active in Reports: 09/26/1995	Last EDR Contact: 01/26/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 04/27/2009
	Data Release Frequency: No Update Planned

## SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/21/2011	Source: Department of Resources Recycling and Recovery
Date Data Arrived at EDR: 11/22/2011	Telephone: 916-341-6320
Date Made Active in Reports: 12/13/2011	Last EDR Contact: 11/22/2011
Number of Days to Update: 21	Next Scheduled EDR Contact: 03/05/2012
	Data Release Frequency: Quarterly

## WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000	Source: State Water Resources Control Board
Date Data Arrived at EDR: 04/10/2000	Telephone: 916-227-4448
Date Made Active in Reports: 05/10/2000	Last EDR Contact: 02/13/2012
Number of Days to Update: 30	Next Scheduled EDR Contact: 05/28/2012
	Data Release Frequency: No Update Planned

## NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 11/21/2011	Source: State Water Resources Control Board
Date Data Arrived at EDR: 11/22/2011	Telephone: 916-445-9379
Date Made Active in Reports: 12/13/2011	Last EDR Contact: 11/22/2011
Number of Days to Update: 21	Next Scheduled EDR Contact: 03/05/2012
	Data Release Frequency: Quarterly

## WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/20/2007	Telephone: 916-341-5227
Date Made Active in Reports: 06/29/2007	Last EDR Contact: 11/28/2011
Number of Days to Update: 9	Next Scheduled EDR Contact: 03/12/2012
	Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

Date of Government Version: 01/03/2012	Source: CAL EPA/Office of Emergency Information
Date Data Arrived at EDR: 01/03/2012	Telephone: 916-323-3400
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 01/03/2012
Number of Days to Update: 16	Next Scheduled EDR Contact: 04/16/2012
	Data Release Frequency: Quarterly

## HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSTITES].

Date of Government Version: 04/01/2001	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/22/2009	Telephone: 916-323-3400
Date Made Active in Reports: 04/08/2009	Last EDR Contact: 01/22/2009
Number of Days to Update: 76	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

## SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 12/12/2011	Source: Department of Conservation
Date Data Arrived at EDR: 12/19/2011	Telephone: 916-323-3836
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 12/19/2011
Number of Days to Update: 31	Next Scheduled EDR Contact: 04/02/2012
	Data Release Frequency: Quarterly

## LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 12/19/2011	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/19/2011	Telephone: see region list
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 01/20/2012
Number of Days to Update: 31	Next Scheduled EDR Contact: 04/02/2012
	Data Release Frequency: Quarterly

## LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001	Source: California Regional Water Quality Control Board North Coast (1)
Date Data Arrived at EDR: 02/28/2001	Telephone: 707-570-3769
Date Made Active in Reports: 03/29/2001	Last EDR Contact: 08/01/2011
Number of Days to Update: 29	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

## LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004	Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-622-2433
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/19/2003	Telephone: 805-542-4786
Date Made Active in Reports: 06/02/2003	Last EDR Contact: 07/18/2011
Number of Days to Update: 14	Next Scheduled EDR Contact: 10/31/2011
	Data Release Frequency: No Update Planned

## LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001	Source: California Regional Water Quality Control Board San Diego Region (9)
Date Data Arrived at EDR: 04/23/2001	Telephone: 858-637-5595
Date Made Active in Reports: 05/21/2001	Last EDR Contact: 09/26/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 01/09/2012
	Data Release Frequency: No Update Planned

## LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008	Source: California Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 07/22/2008	Telephone: 916-464-4834
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 07/01/2011
Number of Days to Update: 9	Next Scheduled EDR Contact: 10/17/2011
	Data Release Frequency: Quarterly

## LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003	Source: California Regional Water Quality Control Board Lahontan Region (6)
Date Data Arrived at EDR: 09/10/2003	Telephone: 530-542-5572
Date Made Active in Reports: 10/07/2003	Last EDR Contact: 09/12/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

## LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005	Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Date Data Arrived at EDR: 06/07/2005	Telephone: 760-241-7365
Date Made Active in Reports: 06/29/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 22	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

## LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004	Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Date Data Arrived at EDR: 02/26/2004	Telephone: 760-776-8943
Date Made Active in Reports: 03/24/2004	Last EDR Contact: 08/01/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

## LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 02/14/2005  
Date Data Arrived at EDR: 02/15/2005  
Date Made Active in Reports: 03/28/2005  
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)  
Telephone: 909-782-4496  
Last EDR Contact: 08/15/2011  
Next Scheduled EDR Contact: 11/28/2011  
Data Release Frequency: Varies

## LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004  
Date Data Arrived at EDR: 09/07/2004  
Date Made Active in Reports: 10/12/2004  
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)  
Telephone: 213-576-6710  
Last EDR Contact: 09/06/2011  
Next Scheduled EDR Contact: 12/19/2011  
Data Release Frequency: No Update Planned

## CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994  
Date Data Arrived at EDR: 09/05/1995  
Date Made Active in Reports: 09/29/1995  
Number of Days to Update: 24

Source: California Environmental Protection Agency  
Telephone: 916-341-5851  
Last EDR Contact: 12/28/1998  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

## SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 12/19/2011  
Date Data Arrived at EDR: 12/19/2011  
Date Made Active in Reports: 01/19/2012  
Number of Days to Update: 31

Source: State Water Resources Control Board  
Telephone: 866-480-1028  
Last EDR Contact: 01/20/2012  
Next Scheduled EDR Contact: 04/02/2012  
Data Release Frequency: Varies

## SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003  
Date Data Arrived at EDR: 04/07/2003  
Date Made Active in Reports: 04/25/2003  
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)  
Telephone: 707-576-2220  
Last EDR Contact: 08/01/2011  
Next Scheduled EDR Contact: 11/14/2011  
Data Release Frequency: No Update Planned

## SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004  
Date Data Arrived at EDR: 10/20/2004  
Date Made Active in Reports: 11/19/2004  
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)  
Telephone: 510-286-0457  
Last EDR Contact: 09/19/2011  
Next Scheduled EDR Contact: 01/02/2012  
Data Release Frequency: Quarterly

## SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/18/2006  
Date Data Arrived at EDR: 05/18/2006  
Date Made Active in Reports: 06/15/2006  
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)  
Telephone: 805-549-3147  
Last EDR Contact: 07/18/2011  
Next Scheduled EDR Contact: 10/31/2011  
Data Release Frequency: Semi-Annually

## SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004  
Date Data Arrived at EDR: 11/18/2004  
Date Made Active in Reports: 01/04/2005  
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)  
Telephone: 213-576-6600  
Last EDR Contact: 07/01/2011  
Next Scheduled EDR Contact: 10/17/2011  
Data Release Frequency: Varies

## SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005  
Date Data Arrived at EDR: 04/05/2005  
Date Made Active in Reports: 04/21/2005  
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)  
Telephone: 916-464-3291  
Last EDR Contact: 09/12/2011  
Next Scheduled EDR Contact: 12/26/2011  
Data Release Frequency: Semi-Annually

## SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005  
Date Data Arrived at EDR: 05/25/2005  
Date Made Active in Reports: 06/16/2005  
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch  
Telephone: 619-241-6583  
Last EDR Contact: 08/15/2011  
Next Scheduled EDR Contact: 11/28/2011  
Data Release Frequency: Semi-Annually

## SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004  
Date Data Arrived at EDR: 09/07/2004  
Date Made Active in Reports: 10/12/2004  
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region  
Telephone: 530-542-5574  
Last EDR Contact: 08/15/2011  
Next Scheduled EDR Contact: 11/28/2011  
Data Release Frequency: No Update Planned

## SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004  
Date Data Arrived at EDR: 11/29/2004  
Date Made Active in Reports: 01/04/2005  
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region  
Telephone: 760-346-7491  
Last EDR Contact: 08/01/2011  
Next Scheduled EDR Contact: 11/14/2011  
Data Release Frequency: No Update Planned

## SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/03/2008  
Date Data Arrived at EDR: 04/03/2008  
Date Made Active in Reports: 04/14/2008  
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)  
Telephone: 951-782-3298  
Last EDR Contact: 09/12/2011  
Next Scheduled EDR Contact: 12/26/2011  
Data Release Frequency: Semi-Annually

## SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007  
Date Data Arrived at EDR: 09/11/2007  
Date Made Active in Reports: 09/28/2007  
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)  
Telephone: 858-467-2980  
Last EDR Contact: 08/08/2011  
Next Scheduled EDR Contact: 11/21/2011  
Data Release Frequency: Annually

## UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/19/2011  
Date Data Arrived at EDR: 12/19/2011  
Date Made Active in Reports: 01/17/2012  
Number of Days to Update: 29

Source: SWRCB  
Telephone: 916-480-1028  
Last EDR Contact: 01/20/2012  
Next Scheduled EDR Contact: 04/02/2012  
Data Release Frequency: Semi-Annually

## UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009  
Date Data Arrived at EDR: 09/23/2009  
Date Made Active in Reports: 10/01/2009  
Number of Days to Update: 8

Source: Department of Public Health  
Telephone: 707-463-4466  
Last EDR Contact: 12/05/2012  
Next Scheduled EDR Contact: 03/19/2012  
Data Release Frequency: Annually

## HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990  
Date Data Arrived at EDR: 01/25/1991  
Date Made Active in Reports: 02/12/1991  
Number of Days to Update: 18

Source: State Water Resources Control Board  
Telephone: 916-341-5851  
Last EDR Contact: 07/26/2001  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

## LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 12/16/2011  
Date Data Arrived at EDR: 12/16/2011  
Date Made Active in Reports: 01/19/2012  
Number of Days to Update: 34

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400  
Last EDR Contact: 12/09/2011  
Next Scheduled EDR Contact: 03/26/2012  
Data Release Frequency: Varies

## SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994  
Date Data Arrived at EDR: 07/07/2005  
Date Made Active in Reports: 08/11/2005  
Number of Days to Update: 35

Source: State Water Resources Control Board  
Telephone: N/A  
Last EDR Contact: 06/03/2005  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2010	Source: Office of Emergency Services
Date Data Arrived at EDR: 05/03/2011	Telephone: 916-845-8400
Date Made Active in Reports: 06/15/2011	Last EDR Contact: 01/30/2012
Number of Days to Update: 43	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Varies

## LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 12/19/2011	Source: State Water Quality Control Board
Date Data Arrived at EDR: 12/19/2011	Telephone: 866-480-1028
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 01/20/2012
Number of Days to Update: 31	Next Scheduled EDR Contact: 04/02/2012
	Data Release Frequency: Quarterly

## AST: Aboveground Petroleum Storage Tank Facilities Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/10/2009	Telephone: 916-341-5712
Date Made Active in Reports: 10/01/2009	Last EDR Contact: 01/23/2012
Number of Days to Update: 21	Next Scheduled EDR Contact: 04/23/2012
	Data Release Frequency: Quarterly

## MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 12/19/2011	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/19/2011	Telephone: 866-480-1028
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 01/20/2012
Number of Days to Update: 31	Next Scheduled EDR Contact: 04/02/2012
	Data Release Frequency: Quarterly

## NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 10/21/1993	Source: State Water Resources Control Board
Date Data Arrived at EDR: 11/01/1993	Telephone: 916-445-3846
Date Made Active in Reports: 11/19/1993	Last EDR Contact: 12/20/2011
Number of Days to Update: 18	Next Scheduled EDR Contact: 04/09/2012
	Data Release Frequency: No Update Planned

## DEED: Deed Restriction Listing

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 12/12/2011	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 12/13/2011	Telephone: 916-323-3400
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 12/13/2011
Number of Days to Update: 37	Next Scheduled EDR Contact: 03/26/2012
	Data Release Frequency: Semi-Annually

## VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 12/13/2011	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 12/14/2011	Telephone: 916-323-3400
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 02/07/2012
Number of Days to Update: 36	Next Scheduled EDR Contact: 05/21/2012
	Data Release Frequency: Quarterly

## DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 06/28/2011	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 07/21/2011	Telephone: 916-327-4498
Date Made Active in Reports: 08/11/2011	Last EDR Contact: 12/21/2011
Number of Days to Update: 21	Next Scheduled EDR Contact: 03/26/2012
	Data Release Frequency: Annually

## WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009	Source: Los Angeles Water Quality Control Board
Date Data Arrived at EDR: 07/21/2009	Telephone: 213-576-6726
Date Made Active in Reports: 08/03/2009	Last EDR Contact: 01/23/2012
Number of Days to Update: 13	Next Scheduled EDR Contact: 04/16/2012
	Data Release Frequency: Varies

## ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 08/15/2011	Source: State Water Resoruces Control Board
Date Data Arrived at EDR: 08/23/2011	Telephone: 916-445-9379
Date Made Active in Reports: 10/03/2011	Last EDR Contact: 01/30/2012
Number of Days to Update: 41	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2011	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/11/2011	Telephone: 916-255-6504
Date Made Active in Reports: 09/09/2011	Last EDR Contact: 02/07/2012
Number of Days to Update: 29	Next Scheduled EDR Contact: 04/16/2012
	Data Release Frequency: Varies

## RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 12/13/2011	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 12/14/2011	Telephone: 916-323-3400
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 02/07/2012
Number of Days to Update: 36	Next Scheduled EDR Contact: 05/21/2012
	Data Release Frequency: Quarterly

## HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2010	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 07/19/2011	Telephone: 916-255-1136
Date Made Active in Reports: 08/16/2011	Last EDR Contact: 01/20/2012
Number of Days to Update: 28	Next Scheduled EDR Contact: 04/30/2012
	Data Release Frequency: Annually

## EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2008	Source: California Air Resources Board
Date Data Arrived at EDR: 09/29/2010	Telephone: 916-322-2990
Date Made Active in Reports: 10/18/2010	Last EDR Contact: 12/30/2011
Number of Days to Update: 19	Next Scheduled EDR Contact: 04/09/2012
	Data Release Frequency: Varies

## HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 09/14/2011	Source: Integrated Waste Management Board
Date Data Arrived at EDR: 09/15/2011	Telephone: 916-341-6422
Date Made Active in Reports: 10/24/2011	Last EDR Contact: 12/27/2011
Number of Days to Update: 39	Next Scheduled EDR Contact: 03/05/2012
	Data Release Frequency: Varies

## ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/13/2011  
Date Data Arrived at EDR: 12/14/2011  
Date Made Active in Reports: 01/19/2012  
Number of Days to Update: 36

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400  
Last EDR Contact: 02/07/2012  
Next Scheduled EDR Contact: 05/21/2012  
Data Release Frequency: Quarterly

## HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/09/2010  
Date Data Arrived at EDR: 08/11/2010  
Date Made Active in Reports: 08/20/2010  
Number of Days to Update: 9

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400  
Last EDR Contact: 12/02/2011  
Next Scheduled EDR Contact: 03/12/2012  
Data Release Frequency: Quarterly

## HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/20/2011  
Date Data Arrived at EDR: 10/21/2011  
Date Made Active in Reports: 11/08/2011  
Number of Days to Update: 18

Source: Department of Toxic Substances Control  
Telephone: 916-440-7145  
Last EDR Contact: 01/18/2012  
Next Scheduled EDR Contact: 04/30/2012  
Data Release Frequency: Quarterly

## MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 12/07/2011  
Date Data Arrived at EDR: 12/15/2011  
Date Made Active in Reports: 01/19/2012  
Number of Days to Update: 35

Source: Department of Public Health  
Telephone: 916-558-1784  
Last EDR Contact: 12/12/2011  
Next Scheduled EDR Contact: 03/26/2012  
Data Release Frequency: Varies

## PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 12/12/2011  
Date Data Arrived at EDR: 12/19/2011  
Date Made Active in Reports: 01/19/2012  
Number of Days to Update: 31

Source: Department of Conservation  
Telephone: 916-323-3836  
Last EDR Contact: 12/19/2011  
Next Scheduled EDR Contact: 04/02/2012  
Data Release Frequency: Quarterly

## TRIBAL RECORDS

### INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005  
Date Data Arrived at EDR: 12/08/2006  
Date Made Active in Reports: 01/11/2007  
Number of Days to Update: 34

Source: USGS  
Telephone: 202-208-3710  
Last EDR Contact: 01/20/2012  
Next Scheduled EDR Contact: 04/30/2012  
Data Release Frequency: Semi-Annually

### INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/1998	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/03/2007	Telephone: 703-308-8245
Date Made Active in Reports: 01/24/2008	Last EDR Contact: 02/06/2012
Number of Days to Update: 52	Next Scheduled EDR Contact: 05/21/2012
	Data Release Frequency: Varies

**INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land**  
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 11/01/2011	Source: EPA Region 7
Date Data Arrived at EDR: 11/21/2011	Telephone: 913-551-7003
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 01/30/2012
Number of Days to Update: 50	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Varies

**INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land**  
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2011	Source: EPA Region 1
Date Data Arrived at EDR: 11/01/2011	Telephone: 617-918-1313
Date Made Active in Reports: 11/11/2011	Last EDR Contact: 02/03/2012
Number of Days to Update: 10	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Varies

**INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land**  
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 12/05/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/07/2011	Telephone: 415-972-3372
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 01/30/2012
Number of Days to Update: 34	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Quarterly

**INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land**  
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/02/2011	Source: EPA Region 10
Date Data Arrived at EDR: 11/04/2011	Telephone: 206-553-2857
Date Made Active in Reports: 11/11/2011	Last EDR Contact: 01/30/2012
Number of Days to Update: 7	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Quarterly

**INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land**  
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011	Source: EPA Region 6
Date Data Arrived at EDR: 09/13/2011	Telephone: 214-665-6597
Date Made Active in Reports: 11/11/2011	Last EDR Contact: 01/30/2012
Number of Days to Update: 59	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Varies

**INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land**  
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 12/14/2011	Source: EPA Region 4
Date Data Arrived at EDR: 12/15/2011	Telephone: 404-562-8677
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 01/30/2012
Number of Days to Update: 26	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Semi-Annually



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/18/2011	Source: EPA Region 8
Date Data Arrived at EDR: 08/19/2011	Telephone: 303-312-6271
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 01/30/2012
Number of Days to Update: 25	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Quarterly

## INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/02/2011	Source: EPA Region 10
Date Data Arrived at EDR: 11/04/2011	Telephone: 206-553-2857
Date Made Active in Reports: 11/11/2011	Last EDR Contact: 01/30/2012
Number of Days to Update: 7	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Quarterly

## INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 11/28/2011	Source: EPA Region 9
Date Data Arrived at EDR: 11/29/2011	Telephone: 415-972-3368
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 01/30/2012
Number of Days to Update: 42	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Quarterly

## INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/18/2011	Source: EPA Region 8
Date Data Arrived at EDR: 08/19/2011	Telephone: 303-312-6137
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 01/30/2012
Number of Days to Update: 25	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Quarterly

## INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 11/01/2011	Source: EPA Region 7
Date Data Arrived at EDR: 11/21/2011	Telephone: 913-551-7003
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 01/30/2012
Number of Days to Update: 50	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Varies

## INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011	Source: EPA Region 6
Date Data Arrived at EDR: 05/11/2011	Telephone: 214-665-7591
Date Made Active in Reports: 06/14/2011	Last EDR Contact: 01/30/2012
Number of Days to Update: 34	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Semi-Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 07/01/2011	Source: EPA Region 5
Date Data Arrived at EDR: 08/26/2011	Telephone: 312-886-6136
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 01/30/2012
Number of Days to Update: 18	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Varies

## INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 12/14/2011	Source: EPA Region 4
Date Data Arrived at EDR: 12/15/2011	Telephone: 404-562-9424
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 01/30/2012
Number of Days to Update: 26	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Semi-Annually

## INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2011	Source: EPA, Region 1
Date Data Arrived at EDR: 11/01/2011	Telephone: 617-918-1313
Date Made Active in Reports: 11/11/2011	Last EDR Contact: 02/03/2012
Number of Days to Update: 10	Next Scheduled EDR Contact: 05/14/2012
	Data Release Frequency: Varies

## INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

## INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 08/04/2011	Source: EPA, Region 1
Date Data Arrived at EDR: 10/04/2011	Telephone: 617-918-1102
Date Made Active in Reports: 11/11/2011	Last EDR Contact: 01/06/2012
Number of Days to Update: 38	Next Scheduled EDR Contact: 04/16/2012
	Data Release Frequency: Varies

## EDR PROPRIETARY RECORDS

### Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A  
Date Data Arrived at EDR: N/A  
Date Made Active in Reports: N/A  
Number of Days to Update: N/A

Source: EDR, Inc.  
Telephone: N/A  
Last EDR Contact: N/A  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

## COUNTY RECORDS

### ALAMEDA COUNTY:

#### Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 10/10/2011  
Date Data Arrived at EDR: 10/11/2011  
Date Made Active in Reports: 11/09/2011  
Number of Days to Update: 29

Source: Alameda County Environmental Health Services  
Telephone: 510-567-6700  
Last EDR Contact: 12/30/2011  
Next Scheduled EDR Contact: 04/16/2012  
Data Release Frequency: Semi-Annually

#### Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/10/2011  
Date Data Arrived at EDR: 10/11/2011  
Date Made Active in Reports: 11/14/2011  
Number of Days to Update: 34

Source: Alameda County Environmental Health Services  
Telephone: 510-567-6700  
Last EDR Contact: 12/30/2011  
Next Scheduled EDR Contact: 04/16/2012  
Data Release Frequency: Semi-Annually

### CONTRA COSTA COUNTY:

#### Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 11/28/2011  
Date Data Arrived at EDR: 11/29/2011  
Date Made Active in Reports: 12/13/2011  
Number of Days to Update: 14

Source: Contra Costa Health Services Department  
Telephone: 925-646-2286  
Last EDR Contact: 02/07/2012  
Next Scheduled EDR Contact: 05/21/2012  
Data Release Frequency: Semi-Annually

### KERN COUNTY:

#### Underground Storage Tank Sites & Tank Listing Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010  
Date Data Arrived at EDR: 09/01/2010  
Date Made Active in Reports: 09/30/2010  
Number of Days to Update: 29

Source: Kern County Environment Health Services Department  
Telephone: 661-862-8700  
Last EDR Contact: 02/13/2012  
Next Scheduled EDR Contact: 05/28/2012  
Data Release Frequency: Quarterly

### LOS ANGELES COUNTY:

#### San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/30/2009  
Date Data Arrived at EDR: 03/31/2009  
Date Made Active in Reports: 10/23/2009  
Number of Days to Update: 206

Source: EPA Region 9  
Telephone: 415-972-3178  
Last EDR Contact: 12/20/2011  
Next Scheduled EDR Contact: 04/09/2012  
Data Release Frequency: No Update Planned

## HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 09/29/2011  
Date Data Arrived at EDR: 12/15/2011  
Date Made Active in Reports: 01/19/2012  
Number of Days to Update: 35

Source: Department of Public Works  
Telephone: 626-458-3517  
Last EDR Contact: 10/17/2011  
Next Scheduled EDR Contact: 01/30/2012  
Data Release Frequency: Semi-Annually

## List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 10/24/2011  
Date Data Arrived at EDR: 10/25/2011  
Date Made Active in Reports: 11/22/2011  
Number of Days to Update: 28

Source: La County Department of Public Works  
Telephone: 818-458-5185  
Last EDR Contact: 01/24/2012  
Next Scheduled EDR Contact: 05/07/2012  
Data Release Frequency: Varies

## City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009  
Date Data Arrived at EDR: 03/10/2009  
Date Made Active in Reports: 04/08/2009  
Number of Days to Update: 29

Source: Engineering & Construction Division  
Telephone: 213-473-7869  
Last EDR Contact: 11/17/2011  
Next Scheduled EDR Contact: 03/05/2012  
Data Release Frequency: Varies

## Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 02/09/2011  
Date Data Arrived at EDR: 02/09/2011  
Date Made Active in Reports: 03/04/2011  
Number of Days to Update: 23

Source: Community Health Services  
Telephone: 323-890-7806  
Last EDR Contact: 01/23/2012  
Next Scheduled EDR Contact: 05/07/2012  
Data Release Frequency: Annually

## City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 02/03/2011  
Date Data Arrived at EDR: 02/08/2011  
Date Made Active in Reports: 03/03/2011  
Number of Days to Update: 23

Source: City of El Segundo Fire Department  
Telephone: 310-524-2236  
Last EDR Contact: 01/23/2012  
Next Scheduled EDR Contact: 04/06/2012  
Data Release Frequency: Semi-Annually

## City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003  
Date Data Arrived at EDR: 10/23/2003  
Date Made Active in Reports: 11/26/2003  
Number of Days to Update: 34

Source: City of Long Beach Fire Department  
Telephone: 562-570-2563  
Last EDR Contact: 02/01/2012  
Next Scheduled EDR Contact: 05/14/2012  
Data Release Frequency: Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 10/17/2011  
Date Data Arrived at EDR: 10/19/2011  
Date Made Active in Reports: 11/14/2011  
Number of Days to Update: 26

Source: City of Torrance Fire Department  
Telephone: 310-618-2973  
Last EDR Contact: 01/16/2012  
Next Scheduled EDR Contact: 04/30/2012  
Data Release Frequency: Semi-Annually

## MARIN COUNTY:

### Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 10/17/2011  
Date Data Arrived at EDR: 10/25/2011  
Date Made Active in Reports: 11/14/2011  
Number of Days to Update: 20

Source: Public Works Department Waste Management  
Telephone: 415-499-6647  
Last EDR Contact: 01/09/2012  
Next Scheduled EDR Contact: 04/23/2012  
Data Release Frequency: Semi-Annually

## NAPA COUNTY:

### Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011  
Date Data Arrived at EDR: 12/06/2011  
Date Made Active in Reports: 02/07/2012  
Number of Days to Update: 63

Source: Napa County Department of Environmental Management  
Telephone: 707-253-4269  
Last EDR Contact: 12/05/2011  
Next Scheduled EDR Contact: 03/19/2012  
Data Release Frequency: No Update Planned

### Closed and Operating Underground Storage Tank Sites

Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008  
Date Data Arrived at EDR: 01/16/2008  
Date Made Active in Reports: 02/08/2008  
Number of Days to Update: 23

Source: Napa County Department of Environmental Management  
Telephone: 707-253-4269  
Last EDR Contact: 12/05/2012  
Next Scheduled EDR Contact: 03/19/2012  
Data Release Frequency: No Update Planned

## ORANGE COUNTY:

### List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

Date of Government Version: 11/01/2011  
Date Data Arrived at EDR: 11/17/2011  
Date Made Active in Reports: 12/13/2011  
Number of Days to Update: 26

Source: Health Care Agency  
Telephone: 714-834-3446  
Last EDR Contact: 11/14/2011  
Next Scheduled EDR Contact: 02/27/2012  
Data Release Frequency: Annually

### List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 11/02/2011  
Date Data Arrived at EDR: 11/18/2011  
Date Made Active in Reports: 12/13/2011  
Number of Days to Update: 25

Source: Health Care Agency  
Telephone: 714-834-3446  
Last EDR Contact: 11/14/2011  
Next Scheduled EDR Contact: 02/27/2012  
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 11/02/2011	Source: Health Care Agency
Date Data Arrived at EDR: 11/18/2011	Telephone: 714-834-3446
Date Made Active in Reports: 12/14/2011	Last EDR Contact: 11/14/2011
Number of Days to Update: 26	Next Scheduled EDR Contact: 02/27/2012
	Data Release Frequency: Quarterly

## PLACER COUNTY:

### Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 12/12/2011	Source: Placer County Health and Human Services
Date Data Arrived at EDR: 12/13/2011	Telephone: 530-889-7312
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 12/09/2011
Number of Days to Update: 37	Next Scheduled EDR Contact: 03/26/2012
	Data Release Frequency: Semi-Annually

## RIVERSIDE COUNTY:

### Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/20/2011	Source: Department of Environmental Health
Date Data Arrived at EDR: 10/21/2011	Telephone: 951-358-5055
Date Made Active in Reports: 11/08/2011	Last EDR Contact: 12/21/2011
Number of Days to Update: 18	Next Scheduled EDR Contact: 04/09/2012
	Data Release Frequency: Quarterly

### Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 10/20/2011	Source: Department of Environmental Health
Date Data Arrived at EDR: 10/21/2011	Telephone: 951-358-5055
Date Made Active in Reports: 11/14/2011	Last EDR Contact: 12/21/2011
Number of Days to Update: 24	Next Scheduled EDR Contact: 04/26/2012
	Data Release Frequency: Quarterly

## SACRAMENTO COUNTY:

### Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 08/02/2011	Source: Sacramento County Environmental Management
Date Data Arrived at EDR: 10/12/2011	Telephone: 916-875-8406
Date Made Active in Reports: 11/08/2011	Last EDR Contact: 01/13/2012
Number of Days to Update: 27	Next Scheduled EDR Contact: 04/23/2012
	Data Release Frequency: Quarterly

### Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 08/02/2011	Source: Sacramento County Environmental Management
Date Data Arrived at EDR: 10/14/2011	Telephone: 916-875-8406
Date Made Active in Reports: 11/08/2011	Last EDR Contact: 01/13/2012
Number of Days to Update: 25	Next Scheduled EDR Contact: 04/23/2012
	Data Release Frequency: Quarterly

## SAN BERNARDINO COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 11/30/2011  
Date Data Arrived at EDR: 12/01/2011  
Date Made Active in Reports: 12/16/2011  
Number of Days to Update: 15

Source: San Bernardino County Fire Department Hazardous Materials Division  
Telephone: 909-387-3041  
Last EDR Contact: 02/13/2012  
Next Scheduled EDR Contact: 05/28/2012  
Data Release Frequency: Quarterly

## SAN DIEGO COUNTY:

### Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/09/2010  
Date Data Arrived at EDR: 09/15/2010  
Date Made Active in Reports: 09/29/2010  
Number of Days to Update: 14

Source: Hazardous Materials Management Division  
Telephone: 619-338-2268  
Last EDR Contact: 12/16/2011  
Next Scheduled EDR Contact: 03/26/2012  
Data Release Frequency: Quarterly

### Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2011  
Date Data Arrived at EDR: 11/04/2011  
Date Made Active in Reports: 12/13/2011  
Number of Days to Update: 39

Source: Department of Health Services  
Telephone: 619-338-2209  
Last EDR Contact: 01/30/2012  
Next Scheduled EDR Contact: 05/14/2012  
Data Release Frequency: Varies

### Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010  
Date Data Arrived at EDR: 06/15/2010  
Date Made Active in Reports: 07/09/2010  
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health  
Telephone: 619-338-2371  
Last EDR Contact: 12/12/2011  
Next Scheduled EDR Contact: 03/26/2012  
Data Release Frequency: No Update Planned

## SAN FRANCISCO COUNTY:

### Local Oversight Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008  
Date Data Arrived at EDR: 09/19/2008  
Date Made Active in Reports: 09/29/2008  
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County  
Telephone: 415-252-3920  
Last EDR Contact: 02/13/2012  
Next Scheduled EDR Contact: 05/28/2012  
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010	Source: Department of Public Health
Date Data Arrived at EDR: 03/10/2011	Telephone: 415-252-3920
Date Made Active in Reports: 03/15/2011	Last EDR Contact: 02/13/2012
Number of Days to Update: 5	Next Scheduled EDR Contact: 05/28/2012
	Data Release Frequency: Quarterly

## SAN JOAQUIN COUNTY:

### San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 09/27/2011	Source: Environmental Health Department
Date Data Arrived at EDR: 09/28/2011	Telephone: N/A
Date Made Active in Reports: 10/19/2011	Last EDR Contact: 01/09/2012
Number of Days to Update: 21	Next Scheduled EDR Contact: 04/09/2012
	Data Release Frequency: Semi-Annually

## SAN MATEO COUNTY:

### Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 10/17/2011	Source: San Mateo County Environmental Health Services Division
Date Data Arrived at EDR: 11/29/2011	Telephone: 650-363-1921
Date Made Active in Reports: 12/05/2011	Last EDR Contact: 12/14/2011
Number of Days to Update: 6	Next Scheduled EDR Contact: 04/02/2012
	Data Release Frequency: Annually

### Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 12/15/2011	Source: San Mateo County Environmental Health Services Division
Date Data Arrived at EDR: 12/15/2011	Telephone: 650-363-1921
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 12/14/2011
Number of Days to Update: 35	Next Scheduled EDR Contact: 04/02/2012
	Data Release Frequency: Semi-Annually

## SANTA CLARA COUNTY:

### HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005	Source: Santa Clara Valley Water District
Date Data Arrived at EDR: 03/30/2005	Telephone: 408-265-2600
Date Made Active in Reports: 04/21/2005	Last EDR Contact: 03/23/2009
Number of Days to Update: 22	Next Scheduled EDR Contact: 06/22/2009
	Data Release Frequency: No Update Planned

### LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 12/05/2011	Source: Department of Environmental Health
Date Data Arrived at EDR: 12/09/2011	Telephone: 408-918-3417
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 12/05/2011
Number of Days to Update: 41	Next Scheduled EDR Contact: 03/19/2012
	Data Release Frequency: Annually



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 12/13/2011	Source: City of San Jose Fire Department
Date Data Arrived at EDR: 12/14/2011	Telephone: 408-535-7694
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 02/13/2012
Number of Days to Update: 36	Next Scheduled EDR Contact: 05/28/2012
	Data Release Frequency: Annually

## SOLANO COUNTY:

### Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 12/19/2011	Source: Solano County Department of Environmental Management
Date Data Arrived at EDR: 01/06/2012	Telephone: 707-784-6770
Date Made Active in Reports: 01/27/2012	Last EDR Contact: 01/03/2012
Number of Days to Update: 21	Next Scheduled EDR Contact: 04/02/2012
	Data Release Frequency: Quarterly

### Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 09/20/2011	Source: Solano County Department of Environmental Management
Date Data Arrived at EDR: 09/28/2011	Telephone: 707-784-6770
Date Made Active in Reports: 10/19/2011	Last EDR Contact: 01/03/2012
Number of Days to Update: 21	Next Scheduled EDR Contact: 04/02/2012
	Data Release Frequency: Quarterly

## SONOMA COUNTY:

### Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/05/2011	Source: Department of Health Services
Date Data Arrived at EDR: 04/06/2011	Telephone: 707-565-6565
Date Made Active in Reports: 05/12/2011	Last EDR Contact: 12/27/2011
Number of Days to Update: 36	Next Scheduled EDR Contact: 04/16/2012
	Data Release Frequency: Quarterly

## SUTTER COUNTY:

### Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 12/12/2011	Source: Sutter County Department of Agriculture
Date Data Arrived at EDR: 12/13/2011	Telephone: 530-822-7500
Date Made Active in Reports: 01/17/2012	Last EDR Contact: 12/09/2011
Number of Days to Update: 35	Next Scheduled EDR Contact: 03/26/2012
	Data Release Frequency: Semi-Annually

## VENTURA COUNTY:

### Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/27/2011  
Date Data Arrived at EDR: 11/23/2011  
Date Made Active in Reports: 12/13/2011  
Number of Days to Update: 20

Source: Ventura County Environmental Health Division  
Telephone: 805-654-2813  
Last EDR Contact: 11/17/2011  
Next Scheduled EDR Contact: 03/05/2012  
Data Release Frequency: Quarterly

## Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011  
Date Data Arrived at EDR: 12/01/2011  
Date Made Active in Reports: 01/19/2012  
Number of Days to Update: 49

Source: Environmental Health Division  
Telephone: 805-654-2813  
Last EDR Contact: 01/09/2012  
Next Scheduled EDR Contact: 04/23/2012  
Data Release Frequency: Annually

## Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008  
Date Data Arrived at EDR: 06/24/2008  
Date Made Active in Reports: 07/31/2008  
Number of Days to Update: 37

Source: Environmental Health Division  
Telephone: 805-654-2813  
Last EDR Contact: 11/17/2011  
Next Scheduled EDR Contact: 03/05/2012  
Data Release Frequency: Quarterly

## Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 10/27/2011  
Date Data Arrived at EDR: 11/07/2011  
Date Made Active in Reports: 12/13/2011  
Number of Days to Update: 36

Source: Ventura County Resource Management Agency  
Telephone: 805-654-2813  
Last EDR Contact: 01/30/2012  
Next Scheduled EDR Contact: 05/14/2012  
Data Release Frequency: Quarterly

## Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 12/01/2011  
Date Data Arrived at EDR: 12/19/2011  
Date Made Active in Reports: 01/17/2012  
Number of Days to Update: 29

Source: Environmental Health Division  
Telephone: 805-654-2813  
Last EDR Contact: 12/19/2011  
Next Scheduled EDR Contact: 04/02/2012  
Data Release Frequency: Quarterly

## YOLO COUNTY:

### Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 12/28/2011  
Date Data Arrived at EDR: 01/06/2012  
Date Made Active in Reports: 01/17/2012  
Number of Days to Update: 11

Source: Yolo County Department of Health  
Telephone: 530-666-8646  
Last EDR Contact: 12/21/2011  
Next Scheduled EDR Contact: 04/09/2012  
Data Release Frequency: Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

### CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 11/21/2011	Source: Department of Environmental Protection
Date Data Arrived at EDR: 11/22/2011	Telephone: 860-424-3375
Date Made Active in Reports: 12/22/2011	Last EDR Contact: 11/22/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 03/05/2012
	Data Release Frequency: Annually

### NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2010	Source: Department of Environmental Protection
Date Data Arrived at EDR: 07/20/2011	Telephone: N/A
Date Made Active in Reports: 08/11/2011	Last EDR Contact: 01/20/2012
Number of Days to Update: 22	Next Scheduled EDR Contact: 04/30/2012
	Data Release Frequency: Annually

### NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 11/01/2011	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 11/08/2011	Telephone: 518-402-8651
Date Made Active in Reports: 12/22/2011	Last EDR Contact: 02/09/2012
Number of Days to Update: 44	Next Scheduled EDR Contact: 05/21/2012
	Data Release Frequency: Annually

### PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2008	Source: Department of Environmental Protection
Date Data Arrived at EDR: 12/01/2009	Telephone: 717-783-8990
Date Made Active in Reports: 12/14/2009	Last EDR Contact: 01/23/2012
Number of Days to Update: 13	Next Scheduled EDR Contact: 05/07/2012
	Data Release Frequency: Annually

### RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2010	Source: Department of Environmental Management
Date Data Arrived at EDR: 06/24/2011	Telephone: 401-222-2797
Date Made Active in Reports: 06/30/2011	Last EDR Contact: 11/28/2011
Number of Days to Update: 6	Next Scheduled EDR Contact: 03/12/2012
	Data Release Frequency: Annually

### WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2010	Source: Department of Natural Resources
Date Data Arrived at EDR: 08/19/2011	Telephone: N/A
Date Made Active in Reports: 09/15/2011	Last EDR Contact: 12/19/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 04/02/2012
	Data Release Frequency: Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

#### AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

#### Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

#### Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

#### Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

#### Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

#### Daycare Centers: Licensed Facilities

Source: Department of Social Services

Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

## **STREET AND ADDRESS INFORMATION**

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**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

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**APPENDIX E  
EDR ENVIRONMENTAL LIEN REPORTS**

**First Solar Campo Verde Project Site  
First Solar Campo Verde Project Site  
El Centro, CA 92243**

**Inquiry Number: 3256771.3S  
February 29, 2012**

# The EDR Environmental LienSearch™ Report



440 Wheelers Farms Road  
Milford, CT 06461  
800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

## EDR Environmental LienSearch™ Report

The EDR Environmental LienSearch Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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# EDR Environmental LienSearch™ Report

## TARGET PROPERTY INFORMATION

### ADDRESS

First Solar Campo Verde Project Site  
First Solar Campo Verde Project Site  
El Centro, CA 92243

### RESEARCH SOURCE

Source 1: Imperial County, California Assessor

Source 2: Imperial County, California Recorder

### PROPERTY INFORMATION

#### **Deed 1:**

Type of Deed: Grant Deed

Title is vested in: Imperial 1585, LLC, a Nevada limited liability company

Title received from: Imperial Irrigation District, a California Irrigation District

Deed Dated: 02/01/2007

Deed Recorded: 02/07/2007

Instrument Number: 2007-004837

**Legal Description:** All that certain piece or parcel of land being a portion of Tract 54 and Tract 295 and Government Lot 7, Township 16 South, Range 12 East, containing 160.41 acres, more or less (parcel 051-300-025); Government Lots 2 and 4 of Section 28 and Government Lots 9 and 15, Section 21, Township 16 South, Range 12 East (parcel 051-300-029); Parcel 1 of Parcel Map M-1914, filed 11/14/1989 in Book 8, Pages 5 and 6 of Parcel Maps, containing 221.88 acres, more or less (051-300-030); a portion of Tract 82 of Section 16 and Government Lots 2, 3, 4 and 5, in Section 21, Township 16 South, Range 12 East, containing 120.86 acres, more or less (parcel 051-270-027); Government Lot 1 in Section 21 and Government Lots 4 and 5 in Section 16, Township 16 South, Range 12 East, more or less (parcel 051-290-038); Parcel 3, being a portion of Tract 81 and 82 in Township 16 South, Range 12 East, containing 81.16 acres, more or less (parcel 051-270-047); Parcel 2 out of Tract 83, Section 16, Township 16 South, Range 12 East, containing 57.19 acres, more or less (parcel 051-270-037); the Southwest Quarter of the Southwest Quarter of Section 27 and the Southeast Quarter of the Southeast Quarter of Section 28, Township 16 South, Range 12 East (parcel 051-330-005); a portion of the Northeast Quarter of the Northeast Quarter of Section 33 and a portion of the Northwest Quarter of the Northwest Quarter of Section 34, Township 16 South, Range 12 East (parcel 051-350-005); a portion of the Southwest Quarter of the Northwest Quarter of Section 27, the Southeast Quarter of the Northeast Quarter, and the Northeast Quarter of the Southeast Quarter of Section 28, Township 16 South, Range 12 East (parcel 051-330-015); the Northwest Quarter of the Southwest Quarter of Section 27, Township 16 South, Range 12 East (parcel 051-330-020); portions of Tract 292, Township 16 South, Range 12 East (parcels 051-360-001, 051-360-002 and 051-360-003); a portion of the Southeast Quarter of the Southeast Quarter of Section 27, Township 16 South, Range 12 East (parcel 051-360-018); situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** Imperial 1585, LLC, a Nevada limited liability company

**Property Identifiers:** 051-270-027, 051-270-037, 051-270-047, 051-290-038, 051-300-025, 051-300-029, 051-300-030, 051-330-005, 051-330-015, 051-330-020, 051-350-005, 051-360-001, 051-360-002, 051-360-003, 051-360-018



## EDR Environmental LienSearch™ Report

### Deed 2:

Type of Deed: Quitclaim Deed

Title is vested in: Mary N. Fitzurka, a married woman as her sole and separate property

Title received from: Mary N. Fitzurka, Trustee pursuant to Trust dated 08/22/1990

Deed Dated: 09/12/2011

Deed Recorded: 09/20/2011

Instrument Number: 2011-022716

**Legal Description:** All those certain pieces or parcels of land being portions of Tract 46, according to the Official Plat thereof, indicated as Parcels "A" and "C" on map recorded in Book 10, Page 28 of Licensed Survey Maps; portions of Tracts 289, according to the Official Plat thereof, indicated as Parcel "B", "D" and "E" on map recorded in Book 10, Page 28 of Licensed Survey Maps; a portion of the South 330 feet of the East 80 acres of Tract 51; a portion of the West 80 acres of Tract 51; portions of Tract 45-A; a portion of the East 80 acres of Tract 51, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** Mary N. Fitzurka, a married woman as her sole and separate property

**Property Identifiers:** 051-310-049, 051-310-050, 051-310-056, 051-310-057, 051-310-059

### Deed 3:

Type of Deed: Memorandum of Purchase and Sale Agreement

Title is vested in: Southwest Land Holdings, LLC, a California limited liability company

Title received from: McVey Properties, LLC

Deed Dated: 06/29/2011

Deed Recorded: 07/12/2011

Instrument Number: 2011-16360

### Deed 4:

Type of Deed: Grant Deed

Title is vested in: McVey Properties, LLC

Title received from: Douglass Adams Cook, Co-Trustees of the Ludwig Family Trust, established 12/11/1975

Deed Dated: 02/28/2005

Deed Recorded: 04/15/2005

Book: 2422

Page: 1731

**Legal Description:** All those certain pieces or parcels of land being Tracts 290, 291, portion of 292 and 294, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** McVey Properties, LLC

**Property Identifiers:** 051-360-032

## EDR Environmental LienSearch™ Report

### Deed 5:

Type of Deed: Grant Deed

Title is vested in: Tierra Partners, LLC, an Arizona limited liability company

Title received from: Brookfield California Land Holdings, LLC, a Delaware limited liability company

Deed Dated: 01/08/2009

Deed Recorded: 01/20/2009

Instrument Number: 2009-3048

### Deed 6:

Type of Deed: Quitclaim Deed

Title is vested in: Tierra Partners, LLC, an Arizona limited liability company

Title received from: LightSource Renewables, LLC, a California limited liability company

Deed Dated: 08/26/2010

Deed Recorded: 08/14/2010

Instrument Number: 2010-22834

**Legal Description:** All those certain pieces or parcels of land being portions of the East Half of the West Half, and the West Half of the East Half of Section 34, the East Half of the Southwest Quarter of Section 27, and Tract 295 in Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** Tierra Partners, LLC, an Arizona limited liability company

**Property Identifiers:** 051-330-019 and 051-350-014

### Deed 7:

Type of Deed: Grant Deed

Title is vested in: J.R. Preece, Inc., a California corporation

Title received from: Huon Van Vo and Nga Tuyet Chau, husband and wife as joint tenants

Deed Dated: 05/20/2002

Deed Recorded: 07/12/2002

Instrument Number: 2002-17699

**Legal Description:** All that certain piece or parcel of land being a portion of the East Half of the Southeast Quarter of Section 18, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** J.R. Preece, Inc., a California corporation

**Property Identifiers:** 051-260-029

## EDR Environmental LienSearch™ Report

### Deed 8:

Type of Deed: Grant Deed  
Title is vested in: J.R. Preece, Inc., a California corporation  
Title received from: Huon Van Vo and Nga Tuyet Chau, husband and wife as joint tenants  
Deed Dated: 05/20/2002  
Deed Recorded: 07/12/2002  
Instrument Number: 2002-17699

**Legal Description:** All that certain piece or parcel of land being a portion of the Southwest Quarter of Section 17, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** J.R. Preece, Inc., a California corporation

**Property Identifiers:** 051-260-030

### Deed 9:

Type of Deed: Quitclaim Deed  
Title is vested in: J. R. Preece, Inc, a California corporation, and Melvin Jerry Preece, Jr., an unmarried man  
Title received from: Brookfield California Land Holdings, LLC, a Delaware limited liability company  
Deed Dated: 12/03/2007  
Deed Recorded: 02/05/2008  
Instrument Number: 2008-3292

**Legal Description:** All those certain pieces or parcels of land being portions of Sections 17, 18, 19, 20, 21, 22, 27, 28, Tract 53, 54 and 55, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** J. R. Preece, Inc, a California corporation, and Melvin Jerry Preece, Jr., an unmarried man

**Property Identifiers:** 051-260-033

### Deed 10:

Type of Deed: Grant Deed  
Title is vested in: Jerry Preece, Jr., an unmarried man  
Title received from: Heidi L. Kuhn, Trustee of the James E. Kuhn Marital Deduction Trust (as to an undivided 50% interest), and Heidi L. Kuhn, Trustee of the Heidi L. and James E. Kuhn Trust (as to an undivided 50% interest)  
Deed Dated: 10/10/2008  
Deed Recorded: 12/01/2008  
Instrument Number: 2008-33880

**Legal Description:** All those certain pieces or parcels of land being Lots 1 and 2 in Section 20, Township 16 South, Range 12 East, situated and lying in an unincorporated area of the County of Imperial, State of California.

**Legal Current Owner:** Jerry Preece, Jr., an unmarried man

**Property Identifiers:** 051-290-014

## EDR Environmental LienSearch™ Report

### Deed 11:

Type of Deed: Grant Deed  
Title is vested in: J. R. Preece, Inc., a California corporation  
Title received from: Mary K. Hatton  
Deed Dated: 02/11/1999  
Deed Recorded: 04/08/1999  
Instrument Number: 1999-7643

**Legal Description:** All that certain piece or parcel of land being the Northwest Quarter of the Northwest Quarter of Section 27 and the Southwest Quarter of the Southwest Quarter of Section 22, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** J. R. Preece, Inc., a California corporation

**Property Identifiers:** 051-300-008

### Deed 12:

Type of Deed: Grant Deed  
Title is vested in: J. R. Preece, Inc., a California corporation  
Title received from: Troy G. Haggard and F. Pauline Haggard  
Deed Dated: 02/10/1999  
Deed Recorded: 04/16/1999  
Instrument Number: 1999-8303

**Legal Description:** All those certain pieces or parcels of land being the North 40 acres of Tract 53 and portions of Tract 55, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** J. R. Preece, Inc., a California corporation

**Property Identifiers:** 051-310-026 and 051-300-005

### Deed 13:

Type of Deed: Quitclaim Deed  
Title is vested in: Melvin Jerry Preece, Jr.  
Title received from: Troy Lee Preece, also known as Troy Lee Mason  
Deed Dated: 09/10/2002  
Deed Recorded: 03/02/2004  
Instrument Number: 2004-5938

**Legal Description:** All that certain piece or parcel of land being portions of the Southeast Quarter of the Southeast Quarter of Section 21 and the Northeast Quarter of the Northeast Quarter of Section 28, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** Melvin Jerry Preece, Jr.

**Property Identifiers:** 051-300-009

## EDR Environmental LienSearch™ Report

### Deed 14:

Type of Deed: Order Appointing Successor Trustee  
Title is vested in: Mary Fitzurka, Successor Trustee  
Title received from: James William England, deceased  
Deed Dated: 08/01/2006  
Deed Recorded: 08/25/2006  
Instrument Number: 2006-041068

### Deed 15:

Type of Deed: Order Settling First and Final Account; Decree of Distribution; Order Appointing Successor Trustee;  
Attorney Fees and Trustee's Bond  
Title is vested in: Ova England, as Trustee  
Title received from: Estate of James William England, deceased  
Deed Dated: 02/18/1976  
Deed Recorded: 02/24/1976  
Book: 1384  
Page: 939

**Legal Description:** All that certain piece or parcel of land being a portion of Tract 293, Township 16 South, Range 12 East, and a portion of Sections 24 and 25, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** Mary Fitzurka, Successor Trustee

**Property Identifiers:** 051-360-004 and 051-310-040

### Deed 16:

According to the Imperial County Assessor, the current owner of the subject property is the Imperial Irrigation District. Records were searched at the Imperial County Recorder's Office back to 1935. No conveyance was found of record for the subject property. Based on our research, it appears that the Imperial Irrigation District acquired title to the property prior to 1935.

**Legal Description:** All those certain pieces or parcels of land being portions of Tract 46 (parcel 051-310-058) and Tract 293 (parcel 051-310-060), in Section 26, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** Imperial Irrigation District

**Property Identifiers:** 051-310-058 and 051-310-060

### Deed 17:

According to the Imperial County Assessor, the current owner of the subject property is the United States of America. Records were searched at the Imperial County Recorder's Office. No conveyance was found of record transferring fee title ownership into United States of America for the subject property.

**Legal Description:** All those certain pieces or parcels of land being portions of the South Half of the Southwest Quarter and the Northwest Quarter of the Southwest Quarter of Section 34, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** United States of America

**Property Identifiers:** 051-350-009

## EDR Environmental LienSearch™ Report

### Deed 18:

According to the Imperial County Assessor, the current owner of the subject property is the United States of America. Records were searched at the Imperial County Recorder's Office. No conveyance was found of record transferring fee title ownership into United States of America for the subject property.

**Legal Description:** All those certain pieces or parcels of land being portions of Section 3 and Lots 5, 6 and 7 and portions of Lot 8, Section 2, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** United States of America

**Property Identifiers:** 051-380-024

### Deed 19:

Type of Deed: Grant Deed

Title is vested in: Rabley Holdings, Inc., a Delaware corporation

Title received from: Imperial 1585, LLC, a Nevada limited liability company

Deed Dated: 12/05/2008

Deed Recorded: 12/15/2008

Instrument Number: 2008-35129

**Legal Description:** All those certain pieces or parcels of land being the South Half of the Southeast Quarter of Section 34, Township 16 South, Range 12 East, situated and lying in an unincorporated area of the County of Imperial, State of California.

**Legal Current Owner:** Rabley Holdings, Inc., a Delaware corporation

**Property Identifiers:** 051-350-010

### Deed 20:

Type of Deed: Grant Deed

Title is vested in: Rabley Holdings, Inc., a Delaware corporation

Title received from: Imperial 1585, LLC, a Nevada limited liability company

Deed Dated: 12/05/2008

Deed Recorded: 12/15/2008

Instrument Number: 2008-35129

**Legal Description:** All those certain pieces or parcels of land being a portion of the Northeast Quarter of the Southeast Quarter of Section 34, and a portion of the Northwest Quarter of the Southeast Quarter and the Northeast Quarter of the Southwest Quarter of Section 34, Township 16 South, Range 12 East, situated and lying in an unincorporated area of the County of Imperial, State of California.

**Legal Current Owner:** Rabley Holdings, Inc., a Delaware corporation

**Property Identifiers:** 051-350-011

## EDR Environmental LienSearch™ Report

### Deed 21:

Type of Deed: Grant Deed

Title is vested in: Theodore L. Whitmer, a married man as his sole and separate property, and Randall R. Whitmer, a married man as his sole and separate property, as Tenants in Common

Title received from: Theodore L. Whitmer and Randall R. Whitmer, as Successor Trustees of the Santana F. Whitmer 1996 Trust

Deed Dated: 02/02/2007

Deed Recorded: 02/06/2007

Instrument Number: 2007-4712

### Deed 22:

Type of Deed: Grant Deed

Title is vested in: Theodore L. Whitmer and Carolyn J. Whitmer, as trustees of the Whitmer Family Trust created on 12/15/2006

Title received from: Theodore L. Whitmer, also known as Ted L. Whitmer, a married man as his sole and separate property

Deed Dated: 12/15/2006

Deed Recorded: 12/19/2006

Instrument Number: 2006-58290

### Deed 23:

Type of Deed: Grant Deed

Title is vested in: Theodore L. Whitmer, a married man as his sole and separate property, and Randall R. Whitmer, a married man as his sole and separate property, as Tenants in Common

Title received from: Theodore L. Whitmer and Randall R. Whitmer, as Trustees of the Santana F. Whitmer 1996 Trust

Deed Dated: 11/14/2006

Deed Recorded: 11/16/2006

Instrument Number: 2006-54011

**Legal Description:** All those certain pieces or parcels of land being a portion of the Southeast Quarter of the Northeast Quarter of Section 33, and the Southwest Quarter of the Northwest Quarter of Section 34, in Township 16 South, Range 12 East, according to the United States Government Plat of Re-Survey approved 03/15/1909, and on file in the United States Land Office at Los Angeles, California, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** Theodore L. Whitmer and Carolyn J. Whitmer, as trustees of the Whitmer Family Trust created on 12/15/2006, and Randall R. Whitmer, a married man as his sole and separate property, as Tenants in Common

**Property Identifiers:** 051-350-008

## EDR Environmental LienSearch™ Report

### Deed 24:

Type of Deed: Individual Grant Deed

Title is vested in: Paul C. Rodriguez and Alice L. Rodriguez, husband and wife, as joint tenants

Title received from: Francisco Gonzalez and Guadalupe G. Gonzalez, husband and wife, as joint tenants

Deed Dated: 08/21/1992

Deed Recorded: 09/18/1992

Instrument Number: 92-19800

**Legal Description:** All that certain piece or parcel of land being a portion of the Southeast Quarter of the Southeast Quarter of Section 27, and that portion of Lot 5, of the Northeast Quarter of the Southeast Quarter of Section 27, and that portion of Lot 7, of the Northwest Quarter of the Southeast Quarter of Section 27, and that portion of the Southwest Quarter of the Southeast Quarter of Section 27, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** Paul C. Rodriguez and Alice L. Rodriguez, husband and wife, as joint tenants

**Property Identifiers:** 051-330-021

### Deed 25:

Type of Deed: Quitclaim Deed

Title is vested in: Carolyn Marie Rhoads, an unmarried woman (as to an undivided ½ interest) and Cathleen Eleanor Whiting, a married woman, as her sole and separate property (as to an undivided ½ interest)

Title received from: Katherine A. Locher, Trustee of the Carl R. Locher and Katherine A. Locher Revocable Trust dated 04/28/2010

Deed Dated: 10/05/2011

Deed Recorded: 10/20/2011

Instrument Number: 2011-025073

**Legal Description:** All that certain piece or parcel of land being the Southwest Quarter of the Southeast Quarter of Section 27, Township 16 South, Range 12 East, situated and lying in the County of Imperial, State of California.

**Legal Current Owner:** Carolyn Marie Rhoads, an unmarried woman (as to an undivided ½ interest) and Cathleen Eleanor Whiting, a married woman, as her sole and separate property (as to an undivided ½ interest)

**Property Identifiers:** 051-330-022

### Deed 26:

Type of Deed: Quitclaim Deed

Title is vested in: Delieu Scopesi, a married woman, as her sole and separate property

Title received from: Gino Scopesi, a married man and the husband of grantee

Deed Dated: 07/01/2011

Deed Recorded: 07/06/2011

Instrument Number: 2011-15975



## EDR Environmental LienSearch™ Report

**Deed 27:**

Type of Deed: Grant Deed

Title is vested in: Delieu Scopesi, a married woman, as her sole and separate property

Title received from: Delieu Scopesi, as Trustee of The Ruth M. Van Sant Living Trust, U/A dated 07/11/1991

Deed Dated: 07/01/2011

Deed Recorded: 07/06/2011

Instrument Number: 2011-15974

**Legal Description:** All that certain piece or parcel of land being Lots 5 and 7 and the Southeast Quarter of the Southeast Quarter of Section 27, Township 16 South, Range 12 East, San Bernardino Base and Meridian, in an unincorporated area of the County of Imperial, State of California.

**Legal Current Owner:** Delieu Scopesi, a married woman, as her sole and separate property

**Property Identifiers:** 051-330-024

## EDR Environmental LienSearch™ Report

### ENVIRONMENTAL LIEN

Environmental Lien: Found  Not Found

If found:

1<sup>st</sup> Party:

2<sup>nd</sup> Party:

Dated:

Recorded:

Book:

Page:

Docket:

Volume:

Instrument:

Comments:

Miscellaneous:

### OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AUL's: Found  Not Found

If found:

1<sup>st</sup> Party:

2<sup>nd</sup> Party:

Dated:

Recorded:

Book:

Page:

Docket:

Volume:

Instrument:

Comments:

Miscellaneous:

**EDR Environmental LienSearch™ Report**

**DEED EXHIBIT**



**RECORDING REQUESTED BY**  
First American Title Insurance Company  
National Commercial Services

**AND WHEN RECORDED MAIL TO:**

Imperial 1585, LLC  
c/o Specialty Land, LLC  
6160 Plumas Street  
Reno, NV 89519

Recorded in Official Records, Imperial County

2/07/2007  
2:00 PM  
AG

**Dolores Provencio**  
County Clerk / Recorder

FA First American Title

Doc#: 2007-004837

Titles: 1 Pages: 23



Fees 82.00  
Taxes \*\* Conf \*\*  
Other 0.00  
PAID \$82.00

Space Above This Line for Recorder's Use Only

A.P.N.: 034-270-33-01, 034-320-03-01  
and 034-270-13-01

File No.: NCS-250461-LJ (lm/ab)

**GRANT DEED**

**DOCUMENTARY TRANSFER  
TAX DECLARATION FILED**

The Undersigned Grantor(s) Declare(s):

Documentary Transfer Tax not shown pursuant  
To Section 11932 of the Revenue and  
Taxation Code, as amended.

County of Imperial

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **IMPERIAL IRRIGATION DISTRICT, a California Irrigation District ("Grantor")**, hereby GRANTS to **IMPERIAL 1585, LLC, a NEVADA California Limited Liability Company ("Grantee")**, that certain real property in the County of Imperial, State of California, which is more particularly described on Exhibits A, B, C, and D attached hereto (the "Property"), subject to: (i) all matters of record or that an accurate survey would disclose; and (ii) the reservation of rights and easements set forth and incorporated herein by reference.

IN WITNESS WHEREOF, the parties hereto have caused this Grant Deed to be executed as of the 1<sup>st</sup> day of February, 2007.

**IMPERIAL IRRIGATION DISTRICT,**  
a California Irrigation District

By: Stella Mendoza  
Stella Mendoza, President

By: Gloria A. Rivera  
Gloria A. Rivera, Secretary

THE UNDERSIGNED GRANTOR DECLARES THAT  
DOCUMENTARY TRANSFER TAX IS: \$ \_\_\_\_\_  
- COMPUTED ON FULL VALUE OF PROPERTY CONVEYED, OR  
- COMPUTED ON FULL VALUE LESS VALUE OF LIENS  
OR ENCUMBRANCES REMAINING AT TIME OF SALE,  
 UNINCORPORATED AREA:  
- CITY OF \_\_\_\_\_

STATE OF CALIFORNIA )  
 )SS  
COUNTY OF IMERIAL )

On February 5, 2007, before me, Sandra L. Solorio, Notary Public, personally appeared Stella Mendoza, personally known to me (~~or proved to me on the basis of satisfactory evidence~~) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

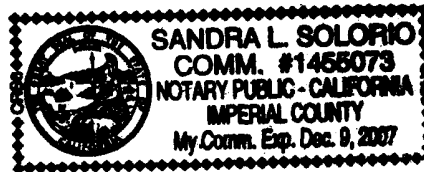
WITNESS my hand and official seal.

Signature



My Commission Expires: December 9, 2007

Notary Name: Sandra L. Solorio  
Notary Registration Number: 1455073



*This area for official notarial seal*

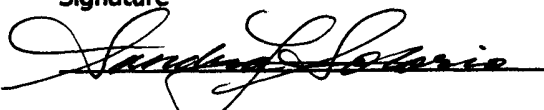
Notary Phone: (760) 339-9125  
County of Principal Place of Business: Imperial

STATE OF CALIFORNIA )  
 )SS  
COUNTY OF IMERIAL )

On February 5, 2007, before me, Sandra L. Solorio, Notary Public, personally appeared Gloria A. Rivera, personally known to me (~~or proved to me on the basis of satisfactory evidence~~) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

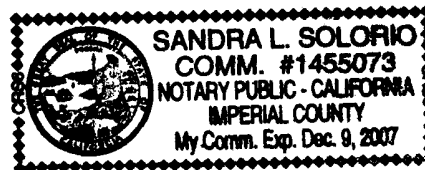
WITNESS my hand and official seal.

Signature



My Commission Expires: December 9, 2007

Notary Name: Sandra L. Solorio  
Notary Registration Number: 1455073



*This area for official notarial seal*

Notary Phone: (760) 339-9125  
County of Principal Place of Business: Imperial

**ILLEGIBLE NOTARY SEAL DECLARATION (GOVERNMENT CODE 27361.7)**

I CERTIFY UNDER PENALTY OF PERJURY THAT THE NOTARY SEAL ON THE DOCUMENT TO WHICH THIS STATEMENT IS ATTACHED READS AS FOLLOWS:

NAME OF NOTARY: SANDRA L. SOLORIO

DATE COMMISSION EXPIRES: DECEMBER 9, 2007

PRINCIPAL OFFICE IN: IMPERIAL COUNTY

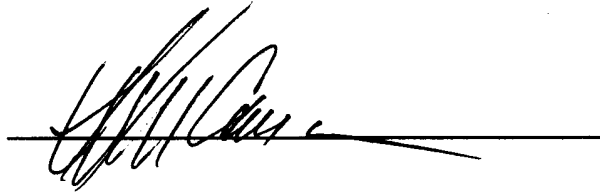
NOTARY COMMISSION NUMBER: 1455073

MANUFACTURER IDENTIFICATION NUMBER: CRS6

PLACE OF EXECUTION OF THIS DECLARATION: EL CENTRO

DATE: FEBRUARY 7, 2007

**FIRST AMERICAN TITLE INSURANCE COMPANY**



**EXHIBIT A  
LEGAL DESCRIPTION  
(Allen Ranch)**

**Parcel 1:**

The Southwest Quarter of the Southwest Quarter of Section 27, in Township 16 South, Range 12 East S.B.M., in an unincorporated area of the County of Imperial, State of California, according to the Official Plat thereof.

APN: 051-330-05-01

**Parcel 2:**

The Southeast Quarter of the Southeast Quarter of Section 28 in Township 16 South, Range 12 East, S.B.M., in an unincorporated area of the County of Imperial, State of California, according to the Official Plat thereof.

APN: 051-330-05-01

**Parcel 3:**

That portion of the Northeast Quarter of the Northeast Quarter of Section 33, in Township 16 South, Range 12 East, S.B.M., in an unincorporated area of the County of Imperial, State of California, according to the Official Plat thereof, lying North of the center line of Dixie Drain No. 3 as said was located February 15, 1949.

APN: 051-350-05-01

**Parcel 4:**

That portion of the Northwest Quarter of the Northwest Quarter of Section 34, in Township 16 South, Range 12 East, S.B.M., in an unincorporated area of the County of Imperial, State of California according to the Official Plat thereof, lying North of the center line of Dixie Drain No. 3, as said Drain was located February 15, 1949.

APN: 051-350-05-01

**Parcel 5:**

The Southwest Quarter of the Northwest Quarter of Section 27, Township 16 South, Range 12 East, S.B.M., in an unincorporated area of the County of Imperial, State of California, according to the Official Plat thereof.

EXCEPTING THEREFROM that portion thereof described as follows:

Beginning at the Southeast corner thereof; thence North along the East line to the South line of the county road; thence West along said South line 27 feet; thence South, parallel with the East line thereof to the South line thereof; thence East, along said South line, 27 feet to the point of beginning.

APN: 051-330-15-01

**Parcel 6:**

The Southeast Quarter of Northeast Quarter, and the Northeast Quarter of the Southeast Quarter of Section 28, Township 16 South, Range 12 East, S.B.M., in an unincorporated area of the County of Imperial, State of California, according to the Official Plat thereof.

APN: 051-330-15-01

Parcel 7:

The Northwest Quarter of the Southwest Quarter of Section 27, Township 16 South, Range 12 East, S.B.M., in an unincorporated area of the County of Imperial, State of California, according to the Official Plat thereof.

APN: 051-330-20-01

Parcel 8:

That part of Tract 292, Township 16 South, Range 12 East, S.B.M., in an unincorporated area of the County of Imperial, State of California, according to the Official Plat thereof, lying West of the West line of Tract 293, Township 16 South, Range 12 East, S.B.M., produced Northerly and South of the North line of Lot 5, Section 27, Township 16 South, Range 12 East, S.B.M. produced Easterly.

APN: 051-360-03-01

Parcel 9:

The North 1320 feet of the West 2640 feet of Tract 292, Township 16 South, Range 12 East, S.B.M., in an unincorporated area of the County of Imperial, State of California, according to the Official Plat thereof.

APN: 051-360-01-01, 051-360-02-01

Parcel 10:

That portion of the Southeast Quarter of the Southeast Quarter of Section 27, Township 16 South, Range 12 East, S.B.M., in an unincorporated area of the County of Imperial, State of California, according to the Official Plot thereof, described as follows;

Beginning at the intersection of the South line of said Section with the Southeasterly line of the Fig Canal; thence East 550 feet to the Southeast corner of said Section; thence North 396 feet along the East line of the intersection with the South line of Fig Canal; thence Southwesterly along the Southeasterly line of the Fig Canal to the point of beginning.

APN: 051-360-18-01

EXCEPTING THEREFROM and reserving unto the Imperial Irrigation District, its successors and assigns, a One Hundred percent (100%) interest in Parcels 1 through 3, inclusive, in all minerals, of every kind and character, either in solid or liquid form, including, without limitation, all oil, gas and hydrocarbons, all geothermal substances that might be produced from the Property, including (a) the natural heat of the earth, and the energy present in, resulting from, or created by, or which may be extracted from, the natural heat of the earth or the heat present below the surface of the earth, in whatever form such heat or energy naturally occurs; (b) all natural products of geothermal processes, including, without limitation, indigenous hot water, hot brine, steam and other fluids and gasses; (c) hot water, hot brine, steam and other fluids and gasses resulting from water or other substances being artificially introduced into the subsurface of the Property; and (d) all minerals, gasses, salts, chemicals, by-products and other substances in solution or mixed with geothermal effluent or otherwise produced from, through and across the Property, and/or from geothermal wells located in or on property outside the boundaries of the Property that have a



production interval lying below a depth of five hundred (500) feet below the surface of the Property, including the reasonable use of the surface for exploration and development of such reserved minerals.

LEGAL DESCRIPTION OF RIGHT OF WAY AND EASEMENT RESERVATIONS

EXCEPTING THEREFROM and reserving unto the Grantor herein, an easement and right of way in the name of Imperial Irrigation District.

The purpose of said easement and right of way is for the conveyance of water, whether open and/or underground, including modification of the land to facilitate such conveyance; the construction, operation, maintenance and/or use of conveyance facilities, pipes, pump structures and the like and appurtenances thereto, as they may now exist or as they may hereafter be constructed, enlarged, modified or relocated; the transmission or distribution of energy and/or communications whether overhead and/or underground and appurtenances thereto, as they may now exist or as they may hereafter be constructed, enlarged, modified or relocated; and unobstructed pedestrian and vehicular ingress, egress and access thereto to facilitate the purposes of said easement. Any existing or prior use of said easement and right of way shall not determine or limit the extent of said easement and right of way granted herein. The Grantor shall have the right to keep the right of way free from brush, wood growth or obstructions which might interfere with use of the easement or be deemed a hazard.

Said parcels of land situated in Township 16 South, Range 12 East, S.B.M., and described as follows:

Wixom Drain:

A1. That portion of the North 1320 feet of the West 2640 feet of Tract 292, lying West of a line which is parallel with and Forty-Five (45) feet East of the centerline of the Wixom Drain as now constructed across the Western boundary of the property.

Fig Canal:

A2. That portion of the North 1320 feet of the West 2640 feet of Tract 292, lying East of a line which is parallel with and Forty (40) feet West of the centerline of the Fig Canal as now constructed across the Eastern boundary of the property.

A3. That portion of Tract 292, lying West of the West line of Tract 293, produced Northerly and South of the North line of Lot 5, lying East of a line which is parallel with and Forty (40) feet West of the center line of the Fig Canal as now constructed across the Eastern boundary of the property.

A4. That portion of Tract 292, lying West of the West line of Tract 293, produced Northerly and South of the North line of Lot 5, lying South of a line which is parallel with and Forty (40) feet North of the center line of the Fig Canal as now constructed across the Southern boundary of the property.

A5. That portion of the Southeast Quarter of the Southeast Quarter of Section 27, lying South of a line which is which is parallel with and Forty (40) feet North of the center line of the Fig Canal as now constructed across the Southern boundary of the property.

Energy Transmission and Distribution-Overhead and/or Underground:

A6. That portion of the North 1320 feet of the West 2640 feet of Tract 292, lying within a strip of land Ten (10) feet in width, the center of which is the center line of a power line as now

constructed along the Northern boundary of the parcel which are now being used as public traveled road way.

A7. That portion of Southwest Quarter of the Northwest Quarter of Section 27 and that part of the Southeast Quarter of the Northeast Quarter, Section 28, lying within a strip of land Ten (10) in width, the center of which is the center line of a power line as now constructed along the Northern boundary of the parcel which are now being used as public traveled road way.

Fern Canal:

A8. That portion of Southwest Quarter of the Northwest Quarter of Section 27, lying North and East of a line which is which is parallel with and Forty-Five (45) feet South and West of the center line of the Fern Canal as now constructed across the North and East sides of the property; EXCEPTING THEREFROM that portion deeded to the County of Imperial and described as follows: Beginning at the Southeast corner thereof; thence North along the East line to the South line of the county road; thence West along said South line 27 feet; thence South, parallel with the East line thereof to the South line thereof; thence East, along said South line, 27 feet to the point of beginning.

Dixie Drain No. 3, Sump No. S-207, Energy Transmission and Distribution-Overhead and/or Underground:

A9. That portion of the Southeast Quarter of the Southeast Quarter, and the Southeast Quarter of Northeast Quarter, and the Northeast Quarter of the Southeast Quarter all in Section 28, lying West of a line which is parallel with and Seventy-Five (75) feet East of the center line of the Dixie Drain No. 3 as now constructed along the Western boundary of the property.

A10. That portion of the Northeast Quarter of the Northeast Quarter of Section 33, lying North of the Dixie Drain No. 3 and South and West of a line which is parallel with and Seventy-Five (75) feet North and East of the center line of Dixie Drain No. 3, as now constructed along the Southern and Western boundaries of the property.

Dixie Drain No. 3-A:

A11. That portion of the Northwest Quarter of the Northwest Quarter of Section 34, lying North of the Dixie 3-A Drain and South and East of a line which is parallel with and Sixty-Five (65) feet North and West of the center line of Dixie Drain No. 3-A, as now constructed along the Southern and Eastern boundaries of the property.

Anchor Permit:

A12. That portion of the Northeast quarter of the Southeast Quarter of Section 28, lying at a point which is Twenty-Four (24) feet more or less East of the center line of Westside Road and Seven Hundred Seventy-Three (773) feet more or less South of the Westerly prolongation of the center line of Diehl Road as now constructed.

Agreements:

A13. Subject to an Agreement for Pipe Service entered into on February 7, 1962 between Imperial Irrigation District and Paul Hutchinson, their successors and assigns to install a service connection 1-1/2 inches in diameter to supply domestic water from the East bank of the Fern Canal, One Hundred (100) feet North of delivery gate 11 to the Southeast Quarter of the Northeast Quarter of Section 28, Township 16 South, Range 12 East, S.B.M., in the County of Imperial, State of California, as Recorded February 15, 1962 in Book 1103, Page 161 of Official Records of Imperial County.

A14. Subject to an Agreement and its conditions entered into on April 22, 1958 between Imperial Irrigation District hereinafter referred to as "District" and Raymond A. Smith and Andrea June Smith, owners of that portion of Tract 292, lying West of the West line of Tract 293, produced Northerly, and South of the North line of Lot 5, Section 27, produced Easterly, T. 16 S., R. 12 E., S.B.B. and M., and Ruth Moore, owner that portion of Tract 293, lying South of the County Road, T. 16 S., R. 12 E., S.B.B. and M., and J.W. England and Ova V. England, owners of that portion of Tract 293, lying North of the County Road, T. 16 S., R. 12 E., S.B.B. and M., hereinafter referred to as "Owners," as Recorded on April 25, 1958 in Book 990, Page 315 of Official Records of Imperial County.

**EXHIBIT B**  
**LEGAL DESCRIPTION**  
(Andreotti-Bonanza Ranch)

Parcel 1:

The West 120 acres of Tract 54, Township 16 South, Range 12 East, S.B.M., according to the Official plat thereof.

EXCEPTING THEREFROM that portion lying North of the center line of the county road as shown by deed recorded January 23, 1963 in Book 1134, Page 297 of Official Records.

APN: 051-300-25-01

Parcel 2:

That portion of Tract 295, Township 16 South, Range 12 East, S.B.M., according to the Official plat thereof, lying North of the Westerly extension of the South line of Tract 54, Township 16 South, Range 12 East.

APN: 051-300-25-01

Parcel 3:

Government Lot 7 in Section 22, Township 16 South, Range 12 East, S.B.M., according to the Official plat thereof

APN: 051-300-25-01

Parcel 4:

The Northeast Quarter of the Northwest Quarter of Section 28, Township 16 South, Range 12 East, S.B.M., according to the Official plat thereof.

APN: 051-300-29-01

Parcel 5:

Parcel 1 of Parcel Map M-1914 filed November 14, 1989 in Book 8 Pages 5 and 6 of Parcel Maps, in the Office of the County Recorder, Imperial County, California.

Said Parcel one formerly known as Government Lots 6, 7 and 10 and the Southeast Quarter of the Southwest Quarter all in Section 21, Township 16 South, Range 12 East, S.B.M.; and Government Lot 3, Section 28, Township 16 South, Range 12 East, S.B.M., and a portion of Tract 107 Township 16 South, Range 12 East, S.B.M.

APN: 051-300-30-01

Parcel 6:

Government Lots 2, 3, 4 and 5 in Section 21, Township 16 South, Range 12 East, S.B.M., according to the Official plat thereof.

APN: 051-270-27-01

Parcel 7:

The West 40 acres of Tract 82, Township 16 South, Range 12 East, S.B.M., according to the Official plat thereof.

EXCEPTING THEREFROM that portion of said Tract 82, lying East of the East line of Dixie No. 3 Drain of Imperial Irrigation District, as said drain was located May 17, 1949.

APN: 051-270-27-01

Parcel 8:

Government Lot 5 and that portion of Government Lot 4, in Section 16, Township 16 South, Range 12 East, S.B.M., according to the Official plat thereof, lying South of the center line of the county road, as located across said Government Lot 4 on November 1, 1941.

EXCEPTING THEREFROM said Lot 4, that portion thereof conveyed to the State of California by deed dated March 31, 1965 and recorded June 21, 1965 in Book 1209 page 499 of Official Records.

APN: 051-270-27-01

Parcel 9:

That portion of the West One-Half of Tract 83, Township 16 South, Range 12 East, S.B.M., according to the Official plat thereof, lying West of Dixie Drain No. 3.

EXCEPTING THEREFROM said Tract 83, Township 16 South, Range 12 East, that portion thereof conveyed to the State of California in that certain deed dated March 31, 1965 and recorded June 21, 1965 in Book 1209 Page 499 of Official Records.

APN: 051-270-27-01

Parcel 10:

Government Lot 1 in Section 21, Township 16 South, Range 12 East, S.B.M., according to the Official plat thereof.

APN: 051-290-38-01

Parcel 11:

That portion of Tracts 81, 82 and the West One-Half of Tract 83 within Section 16 and Section 21, Township 16 South, Range 12 East, S.B.M., according to the Official plat thereof, being more particularly described in Certificate of Compliance Recorded February 28, 1990 in Book 1643, Page 628 of Official Records, as Parcel 3 described as follows:

Commencing at the Southeast corner of said Section 16; thence South 89 degrees, 57 minutes, 00 seconds West along the South line of said Section 16 a distance of 1882.67 feet to the point of intersection with the East line of said Tract 82, from which point the Southeast corner thereof bears South 0 degrees, 05 minutes, 06 seconds East a distance of 800.46 feet; thence North 00 degrees, 05 minutes, 06 seconds West along said East line of said Tract 82 a distance of 491.71 feet to the true point of beginning; thence North 89 degrees, 49 minutes, 11 seconds West, 217.97 feet; thence North 00 degrees, 09 minutes, 17 seconds West, 27.84 feet to the point of intersection with

the South line of said West One-Half of said Tract 83; thence North 89 degrees, 58 minutes, 27 seconds West along said South line of said West One-Half of said Tract 83 a distance of 1866.31 feet to the point of intersection with the centerline of Dixie Drain No. 3; thence South 47 degrees, 01 minutes, 46 seconds East along said centerline a distance of 199.27 feet to the beginning of a tangent 180 foot radius curve concave Northeasterly; thence Southeasterly along said center line curve through a central angle of 2 degrees, 25 minutes, 19 seconds an arc distance of 86.15 feet to the point of tangency; thence continuing along said centerline tangent to said curve South 74 degrees 27 minutes 06 seconds East a distance of 186.67 feet to the beginning a tangent 340 foot radius curve concave Southwesterly; thence Southeasterly along said centerline curve through a central angle of 65 degrees, 06 minutes, 07 seconds an arc distance of 386.32 feet to the point of tangency; thence continuing along said centerline tangent to said curve South 09 degrees, 20 minutes, 59 seconds East, a distance of 22.75 feet to the point of intersection with the South line of said Section 16; thence continuing along said centerline South 09 degrees, 20 minutes, 59 seconds East, a distance of 721.86 feet to the point of intersection with the West line of the East One-Half of said Tract 82, said point also being on the centerline of that certain 200 foot strip of land described in deed recorded October 19, 1940 in Book 559 Page 62 of Official Records of Imperial County, California; thence North 00 degrees, 04 minutes, 07 seconds West along said West line of said East One-Half of said Tract 82 a distance of 620.03 feet to a point in said West line which lies 100 feet Easterly, measured at 90 degrees from said centerline of said Dixie Drain No. 3; thence South 09 degrees, 20 minutes, 59 seconds East along the Easterly deed boundary of said Book 559, Page 62, a distance of 688.35 feet to an angle point; thence continuing along said Easterly deed boundary South 00 degrees, 06 minutes, 52 seconds West a distance of 27.23 feet to the point of intersection with the South line of said Tract 82, said line also being the North line of the Northwest One-Quarter of said Tract 81, from which point the Southeast corner of said Tract 82 bears South 89 degrees, 58 minutes, 28 seconds East, a distance of 1209.84 feet; thence continuing along said Easterly deed boundary South 00 degrees, 06 minutes, 52 seconds West, a distance of 1320.61 feet to the point of intersection with the South line of the Northwest One-Quarter of said Tract 81; thence leaving said Easterly deed boundary North 89 degrees, 58 minutes, 27 seconds East along the South line of the Northwest One-Quarter of said Tract 81, a distance of 1213.65 feet to the center One-Quarter corner of said Tract 81; thence North 00 degrees, 03 minutes, 02 seconds West along the North-South centerline of said Tract 81, a distance of 1320.62 Feet to the North One-Quarter corner of said Tract 81, said point also being the Southeast corner of said Tract 82; thence North 00 degrees, 05 minutes, 06 seconds West along the East line of said Tract 82, a distance of 800.46 feet to the point of intersection with the South line of said Section 16; thence continuing North 00 degrees, 05 minutes, 06 seconds West along said East line of said Tract 82, a distance of 491.71 feet to the true point of beginning.

EXCEPTING THEREFROM that portion of the East One-Half of Tract 82, Township 16 South, Range 12 East, S.B.M., described as lying within a strip of land 200 feet in width, the centerline of which is the center line of Dixie No. 3 Drain, as excepted in the deed from Imperial Irrigation District, recorded October 15, 1940 in Book 559, Page 62 of Official Records.

APN: 051-270-47-01

Parcel 12:

That portion of the West One-Half of Tract 83 within Section 16, Township 16 South, Range 12 East, S.B.M., according to the Official plat thereof, being more particularly in Certificate of Compliance Recorded February 28, 1990 in Book 1643, Page 628 of Official Records, as Parcel 2, described as follows:

Commencing at the Southeast corner of said Section 16; thence South 89 degrees, 57 minutes, 00 seconds West along the South line of said Section 16 a distance of 1882.67 feet to the point of intersection with the East line of said Tract 82, from which point the Southeast corner thereof bears South 00 degrees, 05 minutes, 06 seconds East a distance of 800.46 feet; thence North 00

degrees, 05 minutes, 06 seconds West along said East line of said Tract 82 a distance of 491.71 feet; thence continuing North 00 degrees, 05 minutes, 06 seconds West along said East of said Tract 82, a distance of 28.43 feet to the Southeast corner of the West one-Half of Tract 83, said point also being the Southeast corner of that certain land conveyed by deed recorded March 9, 1965 in Book 1202, Page 800 and further conveyed by deed recorded May 21, 1969 in Book 1278, Page 817, both deeds being of Official Records of Imperial County, California; thence North 00 degrees, 09 minutes, 17 seconds West along the East line of said West One-Half of Tract 83 and deed boundary of said Book 1202, Page 800 and said Book 1278, Page 877, a distance of 160.00 feet to the Northeast corner of that certain land conveyed by deed recorded June 25, 1971 in Book 1311, Page 669 of Official Records of Imperial County, California, said point being the true point of beginning; thence North 00 degrees, 09 minutes, 17 seconds West (record North 00 degrees, 17 minutes, 58 seconds West deed recorded May 7, 1965 in Book 1206, Page 681 of Official Records of Imperial County, California), along the East line of said West One-Half of Tract 83, a distance of 135.67 feet to an angle point; thence leaving said East line South 89 degrees, 10 minutes, 44 seconds West (record South 88 degrees, 50 minutes, 00 seconds West per said Book 1206 Page 681), a distance of 20.00 feet to an angle point; thence North 03 degrees, 38 minutes, 24 seconds West (record North 03 degrees, 50 minutes, 24 seconds West per said Book 1206, Page 681), a distance of 812.73 feet to an angle point, said point being in the Southerly right of way line Interstate Highway 8; thence North 89 degrees, 57 minutes, 36 seconds West (record South 89 degrees, 48 minutes, 05 seconds West per said Book 1206, Page 681) along said Southerly right of way line, a distance of 250.65 feet to a point in said Southerly line; thence continuing North 89 degrees, 57 minutes, 36 seconds West (record South 89 degrees, 48 minutes, 05 seconds West per said Book 1206, Page 681) along said Southerly right of way line, a distance of 940.61 feet to an angle point; thence North 89 degrees, 58 minutes, 02 seconds West (record South 89 degrees, 48 minutes, 05 seconds West per said Book 1206, Page 681), along said Southerly right of way line a distance of 1047.33 feet to an angle point; thence North 89 degrees, 57 minutes, 50 seconds West (record South 89 degrees, 48 minutes, 05 seconds West per said Book 1206, Page 681), along said Southerly right of way line a distance of 81.51 feet to the point of intersection with the centerline of Dixie Drain No. 3; thence leaving said Southerly right of way line, South 04 degrees, 45 minutes, 30 seconds East, along said centerline of said Dixie Drain a distance of 576.93 feet to the beginning of a tangent 96.64 foot radius curve concave Easterly; thence Southeasterly along said centerline curve through a central angle of 17 degrees, 56 minutes, 29 seconds an arc distance of 293.30 feet to the beginning of a 580.00 foot radius compound curve concave Easterly; thence continuing Southeasterly along said centerline curve through a central angle of 24 degrees, 19 minutes, 47 seconds an arc distance of 246.29 feet to the point of tangency; thence continuing along said centerline tangent to said curve South 47 degrees, 01 minutes, 46 seconds East, a distance of 70.06 feet to the point of intersection with the South line of said West One-Half of said Tract 83; thence South 89 degrees. 58 minutes, 27 seconds East, along said South line a distance of 1866.31 feet to the Southwest corner of that certain land conveyed by deed recorded May 27, 1969, in Book 1278, Page 877 of Official Records of Imperial County, California; thence North 00 degrees, 09 minutes, 17 seconds West along the West line of said deed boundary and the West line of that certain land conveyed by deed recorded June 25, 1971 in Book 1311, Page 669 of Official Records, a distance of 160.00 feet to the Northwest corner of said Book 311, Page 669; thence South 89 degrees, 58 minutes, 27 seconds East, along the North line of said Book 1311, Page 669, a distance of 218.00 feet to the true point of beginning.

APN: 051-270-37-01

Parcel 13:

Government Lots 9 and 15 in Section 21 and Government Lots 2 and 4 in Section 28, Township 16 South, Range 12 East, S.B.M., according to the Official plat thereof.

APN: 051-300-29-01

**Parcel 14:**

The Northwest Quarter of Tract 81, and that portion of Tract 82, Township 16 South, Range 12 East, S.B.M., County of Imperial, State of California, lying East of the East line of Dixie No. 3 Drain, of Imperial Irrigation District, as said Drain was located May 17, 1949, according to the Official Plat thereof.

EXCEPTING THEREFROM that portion described as Parcel 3, of Certificate of Compliance Recorded February 28, 1990 in Book 1643, Page 628 of Official Records.

APN: 051-270-47-01

ALSO EXCEPTING THEREFROM and reserving unto the Imperial Irrigation District, its successors and assigns, a One Hundred percent (100%) interest in Parcels 1 through 14, inclusive, in all minerals, of every kind and character, either in solid or liquid form, including, without limitation, all oil, gas and hydrocarbons, all geothermal substances that might be produced from the Property, including (a) the natural heat of the earth, and the energy present in, resulting from, or created by, or which may be extracted from, the natural heat of the earth or the heat present below the surface of the earth, in whatever form such heat or energy naturally occurs; (b) all natural products of geothermal processes, including, without limitation, indigenous hot water, hot brine, steam and other fluids and gasses; (c) hot water, hot brine, steam and other fluids and gasses resulting from water or other substances being artificially introduced into the subsurface of the Property; and (d) all minerals, gasses, salts, chemicals, by-products and other substances in solution or mixed with geothermal effluent or otherwise produced from, through and across the Property, and/or from geothermal wells located in or on property outside the boundaries of the Property that have a production interval lying below a depth of five hundred (500) feet below the surface of the Property, including the reasonable use of the surface for exploration and development of such reserved minerals.

**LEGAL DESCRIPTION OF RIGHT OF WAY AND EASEMENT RESERVATIONS**

EXCEPTING THEREFROM and reserving unto the Grantor herein, an easement and right of way in the name of Imperial Irrigation District.

The purpose of said easement and right of way is for the conveyance of water, whether open and/or underground, including modification of the land to facilitate such conveyance; the construction, operation, maintenance and/or use of conveyance facilities, pipes, pump structures and the like and appurtenances thereto, as they may now exist or as they may hereafter be constructed, enlarged, modified or relocated; the transmission or distribution of energy and/or communications whether overhead and/or underground and appurtenances thereto, as they may now exist or as they may hereafter be constructed, enlarged, modified or relocated; and unobstructed pedestrian and vehicular ingress, egress and access thereto to facilitate the purposes of said easement. Any existing or prior use of said easement and right of way shall not determine or limit the extent of said easement and right of way granted herein. The Grantor shall have the right to keep the right of way free from brush, wood growth or obstructions which might interfere with use of the easement or be deemed a hazard.

Said parcels of land situated in Township 16 South, Range 12 East, S.B.M., and described as follows:

**Fern Lateral 3 Canal:**

B1. That portion of the West One-Half of Tract 83 within Section 16, being described as a portion of Parcel 2 in Certificate of Compliance Recorded February 28, 1990 in Book 1643, Page 628 of



Official Records, lying within a strip of land Fifty (50) feet in width, the center of which is the center line of the concrete lined Fern Lateral 3 Canal as now constructed.

Westside Drain:

B2. That portion of Government Lot 5 and that portion of Government Lot 4, in Section 16, lying North and West of a line which is parallel with and Sixty-Five (65) feet South and East of the center line of the Westside Drain as now constructed.

B3. That portion of Tract 107, being shown as a portion of Parcel 1 of Parcel Map M-1914, lying West of a line which is parallel with and Sixty-Five (65) feet East of the center line of the Westside Drain as now constructed.

Dixie Drain and Sump No. S-516:

B4. That portion of Government Lot 2 of Section 28, lying South of a line which is parallel with and Seventy-Five (75) feet North of the center line of the Dixie Drain as now constructed across the South boundary of the property.

Dixie Drain No. 3:

B5. That portion of Government Lots 4 and 5, Section 16; and that portion of Tracts 81, 82 and the West One-Half of Tract 83; and that portion of Government Lots 3 and 4, Section 21, lying within a strip of land One Hundred Fifty (150) feet in width, the center of which is the center line of the Dixie Drain No. 3 as now constructed.

B6. That portion of the Southeast Quarter of the Southwest Quarter of Section 21 being shown as a portion of Parcel 1 of Parcel Map M-1914; and that portion of Government Lot 9 of Section 21; and that portion of the Northeast Quarter of the Northwest Quarter and that portion of Lot 2 of Section 28, lying within a strip of land One Hundred Fifty (150) feet in width, the center of which is the center line of the Dixie Drain No. 3 as now constructed.

B7. That portion of Government Lots 4 and 7, Section 21, lying East of a line which is parallel with and Seventy-Five (75) feet West of the center line of the Dixie Drain No. 3 as now constructed.

Dixie Drain No. 3-C:

B8. That portion of Tract 81, being described as a portion of Parcel 3 in Certificate of Compliance Recorded February 28, 1990 in Book 1643, Page 628 of Official Records, lying South of a line which is parallel with and Seventy-Five (75) feet North of the center line of the Dixie Drain No. 3-C as now constructed.

Dixie Pipeline Drain No. 3-D:

B9. That portion of the Northeast Quarter of the Northwest Quarter of Section 28, lying South of a line which is parallel with and Twenty (20) feet North of the centerline of the Dixie Pipeline Drain No. 3-D as now constructed across the South boundary of the property.

Wixom Drain:

B10. That portion of the West 120 acres of Tract 54, lying East of a line which is parallel with and Forty-Five (45) feet West of the center line of the Wixom Drain as now constructed.

Energy Transmission and Distribution-Overhead and/or Underground:

B11. That portion of Tract 107 and the Southeast Quarter of the Southwest Quarter and Government Lot 10, being shown as Parcel 1 of Parcel Map M-1914, and that portion of Government Lots 9 and 15 of Section 21, lying within a strip of land Ten (10) feet in width, the center of which is the center line of a power line as now constructed along the Northern and Eastern boundaries of the parcels which are now being used as public traveled way.

B12. That portion of Government Lots 2 and 4 of Section 28, lying within a strip of land Ten (10) feet in width, the center of which is the center line of a power line as now constructed along the East boundary of the parcels which are now being used as public traveled way.

Anchor Permit:

B13. That portion of Tract 54, lying Seventeen (17) feet, more or less West of Jessup Road, and Thirty-Five (35) feet, more or less North of Diehl Road as now constructed.

Agreements:

B14. Subject to an Agreement and its conditions entered into on October 7, 1958, between Imperial Irrigation District hereinafter referred to as "District" and Laurence Lerno and Romanie Lerno, owners of those portions of Tract 107, lying within Sections 21 and 28; those portions of Tracts 82 and 83, lying West of the Dixie Drain No. 3; Lot 5 in Section 16; Lots 1, 2, 3, 4, 5, 6, 7 and 10, and the S.E. 1/4 of the S.W. 1/4 of Section 21, all in T. 16 S., R. 12 E., S.B.B. and M., hereinafter referred to as "Owner," as Recorded on October 8, 1958 in Book 1005, Page 662 of Official Records of Imperial County.

B15. Subject to an Agreement and its conditions entered into on February 7, 1963, between Imperial Irrigation District hereinafter referred to as "District" and E. F. Alves, owner of the West 120 acres of Tract 54, and that portion of Tract 295, lying North of the Westerly extension of the South line of Tract 54, T. 16 S., R. 12 E., S.B.B. and M., hereinafter referred to as "Owner," as Recorded on February 14, 1963 in Book 1137, Page 51 of Official Records of Imperial County.

**EXHIBIT C**  
**LEGAL DESCRIPTION**  
(Lerno Ranch)

Parcel 1:

Those portions of Lots 2 and 3, of Section 16, Township 16 South, Range 12 East, S.B.M.. County of Imperial, State of California, according to the Official Plat thereof lying West of a line beginning at a point 700 feet East of the Northwest corner of Lot 2; thence Southwesterly to a point in the South line of Lot 2, 240 feet East of the Southwest corner of said Lot 2; thence Southeasterly to a point in the South line of Lot 3, 400 feet, East of the Southwest corner of said Lot 3.

APN: 051-270-01-01

Parcel 2:

The East One-Half of the Northeast Quarter of Section 17, Township 16 South, Range 12 East, S.B.M., County of Imperial, State of California, according to the Official Plat thereof.

APN: 051-260-17-01

Parcel 3:

Those portions of Lots 2 and 3, Section 16, Township 16 South, Range 12 East, S.B.M., County of Imperial, State of California, according to the Official Plat thereof, described as follows:

Beginning at a point in the South line of Lot 3, which is 400 feet East of the Southwest corner of said Lot 3; thence Northwesterly on a direct line to a point in the South line of Lot 2, which is 240 feet East of the Southwest corner of said Lot 2; thence Northeasterly on a direct line to the point of intersection with a line which is the Westerly prolongation of the North line of Tract 90; thence East to the Northwest corner of said Tract 90; thence Southerly along the West line of Tract 90 to the Northeast corner of Lot 3; thence, Westerly 198 feet along the North line of said Lot 3; thence South 330 feet; thence Southeasterly on a direct line to a point in the East line of Lot 3, which is 924 feet South of the Northeast corner of Lot 3; thence Southerly along the East line of Lot 3, to the Southeast corner of said Lot 3; thence Westerly along the South line of Lot 3, to the point of beginning.

APN: 051-270-25-01

Parcel 4:

The South 264 feet of the East 330 feet of that portion of Lot 2, Section 16, in Township 16 South, Range 12 East, S.B.M., County of Imperial, State of California, according to the Official Plat thereof, lying North of Tract 90, and that portion of Lot 3, Section 16, described as follows:

Beginning at the Northeast corner of Lot 3; thence West 198 feet; thence South 330 feet; thence Southeasterly on a direct line to a point in the East line of said Lot 3, which is 924 feet South of the Northeast corner of said Lot; thence North 924 feet to the point of beginning.

APN: 051-270-23-01

Parcel 5:

Tract 90 in Township 16 South, Range 12 East, S.B.M., County of Imperial, State of California, according to the Official Plat thereof.

EXCEPTING THEREFROM that portion conveyed to the State of California in the deed Recorded May 18, 1965 in Book 1207, page 268 of Official Records.

ALSO EXCEPTING THEREFROM and reserving unto the Imperial Irrigation District, its successors and assigns, a One Hundred percent (100%) interest in Parcels 1 through 5, inclusive, in all minerals, of every kind and character, either in solid or liquid form, including, without limitation, all oil, gas and hydrocarbons, all geothermal substances that might be produced from the Property, including (a) the natural heat of the earth, and the energy present in, resulting from, or created by, or which may be extracted from, the natural heat of the earth or the heat present below the surface of the earth, in whatever form such heat or energy naturally occurs; (b) all natural products of geothermal processes, including, without limitation, indigenous hot water, hot brine, steam and other fluids and gasses; (c) hot water, hot brine, steam and other fluids and gasses resulting from water or other substances being artificially introduced into the subsurface of the Property; and (d) all minerals, gasses, salts, chemicals, by-products and other substances in solution or mixed with geothermal effluent or otherwise produced from, through and across the Property, and/or from geothermal wells located in or on property outside the boundaries of the Property that have a production interval lying below a depth of five hundred (500) feet below the surface of the Property, including the reasonable use of the surface for exploration and development of such reserved minerals.

APN: 051-270-23-01

#### LEGAL DESCRIPTION OF RIGHT OF WAY AND EASEMENT RESERVATIONS

EXCEPTING THEREFROM and reserving unto the Grantor herein, an easement and right of way in the name of Imperial Irrigation District.

The purpose of said easement and right of way is for the conveyance of water, whether open and/or underground, including modification of the land to facilitate such conveyance; the construction, operation, maintenance and/or use of conveyance facilities, pipes, pump structures and the like and appurtenances thereto, as they may now exist or as they may hereafter be constructed, enlarged, modified or relocated; the transmission or distribution of energy and/or communications whether overhead and/or underground and appurtenances thereto, as they may now exist or as they may hereafter be constructed, enlarged, modified or relocated; and unobstructed pedestrian and vehicular ingress, egress and access thereto to facilitate the purposes of said easement. Any existing or prior use of said easement and right of way shall not determine or limit the extent of said easement and right of way granted herein. The Grantor shall have the right to keep the right of way free from brush, wood growth or obstructions which might interfere with use of the easement or be deemed a hazard.

Said parcels of land situated in Township 16 South, Range 12 East, S.B.M., and described as follows:

#### Dixie Drain No. 4:

C1. That portion of Lot 2, Section 16, lying West of a line beginning at a point 700 feet East of the Northwest corner of said Lot 2; That portion of the East One-Half of the Northeast Quarter, Section 17, lying North of a line which is parallel with and Seventy (70) feet South of the center line of the Dixie Drain No. 4 as now constructed across the North side of the property.

#### Forgetmenot Canal:

C2. That portion of the East One-Half of the Northeast Quarter, Section 17, lying West of a line which is parallel with and Twenty-Five (25) feet East of the center line of the concrete-lined Forgetmenot Canal as now constructed across the West side of the property.

Forgetmenot Drain:

C3. That portion of the East One-Half of the Northeast Quarter, Section 17, and that portion of Lot 3, Section 16, lying South of a line which is parallel with and Fifty (50) feet North of the center line of the Forgetmenot Drain as now constructed across the South side of the property.

Energy Transmission and Distribution-Overhead and/or Underground:

C4. That portion of the East One-Half of the Northeast Quarter, Section 17, and that portion of Lot 3, Section 16, lying within a strip of land ten (10) feet in width, the center of which is the center line of a power line as now constructed along the North side of the public traveled road way across the South side of the property.

C5. That portion of the East One-Half of the Northeast Quarter, Section 17, and that portion of Lot 3, Section 16, lying within a strip of land ten (10) feet in width, the center of which is the center line of a power line as now constructed along the South side of the public traveled road way across the South side of the property.

C6. That portion of Tract 90, lying within a strip of land ten (10) feet in width, the center of which is the center line of a power line as now constructed along the public traveled road across the East side of the property.

Westside Drain:

C7. That portion of Lot 3, Section 16, lying East of a line which is parallel with and Forty-Five (45) feet West of the centerline of the Westside Drain as now constructed across the East side of the property.

C8. That portion of Lot 3, Section 16, lying West of a line which is parallel with and Forty-Five (45) feet East of the centerline of the Westside Drain as now constructed across the East side of the property.

C9. That portion of Tract 90, lying West of a line which is parallel with and Forty-Five (45) feet East of the center line of the Westside Drain as now constructed across the West side of the property.

Intersection of Westside Drain and Dixie Drain No. 3:

C10. Subject to a Right of Way Deed dated March 12, 1965 and Recorded on May 18, 1965 in Book 1207, Page 270 that George J. Lerno and Clemence Lerno, and Emil Lerno and Shirley Lerno grant to Imperial Irrigation District a right of way described as follows:

"That portion of Tract 90, T. 16 S., R. 12 E., S.B.M., according to United States Resurvey March 15, 1909 described as follows:

"Commencing at the Southwest corner of said Tract 90; thence along the West line of said Tract 90, N 00°24'49" W, 37.00 feet to the North line of that 37 foot Right of Way described in Deed to Imperial Water Company No. 12, recorded May 9, 1910 in Book 47, Page 390, Deeds of Imperial County; thence along said North line N 89°49'49" E, 241.05 feet to a point on the East line of that 150 foot Right of Way for Dixie Drain No. 3 as set out in the Agreement to Imperial Irrigation District recorded June 1, 1925 in Book 83, Page 270, Official Records of Imperial County, said point being the True Point of Beginning; thence along said East line N 06°53'41" W, 87.14 feet; thence

leaving said East line N 83°06'19" E, 44.18 feet; thence S 06°53'41" E, 92.35 feet to said North line of said 37 foot Right of Way; thence along said North line S 89°49'49" W, 44.49 feet to the Point of Beginning."

"Containing 0.09 acres. The bearings and distances used in the above description are on the California Coordinate System, Zone 6. Multiply all distances in the above description by .9999973 to obtain ground level distances."

Flooding Easement:

C11. Subject to a flooding easement made the 9<sup>th</sup> day of April, 1965 by and between Grantors George J. Lerno, Clemence Lerno, Emil Lerno and Shirley Lerno, and the Imperial Irrigation District, Grantee, and recorded April 19, 1965 in Book 1205, Page 470 of Official Records and described as follows:

"Grantors grant and convey to Grantee, its successors and assigns, a perpetual right and easement which may be exercised at any and all times over the West ½ of the West ½ of Tract 90; that portion of Lot 4, Section 16, lying north of the County Road; those portions of Lot 2 and 3, Section 16, described as follows: Beginning at a point in the south line of Lot 3 which is 400 feet east of the southwest corner of said Lot 3; thence northwesterly to a point in the south line of Lot 2 which is 240 feet east of the southwest corner of said Lot 2; thence northeasterly to the intersection with a line which is the westerly prolongation of the north line of Tract 90; thence east to the northwest corner of said Tract 90; thence south along the west line of Tract 90 to the southeast corner of Lot 3, Section 16; thence west along the south line of said Lot 3 to the point of beginning; all in T. 16 S. R. 12 E., S.B.B. and M.; to flow or cause or permit water to flow over and upon and to flood and/or pond water upon any part of said premises lying below the elevation of the natural ground surface of the adjacent area as the same now or may be hereafter exist on either side of and adjacent to the channel of the Westside Drain; and"

"Grantors further grant and convey to the Grantee the right to overflow, or cause to be overflowed, operate and maintain, at the sole discretion of Grantee, the said Westside Drain channel; and"

"As and for covenants running with the land herein described, Grantors further agree that Grantee shall not be liable to Grantors, their heirs, assigns, or administrators, for any damage or damages caused to the said real property or improvements, or any part thereof, or for any damage or damages to Grantors' real property or improvements, caused by (1) the sloughing of the banks on either side of and adjacent to the channel of said Westside Drain, whether due to any act or acts on the part of the Grantee or otherwise; (2) natural causes or whether caused by the Grantee in performing any powers or duties that Grantee may have under any local, state or federal law, or as custodian of the Westside Drain, or otherwise; or (3) waters in Westside Drain whether said waters be operational, storm drainage, any combination of same, or otherwise."

"As and for additional covenants running with the land hereinbefore described, Grantors further agree to hold said Grantee free and harmless from any and all damages that may result to any real and/or personal property belonging to the Grantee, whether the damage be caused by the escape of any water that Grantors may bring onto Grantors' real property, regardless of how or in what manner said water escapes therefrom or from the use made of Grantors' real property, or otherwise."

"Grantors further grant and convey to Grantee, its successors and assigns, a perpetual right and easement for access at any and all times for any purpose whatsoever in carrying out any of the functions and powers of Grantee, over and across the real property hereinbefore described."

"Any use of the rights or easements or easement, herein granted shall not determine or limit the extent of the said rights or easements."

**EXHIBIT D  
LEGAL DESCRIPTION  
(Nassif Ranch)**

**Parcel 1:**

That portion of the Northeast Quarter of the Southeast Quarter of Section 34, Township 16 South, Range 12 East, S.B.M., in an unincorporated area of the County of Imperial, State of California, according to the Official Plat thereof, lying South of the Westside Main Canal as said canal existed September 18, 1950.

EXCEPTING THEREFROM and reserving unto the Imperial Irrigation District, its successors and assigns, a One Hundred percent (100%) interest in Parcels 1 and 2, inclusive, in all minerals, of every kind and character, either in solid or liquid form, including, without limitation, all oil, gas and hydrocarbons, all geothermal substances that might be produced from the Property, including (a) the natural heat of the earth, and the energy present in, resulting from, or created by, or which may be extracted from, the natural heat of the earth or the heat present below the surface of the earth, in whatever form such heat or energy naturally occurs; (b) all natural products of geothermal processes, including, without limitation, indigenous hot water, hot brine, steam and other fluids and gasses; (c) hot water, hot brine, steam and other fluids and gasses resulting from water or other substances being artificially introduced into the subsurface of the Property; and (d) all minerals, gasses, salts, chemicals, by-products and other substances in solution or mixed with geothermal effluent or otherwise produced from, through and across the Property, and/or from geothermal wells located in or on property outside the boundaries of the Property that have a production interval lying below a depth of five hundred (500) feet below the surface of the Property, including the reasonable use of the surface for exploration and development of such reserved minerals.

APN: 051-350-11-01

**Parcel 2:**

That portion of the Northwest Quarter of the Southeast Quarter and the Northeast Quarter of the Southwest Quarter, all in Section 34, Township 16 South, Range 12 East, S.B.M., in an unincorporated area of the County of Imperial, State of California, according to the Official Plat thereof, lying South of the Westside Main Canal as said canal existed February 6, 1951.

EXCEPTING THEREFROM and reserving unto the Imperial Irrigation District, its successors and assigns, a One Hundred percent (100%) interest in Parcels 1 and 2, inclusive, in all minerals, of every kind and character, either in solid or liquid form, including, without limitation, all oil, gas and hydrocarbons, all geothermal substances that might be produced from the Property, including (a) the natural heat of the earth, and the energy present in, resulting from, or created by, or which may be extracted from, the natural heat of the earth or the heat present below the surface of the earth, in whatever form such heat or energy naturally occurs; (b) all natural products of geothermal processes, including, without limitation, indigenous hot water, hot brine, steam and other fluids and gasses; (c) hot water, hot brine, steam and other fluids and gasses resulting from water or other substances being artificially introduced into the subsurface of the Property; and (d) all minerals, gasses, salts, chemicals, by-products and other substances in solution or mixed with geothermal effluent or otherwise produced from, through and across the Property, and/or from geothermal wells located in or on property outside the boundaries of the Property that have a production interval lying below a depth of five hundred (500) feet below the surface of the Property, including the reasonable use of the surface for exploration and development of such reserved minerals.



APN: 051-350-11-01

Parcel 3:

The South One-Half of the Southeast Quarter of Section 34, Township 16 South, Range 12 East, S.B.M., in an unincorporated area of the County of Imperial, State of California, according to the Official Plat thereof.

EXCEPTED all the oil and gas in said lands, as set out in the patent from the United States of America to George O. Lien, recorded September 28, 1954 in Book 893, Page 676 of Official Records.

ALSO EXCEPTING THEREFROM and reserving unto the Imperial Irrigation District, its successors and assigns, a One Hundred percent (100%) interest in Parcels 1, 2 and 3, inclusive, in all minerals, of every kind and character, either in solid or liquid form, including, without limitation, all oil, gas and hydrocarbons, all geothermal substances that might be produced from the Property, including (a) the natural heat of the earth, and the energy present in, resulting from, or created by, or which may be extracted from, the natural heat of the earth or the heat present below the surface of the earth, in whatever form such heat or energy naturally occurs; (b) all natural products of geothermal processes, including, without limitation, indigenous hot water, hot brine, steam and other fluids and gasses; (c) hot water, hot brine, steam and other fluids and gasses resulting from water or other substances being artificially introduced into the subsurface of the Property; and (d) all minerals, gasses, salts, chemicals, by-products and other substances in solution or mixed with geothermal effluent or otherwise produced from, through and across the Property, and/or from geothermal wells located in or on property outside the boundaries of the Property that have a production interval lying below a depth of five hundred (500) feet below the surface of the Property, including the reasonable use of the surface for exploration and development of such reserved minerals; EXCLUDING however those rights reserved by the United States of America to George O. Lien, recorded September 28, 1954 in Book 893, Page 676 of Official Records.

APN: 051-350-10-01

#### LEGAL DESCRIPTION OF RIGHT OF WAY AND EASEMENT RESERVATIONS

EXCEPTING THEREFROM and reserving unto the Grantor herein, an easement and right of way in the name of Imperial Irrigation District.

The purpose of said easement and right of way is for the conveyance of water, whether open and/or underground, including modification of the land to facilitate such conveyance; the construction, operation, maintenance and/or use of conveyance facilities, pipes, pump structures and the like and appurtenances thereto, as they may now exist or as they may hereafter be constructed, enlarged, modified or relocated; the transmission or distribution of energy and/or communications whether overhead and/or underground and appurtenances thereto, as they may now exist or as they may hereafter be constructed, enlarged, modified or relocated; and unobstructed pedestrian and vehicular ingress, egress and access thereto to facilitate the purposes of said easement. Any existing or prior use of said easement and right of way shall not determine or limit the extent of said easement and right of way granted herein. The Grantor shall have the right to keep the right of way free from brush, wood growth or obstructions which might interfere with use of the easement or be deemed a hazard.

Said parcels of land situated in Township 16 South, Range 12 East, S.B.M., and described as follows:

Westside Main Canal and Energy Transmission and Distribution-Overhead and/or Underground:

D1. That portion of the Northwest Quarter of the Southeast Quarter and the Northeast Quarter of the Southwest Quarter and that portion of the Northeast Quarter of the Southeast Quarter, all in Section 34, lying South of the Westside Main Canal and North of a line which is parallel with and One Hundred Fifty (150) feet South of the center line of the Westside Main Canal as now constructed across the North side of the property as recorded in Right of Way deed on March 7, 1951 in Book 807, Page 183 of Official Records of Imperial County.

**RECORDING REQUESTED BY**

Philip J. Krum, Jr.  
Attorney at Law  
506 W. Aten Road  
Imperial, CA 92251

Recorded in Official Records, Imperial County

9/20/2011

3:45 PM

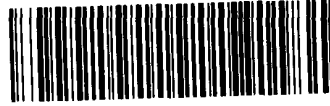
AG

**Chuck Storey**  
County Clerk / Recorder

**P Public**

**Doc#: 2011 - 022716**

**Titles: 1 Pages: 3**



Fees	21.00
Taxes	0.00
Other	0.00
<b>PAID</b>	<b>\$21.00</b>

**MAIL TAX STATEMENTS TO AND WHEN RECORDED MAIL TO:**

Mary N. Fitzurka, Trustee  
1205 South 19th Street  
El Centro, CA 92243

APN: 051-310-049, 051-310-050, 051-310-056, 051-310-057 and 051-310-059

SPACE ABOVE THIS LINE FOR RECORDER'S USE

**QUITCLAIM DEED**

**THE UNDERSIGNED GRANTOR(s) DECLARE(s) This deed conveys property without consideration and is exempt under R. & T. C. section 11930**

DOCUMENTARY TRANSFER TAX IS \$ -0-

- (X) unincorporated area ( ) City of \_\_\_\_\_
- ( ) computed on full value of interest or property conveyed, or
- ( ) computed on full value less value of liens or encumbrances remaining at time of sale, and

**FOR NO CONSIDERATION**, Mary N. Fitzurka, Trustee pursuant to Trust dated August 22, 1990,

**hereby REMISES, RELEASES AND FOREVER QUITCLAIMS** to Mary N. Fitzurka, a married woman as her sole and separate property

the trust's interest in the following described property in the County of Imperial, State of California:  
For complete legal description see attached Exhibit "A" hereto and made a part hereof.

Dated: Sep 12, 2011

*Mary N. Fitzurka, Trustee*  
Mary N. Fitzurka, Trustee

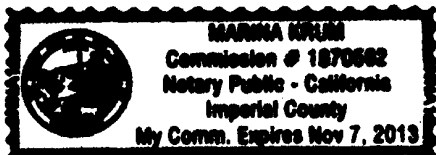
STATE OF CALIFORNIA    )  
  )ss.  
COUNTY OF IMPERIAL    )

On September 12, 2011, before me, Marina Krum, Notary Public for the State of California, personally appeared Mary N. Fitzurka, who proved to me on the basis of satisfactory evidence to be the person(s) whose name (s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature (s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY of PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

*Marina Krum*  
NOTARY PUBLIC



PARCEL 1:

THAT PORTION OF TRACT 46, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, INDICATED AS PARCEL "C" ON MAP RECORDED IN BOOK 10, PAGE 28 OF LICENSED SURVEY MAPS IN THE OFFICE OF THE COUNTY RECORDER OF IMPERIAL COUNTY.

PARCEL 2:

THAT PORTION OF TRACT 289, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, INDICATED AS PARCEL "D" ON MAP RECORDED IN BOOK 10, PAGE 28 OF LICENSED SURVEY MAPS IN THE OFFICE OF THE COUNTY RECORDER OF IMPERIAL COUNTY.

PARCEL 3:

THAT PORTION OF THE SOUTH 330 FEET OF THE EAST 80 ACRES OF TRACT 51, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, LYING EAST OF THE CENTER LINE OF FIG DRAIN.

PARCEL 4:

THAT PORTION OF TRACT 46, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, INDICATED AS PARCEL "A" ON MAP RECORDED IN BOOK 10, PAGE 28 OF LICENSED SURVEY MAPS IN THE OFFICE OF THE COUNTY RECORDER OF IMPERIAL COUNTY.

PARCEL 5:

THAT PORTION OF TRACT 289, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, INDICATED AS PARCELS "B" AND "E" ON MAP RECORDED IN BOOK 10, PAGE 28 OF LICENSED SURVEY MAPS IN THE OFFICE OF THE COUNTY RECORDER OF IMPERIAL COUNTY.

PARCEL 6:

THE WEST 80 ACRES OF TRACT 51, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THAT PORTION THEREOF DEEDED TO O.W. HOBBS, ET UX., IN DEED RECORDED MARCH 26, 1970 IN BOOK 1290, PAGE 886 OF OFFICIAL RECORDS.

PARCEL 7:

THAT PORTION OF TRACT 45-A, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, LYING WEST OF THE CENTER LINE OF FIG DRAIN AND NORTHWEST OF THE CENTER LINE OF DIEHL DRAIN, AS SAID DRAINS WERE LOCATED ON JANUARY 21, 1964.

PARCEL 8:

THE EAST HALF OF THE SOUTH HALF OF TRACT 45-A; AND THAT PORTION OF THE NORTH HALF OF TRACT 45-A LYING EAST OF THE CENTER LINE OF FIG DRAIN, ALL IN TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL 9:

THAT PORTION OF THE EAST 80 ACRES OF TRACT 51, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, LYING WEST OF THE CENTER LINE OF FIG DRAIN.

EXCEPTING THEREFROM THAT PORTION THEREOF DEEDED TO O.W. HOBBS, ET UX., IN DEED RECORDED MARCH 26, 1970 IN BOOK 1290, PAGE 886 OF OFFICIAL RECORDS.

RECORDING REQUESTED BY:  
FIRST AMERICAN TITLE

Recorded in Official Records, Imperial County

7/12/2011

1:47 PM  
IV

**Chuck Storey**  
County Clerk / Recorder

P Public

Doc#: 2011-016360

Titles: 1 Pages: 6



Fees	22.00
Taxes	0.00
Other	0.00
PAID	\$22.00

RECORDING REQUESTED BY

WHEN RECORDED MAIL TO

Reed Smith LLP  
1901 Avenue of the Stars, Suite 700  
Los Angeles, California 90067  
Attn: Stephane D. Nguyen

442831

### MEMORANDUM OF PURCHASE AND SALE AGREEMENT

By this Memorandum, the undersigned seller (“**Seller**”) evidences that it has agreed to sell to SOUTHWEST LAND HOLDINGS LLC, a California limited liability company (“**Buyer**”), and Buyer agrees to purchase from Seller, certain real property situated in the County of Imperial, State of California, as more particularly described on Schedule 1 attached hereto (the “**Property**”) and made a part hereof, on terms and conditions set forth in that certain Purchase and Sale Agreement and Joint Escrow Instructions (the “**Agreement**”) dated as of June 8, 2010, by and between Seller and Buyer.

The parties have executed and recorded this instrument for the purpose of imparting notice to all third parties of the Agreement.

This Memorandum and the Agreement shall bind and inure to the benefit of the parties and their respective heirs, successors, and assigns.

This Memorandum and the Agreement are governed by California law.


This Memorandum may be executed in any number of counterparts, all of which together shall constitute one instrument.

*[remainder of page intentionally left blank – signature page follows]*

IN WITNESS WHEREOF, Seller and Buyer have executed this Memorandum as of the dates of the notary acknowledgements below.

**SELLER:**

MCVEY PROPERTIES, L.L.C.,  
*an Arizona limited liability company*

  
\_\_\_\_\_  
By: Joshua J. Meyer  
Its: Manager

**BUYER:**

SOUTHWEST LAND HOLDINGS LLC,  
*a California limited liability company*

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_

IN WITNESS WHEREOF, Seller and Buyer have executed this Memorandum as of the dates of the notary acknowledgements below.

**SELLER:**

MCVEY PROPERTIES, L.L.C.,  
*an Arizona limited liability company*

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_

**BUYER:**

SOUTHWEST LAND HOLDINGS LLC,  
*a California limited liability company*

  
\_\_\_\_\_  
By: Robert Looper  
Its: Manager



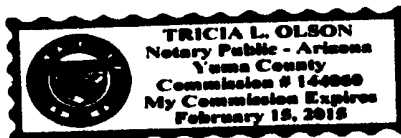
State of ~~California~~ Arizona  
County of Yuma )

On June 29, 2011, before me, TRICIA L. OLSON, a notary public for said county and said state, personally appeared Joshua J. Meyer who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of ~~California~~ Arizona that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

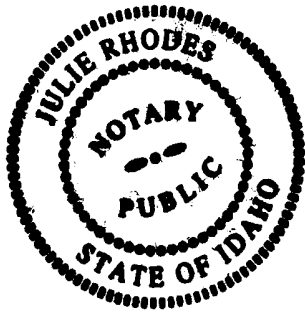
Signature Tricia L. Olson (Seal)



STATE OF IDAHO )  
  : ss.  
County of Ada        )

On this 30 day of June, 2011, before me, the undersigned Notary Public in and for said State, personally appeared Robert Looper, known or identified to me, to be a Manager of Southwest Land Holdings, LLC, a California limited liability company, and the person that executed the within instrument on behalf of said limited liability company, and acknowledged to me that such Manager executed the same in said limited liability company's name.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.



Julie Rhodes  
Notary Public for Idaho  
Residing at Boise, Id  
My commission expires 10/22/2011

JULIE RHODES  
Notary Public - State of Idaho  
Residing in Boise  
My Commission Expires October 22, 2011

## **Schedule 1**

### **Legal Description of Property**

Real property in the unincorporated area of the County of Imperial, State of California, described as follows:

**PARCEL NO. 1:**

TRACTS 290 AND 291, TOWNSHIP 16 SOUTH , RANGE 12 EAST, S.B.M., ACCORDING TO U. S. GOVERNMENT PLAT OF RE-SURVEY APPROVED MAY 2, 1913 AND ON FILE IN THE U. S. LAND OFFICE AT LOS ANGELES, CALIFORNIA - EXCEPT THE NORTH 30 FEET OF SAID TRACTS 290 AND 291, AND EXCEPT THE SOUTH 30 FEET OF SAID TRACT 290, EXCEPT THAT PORTION OF SAID TRACT 291 LYING SOUTH AND WEST OF THE FIG DRAIN.

**PARCEL NO. 2:**

THE PORTION OF TRACT 292, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., ACCORDING TO U. S. GOVERNMENT PLAT OF RE-SURVEY APPROVED MAY 2, 1913 AND ON FILE IN THE U. S. LAND OFFICE AT LOS ANGELES, CALIFORNIA, LYING NORTH AND EAST OF FIG DRAIN.

**PARCEL NO. 3:**

THAT PORTION OF TRACT 294, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., ACCORDING TO U. S. GOVERNMENT PLAT OF RE-SURVEY APPROVED MAY 2, 1913 AND ON FILE IN THE DISTRICT LAND OFFICE, LYING WEST OF THE WEST LINE OF STATE HIGHWAY NO. 98 AS SAID HIGHWAY WAS LOCATED ON FEBRUARY 1, 1965.

APN: 051-360-032-000

yes

APR 15 2005 01:13:35

BOOK 2422 PAGE 1731



RECORDING REQUESTED BY  
First American Title Company

AND WHEN RECORDED MAIL TO:  
McVey Properties  
11593 S. Fortuna  
Yuma, AZ 85367

DOLORES PROVENCIO  
BOOK 2422 PAGE 1731  
COUNTY RECORDER

\*05 APR 15 AM 9 02

OFFICIAL RECORDS  
IMPERIAL COUNTY, CA

RG	4
RF	8
MC	T
IX	T
TF	T
NL	T
FY	30
FE	10
MS	

Source Above This Line for Recorder's Use Only

A.P.N.: 051-360-32-01

File No.: IEC-1773790 (JDM)

### GRANT DEED

The Undersigned Grantor(s) Declare(s): DOCUMENTARY TRANSFER TAX \$ 557.48 CITY TRANSFER TAX \$0.00;

- computed on the consideration or full value of property conveyed, OR
- computed on the consideration or full value less value of liens and/or encumbrances remaining at time of sale,
- unincorporated area;  City of Imperial County, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, Douglass Adams Cook, Co-trustees for the Ludwig Family Trust, established December 11, 1975

hereby GRANTS to McVey Properties, LLC

the following described property in the City of Imperial County, County of Imperial, State of California:

**PARCEL NO. 1:**

TRACTS 290 AND 291, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., ACCORDING TO U. S. GOVERNMENT PLAT OF RE-SURVEY APPROVED MAY 2, 1913 AND ON FILE IN THE U. S. LAND OFFICE AT LOS ANGELES, CALIFORNIA - EXCEPT THE NORTH 30 FEET OF SAID TRACTS 290 AND 291, AND EXCEPT THE SOUTH 30 FEET OF SAID TRACT 290, EXCEPT THAT PORTION OF SAID TRACT 291 LYING SOUTH AND WEST OF THE FIG DRAIN.

**PARCEL NO. 2:**

THE PORTION OF TRACT 292, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., ACCORDING TO U. S. GOVERNMENT PLAT OF RE-SURVEY APPROVED MAY 2, 1913 AND ON FILE IN THE U. S. LAND OFFICE AT LOS ANGELES, CALIFORNIA, LYING NORTH AND EAST OF FIG DRAIN.

**PARCEL NO. 3:**

THAT PORTION OF TRACT 294, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., ACCORDING TO U. S. GOVERNMENT PLAT OF RE-SURVEY APPROVED MAY 2, 1913 AND ON FILE IN THE DISTRICT LAND OFFICE, LYING WEST OF THE WEST LINE OF STATE HIGHWAY NO. 98 AS SAID HIGHWAY WAS LOCATED ON FEBRUARY 1, 1965.

Dated: 02-28-05

Mail Tax Statements To: SAME AS ABOVE

Douglas Adams Cook, Co-trustees for the  
Ludwig Family Trust, established December  
11, 1975

Douglas Adams Cook, TRF  
Douglas Adams Cook, Co-Trustee

STATE OF CALIFORNIA )  
COUNTY OF ORANGE ) ss.

On MARCH 30 2006 before  
me, ANNETTE GORBEA, NOTARY PUBLIC personally  
appeared DOUGLAS ADAMS COOK  
personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose  
name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same  
in his/her/their authorized capacity(ies) and that his/her/their signature(s) on the instrument the person(s) or the  
entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

*This area for official  
notarial seal*

Signature

Annette Gorbea

My Commission Expires: JUNE 1<sup>st</sup> 2005



Notary Name: ANNETTE GORBEA  
Notary Registration Number: 1308753

Notary Phone: 714-671-3023  
County of Principal Place of Business: ORANGE

**Dolores Provencio**  
County Clerk / Recorder

1/20/2009  
3:18 PM  
AG

**RECORDING REQUESTED BY**  
**CHICAGO TITLE COMPANY** 

CT Chicago Title

Doc#: 2009-003048

Titles:	1	Pages:	5
Fees			29.00
Taxes			1,174.80
Other			0.00
PAID			61,203.86



When recorded mail to:  
Tierra Partners, L.L.C.  
4563 E. 30<sup>th</sup> Place  
Yuma, AZ 85365

**GRANT DEED**

The undersigned Grantors declare  
Documentary Transfer Tax is \$1,174.80

APN: 051-350-014-000  
051-330-019-000

unincorporated area  
 computed on the full value of the interest or property conveyed, or is  
\_\_\_\_\_ computed on the full value less the value of liens or encumbrances remaining at  
the time of said, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

BROOKFIELD CALIFORNIA LAND HOLDINGS, LLC, a Delaware limited  
liability company

hereby GRANT to

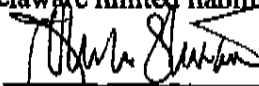
TIERRA PARTNERS, L.L.C., an Arizona limited liability company

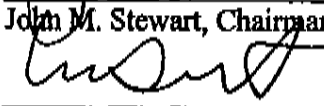
the following described property in the County of Imperial, State of California:

SEE LEGAL DESCRIPTION ATTACHED HERETO

DATED this 8<sup>th</sup> day of January, 2009.

BROOKFIELD CALIFORNIA LAND HOLDINGS, LLC,  
a Delaware limited liability company

By:   
John M. Stewart, Chairman

By:   
William B. Seith, Asst. Secretary

**REAL TAX STATEMENT AS DIRECTED ABOVE**

4.05

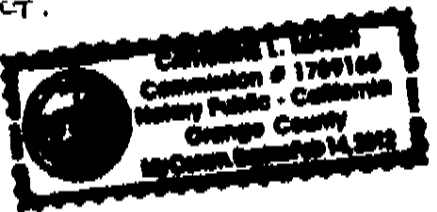
STATE OF CALIFORNIA )  
 ) ss.  
 County of ORANGE )

On JANUARY 13, 2019 before me, the undersigned, a Notary Public in and for said County and State, personally appeared ~~XX~~ WILLIAM B. SEXTON AND JOHN H. SEXTON (or provided to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FORE GOING PARAGRAPH IS TRUE AND CORRECT.

WITNESS my hand and official seal.

*[Handwritten Signature]*  
 \_\_\_\_\_  
 Notary Public



STATE OF CALIFORNIA )  
 ) ss.  
 County of )

On \_\_\_\_\_ before me, the undersigned, a Notary Public in and for said County and State, personally appeared \_\_\_\_\_ personally known to me (or provided to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

\_\_\_\_\_  
 Notary Public

## DESCRIPTION

### PARCEL 1:

THAT PORTION OF THE EAST HALF OF THE WEST HALF, AND THE WEST HALF OF THE EAST HALF OF SECTION 34, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, LYING NORTH OF THE CENTER LINE OF WESTSIDE MAIN CANAL AS IT EXISTED ON MARCH 28, 1950.

EXCEPT 1.03 ACRES IN THE SOUTHEAST CORNER, BEING THAT CERTAIN PARCEL OF LAND MARKED "ZANHERO SITE" ON RECORD OF SURVEY MAP ON FILE IN BOOK 1, PAGE 6.

ALSO EXCEPTING THEREFROM FORTY-NINE PERCENT (49%) INTEREST IN ALL MINERALS, OF EVERY KIND AND CHARACTER, EITHER IN SOLID OR LIQUID FORM, INCLUDING, WITHOUT LIMITATION, ALL OIL, GAS AND HYDROCARBONS, ALL GEOTHERMAL SUBSTANCES THAT MIGHT BE PRODUCED FROM THE PROPERTY, INCLUDING (A) THE NATURAL GEOTHERMAL ENERGY AND NATURAL HEAT OF THE EARTH, AND THE ENERGY PRESENT IN, RESULTING FROM, OR CREATED BY, OR WHICH MAY BE EXTRACTED FROM, THE NATURAL HEAT OF THE EARTH OR THE HEAT PRESENT BELOW THE SURFACE OF THE EARTH, IN WHATEVER FORM SUCH HEAT OR ENERGY NATURALLY OCCURS; (B) ALL NATURAL PRODUCTS OF GEOTHERMAL PROCESSES, INCLUDING, WITHOUT LIMITATION, INDIGENOUS HOT WATER, HOT BRINE, STEAM AND OTHER FLUIDS AND GASSES; (C) HOT WATER, HOT BRINE, STEAM, AND OTHER FLUIDS AND GASSES RESULTING FROM WATER OR OTHER SUBSTANCES BEING ARTIFICIALLY INTRODUCED INTO THE SUBSURFACE OF THE LAND; AND (D) ALL MINERAL, GASSES, SALTS, CHEMICALS, BY-PRODUCTS AND OTHER SUBSTANCES IN SOLUTION OR MIXED WITH GEOTHERMAL EFFLUENT OR OTHERWISE PRODUCED FROM, THROUGH AND ACROSS THE PROPERTY, AND/OR FROM GEOTHERMAL WELLS LOCATED IN OR ON PROPERTY OUTSIDE THE BOUNDARIES OF THE PROPERTY THAT HAVE A PRODUCTION INTERVAL LYING BELOW A DEPTH OF FIVE HUNDRED (500) FEET BELOW THE SURFACE OF THE LAND, INCLUDING THE REASONABLE USE OF THE SURFACE FOR EXPLORATION AND DEVELOPMENT OF SUCH RESERVED MINERALS, AS RESERVED BY THE IMPERIAL IRRIGATION DISTRICT IN DEED RECORDED JULY 5, 2006 AS FILE NO. 2006-031777 OF OFFICIAL RECORDS.

### PARCEL 2:

THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 27, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

ALSO A RIGHT OF WAY FOR AN IRRIGATION DITCH 15 FEET WIDE OVER THE SOUTH SIDE OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 27, RUNNING FROM GATE 1/A TO FERN CANAL, WESTERLY TO THE WEST LINE OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 27.

ALSO EXCEPTING THEREFROM FORTY-NINE PERCENT (49%) INTEREST IN ALL MINERALS, OF EVERY KIND AND CHARACTER, EITHER IN SOLID OR LIQUID FORM, INCLUDING, WITHOUT LIMITATION, ALL OIL, GAS AND HYDROCARBONS, ALL GEOTHERMAL SUBSTANCES THAT MIGHT BE PRODUCED FROM THE PROPERTY, INCLUDING (A) THE NATURAL GEOTHERMAL ENERGY AND NATURAL HEAT OF THE EARTH, AND THE ENERGY PRESENT IN, RESULTING FROM, OR CREATED BY, OR WHICH MAY BE EXTRACTED FROM, THE NATURAL HEAT OF THE EARTH OR THE HEAT PRESENT BELOW THE SURFACE OF THE EARTH, IN WHATEVER FORM SUCH HEAT OR ENERGY NATURALLY OCCURS; (B) ALL NATURAL PRODUCTS OF GEOTHERMAL PROCESSES, INCLUDING, WITHOUT LIMITATION, INDIGENOUS HOT WATER, HOT BRINE, STEAM AND OTHER FLUIDS AND GASSES; (C) HOT WATER, HOT BRINE, STEAM, AND OTHER FLUIDS AND GASSES RESULTING FROM WATER OR OTHER SUBSTANCES BEING ARTIFICIALLY INTRODUCED INTO THE SUBSURFACE



## DESCRIPTION

OF THE LAND; AND (D) ALL MINERAL, GASSES, SALTS, CHEMICALS, BY-PRODUCTS AND OTHER SUBSTANCES IN SOLUTION OR MIXED WITH GEOTHERMAL EFFLUENT OR OTHERWISE PRODUCED FROM, THROUGH AND ACROSS THE PROPERTY, AND/OR FROM GEOTHERMAL WELLS LOCATED IN OR ON PROPERTY OUTSIDE THE BOUNDARIES OF THE PROPERTY THAT HAVE A PRODUCTION INTERVAL LYING BELOW A DEPTH OF FIVE HUNDRED (500) FEET BELOW THE SURFACE OF THE LAND, INCLUDING THE REASONABLE USE OF THE SURFACE FOR EXPLORATION AND DEVELOPMENT OF SUCH RESERVED MINERALS, AS RESERVED BY THE IMPERIAL IRRIGATION DISTRICT IN DEED RECORDED JULY 5, 2006 AS FILE NO. 2006-031777 OF OFFICIAL RECORDS.

PARCEL 3:

TRACT 295, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPT THE MOST SOUTHERLY 14 ACRES THEREOF, AND THE NORTH 40 ACRES THEREOF

ALSO EXCEPTING THEREFROM FORTY-NINE PERCENT (49%) INTEREST IN ALL MINERALS, OF EVERY KIND AND CHARACTER, EITHER IN SOLID OR LIQUID FORM, INCLUDING, WITHOUT LIMITATION, ALL OIL, GAS AND HYDROCARBONS, ALL GEOTHERMAL SUBSTANCES THAT MIGHT BE PRODUCED FROM THE PROPERTY, INCLUDING (A) THE NATURAL GEOTHERMAL ENERGY AND NATURAL HEAT OF THE EARTH, AND THE ENERGY PRESENT IN, RESULTING FROM, OR CREATED BY, OR WHICH MAY BE EXTRACTED FROM, THE NATURAL HEAT OF THE EARTH OR THE HEAT PRESENT BELOW THE SURFACE OF THE EARTH, IN WHATEVER FORM SUCH HEAT OR ENERGY NATURALLY OCCURS; (B) ALL NATURAL PRODUCTS OF GEOTHERMAL PROCESSES, INCLUDING, WITHOUT LIMITATION, INDIGENOUS HOT WATER, HOT BRINE, STEAM AND OTHER FLUIDS AND GASSES; (C) HOT WATER, HOT BRINE, STEAM, AND OTHER FLUIDS AND GASSES RESULTING FROM WATER OR OTHER SUBSTANCES BEING ARTIFICIALLY INTRODUCED INTO THE SUBSURFACE OF THE LAND; AND (D) ALL MINERAL, GASSES, SALTS, CHEMICALS, BY-PRODUCTS AND OTHER SUBSTANCES IN SOLUTION OR MIXED WITH GEOTHERMAL EFFLUENT OR OTHERWISE PRODUCED FROM, THROUGH AND ACROSS THE PROPERTY, AND/OR FROM GEOTHERMAL WELLS LOCATED IN OR ON PROPERTY OUTSIDE THE BOUNDARIES OF THE PROPERTY THAT HAVE A PRODUCTION INTERVAL LYING BELOW A DEPTH OF FIVE HUNDRED (500) FEET BELOW THE SURFACE OF THE LAND, INCLUDING THE REASONABLE USE OF THE SURFACE FOR EXPLORATION AND DEVELOPMENT OF SUCH RESERVED MINERALS, AS RESERVED BY THE IMPERIAL IRRIGATION DISTRICT IN DEED RECORDED JULY 5, 2006 AS FILE NO. 2006-031777 OF OFFICIAL RECORDS.

**ILLEGIBLE NOTARY SEAL DECLARATION  
(GOVERNMENT CODE 27361.7)**

**I certify under penalty of perjury that the notary seal on the document to which this statement is attached reads as follows:**

**Name of Notary:** CATHERINE L. MARSH

**Date Commission Expires:** FEB 14, 2012

**Principal Office in:** IMPERIAL County

**Notary Commission Number:** 1789165

**Manufacturer Identification Number:** NNA1

**Place of Execution of this Declaration:** EL CENTRO

**Date:** 1/20/09

**Chicago Title Company**

Stacy Bauer

**RECORDING REQUESTED BY:**

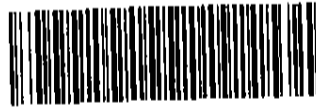
Chicago Title Company  
Order No.: 970019709

**Dolores Provencio**  
County Clerk / Recorder

**CT Chicago Title**

**When Recorded Mail Document To:**  
Tierra Partners, LLC, an Arizona Limited  
Liability Company  
c/o Tierra Financial Services, 2921B South Kish  
Avenue  
Yuma, AZ 85365

**Doc#:** 2010-022834



<b>Titles:</b>	1	<b>Pages:</b>	7
Fees			45.00
Taxes			0.00
Other			0.00
<b>PAID</b>			<b>\$45.00</b>

APN/Parcel ID(s): 051-350-014-000  
051-330-019-000

SPACE ABOVE THIS LINE FOR RECORDER'S USE

**QUITCLAIM DEED**

**The undersigned grantor(s) declare(s)**

- This transfer is exempt from the documentary transfer tax. R & T 11130 \*
- The documentary transfer tax is \$ \_\_\_\_\_ and is computed on:
  - the full value of the interest or property conveyed.
  - the full value less the liens or encumbrances remaining thereon at the time of sale.

The property is located in  an Unincorporated area of Imperial County.

\*This document is being recorded to release the Memorandum of Purchase Agreement recorded on July 28, 2009, as Instrument No. 2009-022710 in the Office of the County Recorder of Imperial County, California.

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, LightSource Renewables, LLC, a California Limited Liability Company

hereby remises, releases and quitclaims to Tierra Partners, LLC, an Arizona Limited Liability Company

the following described real property in County of Imperial, State of California:

For APN/Parcel ID(s): 051-350-014-000 and 051-330-019-000

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF.

IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

Dated: August 25, 2010

LightSource Renewables, LLC, a California Limited Liability Company

BY:

**MAIL TAX STATEMENTS AS DIRECTED ABOVE**

ACKNOWLEDGMENT PAGE TO BE ATTACHED TO THE FOLLOWING DOCUMENT:  
Quitclaim Deed

State of CALIFORNIA

County of SAN DIEGO <sup>nd.</sup>

On AUG 27, 2010 before me, ~~PETER~~ HEATHER DODDS, <sup>NOTARY PUBLIC</sup> personally appeared

PETER FISHER

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of CALIFORNIA that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.  
Heather Dodds (Seal)  
Signature



# EXHIBIT A

## PARCEL 1:

THAT PORTION OF THE EAST HALF OF THE WEST HALF, AND THE WEST HALF OF THE EAST HALF OF SECTION 34, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, LYING NORTH OF THE CENTER LINE OF WESTSIDE MAIN CANAL AS IT EXISTED ON MARCH 28, 1950.

EXCEPT 1.03 ACRES IN THE SOUTHEAST CORNER, BEING THAT CERTAIN PARCEL OF LAND MARKED "ZANHERO SITE" ON RECORD OF SURVEY MAP ON FILE IN BOOK 1, PAGE 6.

ALSO EXCEPTING THEREFROM FORTY-NINE PERCENT (49%) INTEREST IN ALL MINERALS, OF EVERY KIND AND CHARACTER, EITHER IN SOLID OR LIQUID FORM, INCLUDING, WITHOUT LIMITATION, ALL OIL, GAS AND HYDROCARBONS, ALL GEOTHERMAL SUBSTANCES THAT MIGHT BE PRODUCED FROM THE PROPERTY, INCLUDING (A) THE NATURAL GEOTHERMAL ENERGY AND NATURAL HEAT OF THE EARTH, AND THE ENERGY PRESENT IN, RESULTING FROM, OR CREATED BY, OR WHICH MAY BE EXTRACTED FROM, THE NATURAL HEAT OF THE EARTH OR THE HEAT PRESENT BELOW THE SURFACE OF THE EARTH, IN WHATEVER FORM SUCH HEAT OR ENERGY NATURALLY OCCURS; (B) ALL NATURAL PRODUCTS OF GEOTHERMAL PROCESSES, INCLUDING, WITHOUT LIMITATION, INDIGENOUS HOT WATER, HOT BRINE, STEAM AND OTHER FLUIDS AND GASSES; (C) HOT WATER, HOT BRINE, STEAM, AND OTHER FLUIDS AND GASSES RESULTING FROM WATER OR OTHER SUBSTANCES BEING ARTIFICIALLY INTRODUCED INTO THE SUBSURFACE OF THE LAND; AND (D) ALL MINERAL, GASSES, SALTS, CHEMICALS, BY-PRODUCTS AND OTHER SUBSTANCES IN SOLUTION OR MIXED WITH GEOTHERMAL EFFLUENT OR OTHERWISE PRODUCED FROM, THROUGH AND ACROSS THE PROPERTY, AND/OR FROM GEOTHERMAL WELLS LOCATED IN OR ON PROPERTY OUTSIDE THE BOUNDARIES OF THE PROPERTY THAT HAVE A PRODUCTION INTERVAL LYING BELOW A DEPTH OF FIVE HUNDRED (500) FEET BELOW THE SURFACE OF THE LAND, INCLUDING THE REASONABLE USE OF THE SURFACE FOR EXPLORATION AND DEVELOPMENT OF SUCH RESERVED MINERALS, AS RESERVED BY THE IMPERIAL IRRIGATION DISTRICT IN DEED RECORDED JULY 5, 2006 AS FILE NO. 2006-031777 OF OFFICIAL RECORDS.

## PARCEL 2:

THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 27, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

ALSO A RIGHT OF WAY FOR AN IRRIGATION DITCH 15 FEET WIDE OVER THE SOUTH SIDE OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 27, RUNNING FROM GATE 1/A TO FERN CANAL, WESTERLY TO THE WEST LINE OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 27.

ALSO EXCEPTING THEREFROM FORTY-NINE PERCENT (49%) INTEREST IN ALL MINERALS, OF EVERY KIND AND CHARACTER, EITHER IN SOLID OR LIQUID FORM, INCLUDING, WITHOUT LIMITATION, ALL OIL, GAS AND HYDROCARBONS, ALL GEOTHERMAL SUBSTANCES THAT MIGHT BE PRODUCED FROM THE PROPERTY, INCLUDING (A) THE NATURAL GEOTHERMAL ENERGY AND NATURAL HEAT OF THE EARTH, AND THE ENERGY PRESENT IN, RESULTING FROM, OR CREATED BY, OR WHICH MAY BE EXTRACTED FROM, THE NATURAL HEAT OF THE EARTH OR THE HEAT PRESENT BELOW THE SURFACE OF THE EARTH, IN WHATEVER FORM SUCH HEAT OR ENERGY NATURALLY OCCURS; (B) ALL NATURAL PRODUCTS OF GEOTHERMAL PROCESSES, INCLUDING, WITHOUT LIMITATION, INDIGENOUS HOT WATER, HOT BRINE, STEAM AND OTHER FLUIDS AND GASSES; (C) HOT WATER, HOT BRINE, STEAM, AND OTHER FLUIDS AND GASSES RESULTING FROM WATER OR OTHER SUBSTANCES BEING ARTIFICIALLY INTRODUCED INTO THE SUBSURFACE OF THE LAND; AND (D) ALL MINERAL, GASSES, SALTS, CHEMICALS, BY-PRODUCTS AND OTHER SUBSTANCES IN SOLUTION OR MIXED WITH GEOTHERMAL EFFLUENT OR OTHERWISE PRODUCED FROM, THROUGH AND ACROSS THE

PROPERTY, AND/OR FROM GEOTHERMAL WELLS LOCATED IN OR ON PROPERTY OUTSIDE THE BOUNDARIES OF THE PROPERTY THAT HAVE A PRODUCTION INTERVAL LYING BELOW A DEPTH OF FIVE HUNDRED (500) FEET BELOW THE SURFACE OF THE LAND, INCLUDING THE REASONABLE USE OF THE SURFACE FOR EXPLORATION AND DEVELOPMENT OF SUCH RESERVED MINERALS, AS RESERVED BY THE IMPERIAL IRRIGATION DISTRICT IN DEED RECORDED JULY 5, 2006 AS FILE NO. 2006-031777 OF OFFICIAL RECORDS.

PARCEL 3:

TRACT 295, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPT THE MOST SOUTHERLY 14 ACRES THEREOF, AND THE NORTH 40 ACRES THEREOF.

ALSO EXCEPTING THEREFROM FORTY-NINE PERCENT (49%) INTEREST IN ALL MINERALS, OF EVERY KIND AND CHARACTER, EITHER IN SOLID OR LIQUID FORM, INCLUDING, WITHOUT LIMITATION, ALL OIL, GAS AND HYDROCARBONS, ALL GEOTHERMAL SUBSTANCES THAT MIGHT BE PRODUCED FROM THE PROPERTY, INCLUDING (A) THE NATURAL GEOTHERMAL ENERGY AND NATURAL HEAT OF THE EARTH, AND THE ENERGY PRESENT IN, RESULTING FROM, OR CREATED BY, OR WHICH MAY BE EXTRACTED FROM, THE NATURAL HEAT OF THE EARTH OR THE HEAT PRESENT BELOW THE SURFACE OF THE EARTH, IN WHATEVER FORM SUCH HEAT OR ENERGY NATURALLY OCCURS; (B) ALL NATURAL PRODUCTS OF GEOTHERMAL PROCESSES, INCLUDING, WITHOUT LIMITATION, INDIGENOUS HOT WATER, HOT BRINE, STEAM AND OTHER FLUIDS AND GASSES; (C) HOT WATER, HOT BRINE, STEAM, AND OTHER FLUIDS AND GASSES RESULTING FROM WATER OR OTHER SUBSTANCES BEING ARTIFICIALLY INTRODUCED INTO THE SUBSURFACE OF THE LAND; AND (D) ALL MINERAL, GASSES, SALTS, CHEMICALS, BY-PRODUCTS AND OTHER SUBSTANCES IN SOLUTION OR MIXED WITH GEOTHERMAL EFFLUENT OR OTHERWISE PRODUCED FROM, THROUGH AND ACROSS THE PROPERTY, AND/OR FROM GEOTHERMAL WELLS LOCATED IN OR ON PROPERTY OUTSIDE THE BOUNDARIES OF THE PROPERTY THAT HAVE A PRODUCTION INTERVAL LYING BELOW A DEPTH OF FIVE HUNDRED (500) FEET BELOW THE SURFACE OF THE LAND, INCLUDING THE REASONABLE USE OF THE SURFACE FOR EXPLORATION AND DEVELOPMENT OF SUCH RESERVED MINERALS, AS RESERVED BY THE IMPERIAL IRRIGATION DISTRICT IN DEED RECORDED JULY 5, 2006 AS FILE NO. 2006-031777 OF OFFICIAL RECORDS.

Date: 9-13-2010

ATTACHMENT TO ILLEGIBLE ORIGINAL DOCUMENT  
WITH CERTIFICATION UNDER PENALTY OF PERJURY

I certify under penalty of perjury that the foregoing is a true and correct copy as to form of the original to which it is attached.

CHICAGO TITLE

By: 

El Centro, California

**RECORDING REQUESTED BY:**

Chicago Title Company  
Order No.: 970019709

**When Recorded Mail Document To:**

Tierra Partners, LLC, an Arizona Limited  
Liability Company  
c/o Tierra Financial Services, 2921B South Kish  
Avenue  
Yuma, AZ 85365

APN/Parcel ID(s): 051-350-014-000  
051-330-019-000

SPACE ABOVE THIS LINE FOR RECORDER'S USE

**QUITCLAIM DEED**

**The undersigned grantor(s) declare(s)**

- This transfer is exempt from the documentary transfer tax. R & T 11930 "
- The documentary transfer tax is \$ \_\_\_\_\_ and is computed on:
  - the full value of the interest or property conveyed.
  - the full value less the liens or encumbrances remaining thereon at the time of sale.

The property is located in  an Unincorporated area of Imperial County.

\*This document is being recorded to release the Memorandum of Purchase Agreement recorded on July 28, 2009, as Instrument No. 2009-022710 in the Office of the County Recorder of Imperial County, California.

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, LightSource Renewables, LLC, a California Limited Liability Company

herby remises, releases and quitclaims to Tierra Partners, LLC, an Arizona Limited Liability Company

the following described real property in County of Imperial, State of California:

For APN/Parcel ID(s): 051-350-014-000 and 051-330-019-000

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF.

IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

Dated: August 26, 2010

LightSource Renewables, LLC, a California Limited Liability Company

BY: \_\_\_\_\_

**MAIL TAX STATEMENTS AS DIRECTED ABOVE**



ACKNOWLEDGMENT PAGE TO BE ATTACHED TO THE FOLLOWING DOCUMENT:  
Quitclaim Deed

State of \_\_\_\_\_

County of \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_, personally  
appeared

\_\_\_\_\_ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and ecknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of \_\_\_\_\_ that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

\_\_\_\_\_  
Signature (Seal)

RECORDING REQUESTED BY  
First American Title Ins., Co.  
AND WHEN RECORDED MAIL TO:  
Jerry Preece, Jr.  
965 Aurora Drive  
El Centro, CA 92243



RECORDED  
OFFICIAL RECORDS  
IMPERIAL COUNTY, CA  
BOOK 2134 PAGE 1453  
2002 JUL 12 PM 3 36  
DOLORES PROMENCIO  
COUNTY RECORDER

TLS	36
RG	3
RF	1
MC	1
EX	1
IF	
NL	
PY	
PR	20
3410	

A.P.N.: 051-260-21,22,29 & 30

Order No.: 12239-51

Space Above This Line for Recorder's Use Only

Escrow No.: 12239-JM

**GRANT DEED**

THE UNDERSIGNED GRANTOR(S) DECLARE(S) THAT DOCUMENTARY TRANSFER TAX IS: COUNTY \$363.00.  
 computed on full value of property conveyed, or  
 computed on full value less value of liens or encumbrances remaining at time of sale.  
 unincorporated area;  City of \_\_, and

FOR A VALUABLE CONSIDERATION, Receipt of which is hereby acknowledged,  
Huon Van Vo and Nga Tuyet Chau, Husband and Wife as Joint Tenants

hereby GRANT(S) to

J.R. PREECE, INC., A CALIFORNIA CORPORATION  
the following described property in the City of \_\_, County of Imperial State of California:

The Southwest Quarter of Section 17, and East half of the Southeast Quarter of Section 18, Township 16 South, Range 12 East, S.B.M., in an unincorporated area of the County of Imperial, State of California, according to the Official Plat thereof.

Excepting therefrom, that portion thereof condemned by the State of California for freeway purposes and as described in that certian Final Order of Condemnation recorded April 27, 1967 in Book 1244, Page 745 of Official Records.

Huon Van Vo  
Huon Van Vo

Nga Tuyet Chau  
Nga Tuyet Chau

Document Date: May 20, 2002

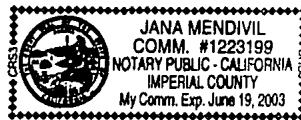
STATE OF CALIFORNIA )  
COUNTY OF Imperial )

On 7/18/02 before me, Jana Mendivil NOTARY PUBLIC  
personally appeared Huon Van Vo and Nga Tuyet Chau

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument

WITNESS my hand and official seal.

Signature Jana Mendivil



Mail Tax Statements to: SAME AS ABOVE or Address Noted Below

RECORDING REQUESTED BY  
CHICAGO TITLE COMPANY  
AND WHEN RECORDED MAIL TO

J.R. PREECE, INC. and  
MELVIN JERRY PREECE, JR.  
2396 WEST VAUGHN ROAD  
EL CENTRO, CALIFORNIA 92243

Recorded in Official Records, Imperial County

2/05/2008  
2:00 PM  
IV

**Dolores Provencio**  
County Clerk / Recorder

CT Chicago Title

Doc#: 2008-003292

Titles: 1 Pages: 3



Fees 32.00  
Taxes 0.00  
Other 0.00  
PAID \$32.00

Escrow No. 57000030 - G35  
Order No. 57000030 - G09

SPACE ABOVE THIS LINE FOR RECORDER'S USE

# QUITCLAIM DEED

Assessor's Parcel No:  
051-260-33-01

3  
1  
PR

THE UNDERSIGNED GRANTOR(S) DECLARE(S)

DOCUMENTARY TRANSFER TAX IS \$none - R&T 11911 \*

unincorporated area  City of

computed on the full value of the interest or property conveyed, or is

computed on the full value less the value of liens or encumbrances remaining at time of sale, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,  
BROOKFIELD CALIFORNIA LAND HOLDINGS LLC, a Delaware Limited Liability Company

hereby REMISE, RELEASE AND FOREVER QUITCLAIM to  
J.R. PREECE, INC., A CALIFORNIA CORPORATION, and MELVIN JERRY PREECE, JR., AN  
UNMARRIED MAN

the following described real property in the  
County of IMPERIAL, State of California:

\*This document is being recorded to relinquish any and all interest in and to that  
certain Memorandum of Option dated October 18, 2005 and recorded January 9, 2006 as  
Instrument No. 2006-01049 in the office of the County Recorder of Imperial County,

LEGAL DESCRIPTION ATTACHED HERETO AND MADE A PART HEREOF BY REFERENCE

Dated December 3, 2007

**EXHIBIT "A"**

BROOKFIELD CALIFORNIA LAND HOLDINGS LLC,  
a Delaware Limited Liability Company

STATE OF CALIFORNIA  
COUNTY OF Orange } SS.

On December 10, 2007 before me,

Catherine L. Marsh

a Notary Public in and for said County and State, personally appeared

John M. Stewart

BY [Signature] (CEO)  
John M. Stewart, CEO

BY \_\_\_\_\_

personally known to me (or proved to me on the basis of satisfactory  
evidence) to be the person(s) whose name(s) is/are subscribed to the  
within instrument and acknowledged to me that he/she/they executed the  
same in his/her/their authorized capacity(ies), and that by his/her/their  
signature(s) on the instrument the person(s), or the entity upon behalf of  
which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

[Signature]  
Signature of Notary



FOR NOTARY SEAL OR STAMP

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE: IF NO PARTY SO SHOWN, MAIL AS DIRECTED ABOVE  
SAME AS ABOVE

Name

Street Address

City, State & Zip

LEGAL DESCRIPTION EXHIBIT

EXHIBIT "A"

California.

PARCEL 1:

THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 18, AND THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 19, ALL IN TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, SHOWN AND DESIGNATED AS PARCEL 2 OF PARCEL MAP NO. M-918 ON FILE IN BOOK 3, PAGE 87 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF IMPERIAL COUNTY.

PARCEL 2:

THE SOUTHWEST QUARTER OF SECTION 17, AND THE EAST HALF OF THE SOUTHEAST QUARTER OF SECTION 18, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THAT PORTION THEREOF CONDEMNED BY THE STATE OF CALIFORNIA FOR FREEWAY PURPOSES AND AS DESCRIBED IN THAT CERTAIN FINAL ORDER OF CONDEMNATION RECORDED APRIL 27, 1967 IN BOOK 1244, PAGE 745 OF OFFICIAL RECORDS.

PARCEL 3:

THE EAST HALF OF THE NORTHWEST QUARTER AND THE WEST HALF OF THE NORTHEAST QUARTER OF SECTION 17, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 18, AND THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 19, ALL IN TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, SHOWN AND DESIGNATED AS PARCEL 2 OF PARCEL MAP NO. M-918 ON FILE IN BOOK 3, PAGE 87 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF IMPERIAL COUNTY.

PARCEL 4:

THE SOUTH HALF OF THE NORTHEAST QUARTER AND THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF LYING WITHIN Tract 107.

PARCEL 5:

THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER AND THAT PART OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 20, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, BEING ALL EXCEPT THAT PORTION LYING SOUTH AND WEST OF THE FOXGLOVE NO. 10 DELIVERY DITCH AND THE NORTH TOE OF THE FOXGLOVE CANAL, ALL BEING A PORTION OF TRACT 107, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M.

PARCEL 6:

LEGAL DESCRIPTION EXHIBIT EXHIBIT "A"

THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 22 AND THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 27, ALL IN TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL 7:

THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 21, AND THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 28, ALL IN TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL 8:

THE NORTH 40 ACRES OF TRACT 53, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL 9:

TRACT 54, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THE WEST 120 ACRES THEREOF.

PARCEL 10:

THE SOUTHEAST QUARTER OF TRACT 55, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

RECORDING REQUESTED BY  
CHICAGO TITLE COMPANY  
AND WHEN RECORDED MAIL TO

JERRY PREECE, JR.  
2396 WEST VAUGHN ROAD  
EL CENTRO, CALIFORNIA  
92243

Recorded in Official Records, Imperial County

12/01/2008  
2:00 PM  
AG

Dolores Provencio  
County Clerk / Recorder  
CT, Chicago Title

Doc#: 2008-033880

Titles: 1 Pages: 2  
Fees 20.00  
Taxes 528.00  
Other 0.00  
PAID \$548.00



Escrow No. 870019108 - G04  
Order No. 870019108 - G09

SPACE ABOVE THIS LINE FOR RECORDER'S USE

# GRANT DEED

Assessor's Parcel No.  
051-290-014-000  
051-260-031-000

THE UNDERSIGNED GRANTOR(S) DECLARE(S)  
DOCUMENTARY TRANSFER TAX IS \$528.00

- unincorporated area  City of
- computed on the full value of the interest or property conveyed, or is
- computed on the full value less the value of liens or encumbrances remaining at time of sale, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,  
HEIDI L. KUHN, TRUSTEE OF THE JAMES E. KUHN MARITAL DEDUCTION TRUST, AS TO AN  
UNDIVIDED 50% INTEREST, AND HEIDI L. KUHN, TRUSTEE OF THE HEIDI L. AND JAMES E. KUHN  
TRUST, AS TO AN UNDIVIDED 50% INTEREST

hereby GRANT(S) to  
JERRY PREECE, JR., AN UNMARRIED MAN

the following described real property in the  
County of IMPERIAL, State of California:  
LEGAL DESCRIPTION ATTACHED HERETO AND MADE A PART HEREOF BY REFERENCE

Dated October 10, 2008

STATE OF CALIFORNIA  
COUNTY OF SAN DIEGO } SS.

On October 27, 2008 before me,

Lanh Tran, Notary Public  
personally appeared  
HEIDI L. KUHN

*Heidi L. Kuhn, Trustee*  
HEIDI L. KUHN, TRUSTEE

*Heidi L. Kuhn, Trustee*  
HEIDI L. KUHN, TRUSTEE

who proved to me on the basis of satisfactory evidence to be the person(s)  
whose name(s) is/are subscribed to the within instrument and  
acknowledged to me that he/she/they executed the same in his/her/their  
authorized capacity(ies) and that by his/her/their signature(s) on the  
instrument the person(s), or the entity upon behalf of which the person(s)  
acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of  
California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.  
*[Signature]*  
Signature of Notary

March 19, 11  
Date My Commission Expires



FOR NOTARY SEAL OR STAMP

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE: IF NO PARTY SO SHOWN, MAIL AS DIRECTED ABOVE  
SAME AS ABOVE

Name Street Address City, State & Zip

**LEGAL DESCRIPTION EXHIBIT**

PARCEL 1:

THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SECTION 17, AND LOTS 1, AND 2, IN SECTION 20, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA BY DEED RECORDED AUGUST 23, 1965 IN BOOK 1213, PAGE 822 OF OFFICIAL RECORDS.

PARCEL 2:

THAT PART OF TRACT 107, LYING WITHIN THE NORTH HALF OF THE NORTHEAST QUARTER OF SECTION 20, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING FROM SAID PARCELS 1 AND 2: AN UNDIVIDED ONE HALF INTEREST IN AND TO ALL OIL, GAS AND OTHER HYDROCARBON SUBSTANCES LYING BELOW A DEPTH OF 600 FEET BENEATH THE SURFACE OF SAID LAND, WITHOUT, ANY RIGHT OR POWER TO ENTER UPON, USE OR POSSESS ANY PART OF THE SURFACE THEREOF OR ANY PART OF THE SUBSURFACE THEREOF AT A DEPTH OF LESS THAN SAID 600 FEET, AS RESERVED BY MAURICE M. WEIKEL AND LORRAINE WEIKEL, HUSBAND AND WIFE, IN THAT CERTAIN DEED RECORDED JUNE 6, 1963 IN BOOK 1149, PAGE 495, OFFICIAL RECORDS OF IMPERIAL COUNTY.

PARCEL 3:

THAT PART OF THAT PORTION OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 17, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SAID NORTH HALF OF THE SOUTHEAST QUARTER OF SAID SECTION 17; THENCE ALONG THE FOLLOWING NUMBERED COURSES: (1) ALONG THE SOUTH LINE OF SAID NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 17, SOUTH 89°44'26 WEST, 603.58 FEET; (2) LEAVING SAID SOUTH LINE, NORTH 74°45'23" EAST, 562.62 FEET TO THE WEST BOUNDARY OF THAT RELINQUISHMENT TO THE COUNTY OF IMPERIAL RECORDED AUGUST 14, 1969 IN BOOK 1282, PAGE 431, OFFICIAL RECORDS OF IMPERIAL COUNTY; (3) ALONG SAID WEST BOUNDARY SOUTH 0°17'44" EAST, 119.47 FEET; (4) ALONG THE SOUTH BOUNDARY OF SAID RELINQUISHMENT, NORTH 89°44'26" EAST, 60.00 FEET; (5) SOUTH 0°17'44" EAST, 26.00 FEET TO THE POINT OF BEGINNING.

RECORDING REQUESTED BY:

Commonwealth Land Title

AND WHEN RECORDED MAIL TO:

J.R. Procca, Inc. a California  
965 Aurora Drive  
El Centro, CA 92243

DELEGED PROXY

COUNTY RECORDER

BOOK 1971 PAGE 725

'99 APR 8 AM 9 08

OFFICIAL RECORDS  
IMPERIAL COUNTY, CA

TL	89
RD	9
RF	2
MC	1
IX	1
TF	1
NL	1
PY	1
PR	20

THIS SPACE RESERVED FOR RECORDER ONLY  
Gov. Code 27361.6

DOCUMENT TITLE (S): Grant Deed



# Commonwealth

COMMONWEALTH LAND TITLE COMPANY

THIS PAGE IS ADDED TO PROVIDE ADEQUATE SPACE FOR RECORDING INFORMATION  
(ADDITIONAL RECORDING FEE(S) APPLY)



Recording Requested by:  
Commonwealth Land Title Insurance  
Company

WHEN RECORDED MAIL TO:  
J.R. Preco, Inc., a California Corporation  
965 Aurora Drive  
El Centro, CA 92243

**GRANT DEED**

The undersigned Grantor(s) declare(s) that the DOCUMENTARY TRANSFER  
TAX IS: \$ 140.80 County # \_\_\_\_\_ City \_\_\_\_\_  
 Computed on the consideration or value of property conveyed; OR  
 Computed on the consideration or value less of encumbrances  
remaining at time of sale.  
COMMONWEALTH LAND TITLE Commonwealth

APN: 031-300-00

US-300-008

JPN:

UNINCORPORATED

TITLE NO.:

ESCROW NO: 132396M

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

Mary K. Hatton

hereby GRANT(S) to

J.R. Preco, Inc., a California Corporation

all the real property situated in the \_\_\_\_\_ County of Imperial, State of California, described as:

The Northwest Quarter of the Northwest quarter of Section 27 and the Southwest quarter of the Southwest quarter of Section 22  
all in Township 15 South, Range 12 East, S.B.M., according to the official plat thereof.

Dated: February 11, 1999

Mary K. Hatton  
Mary K. Hatton

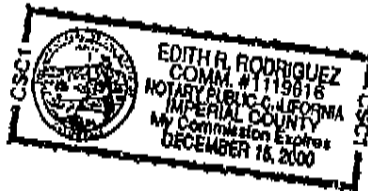
STATE OF CALIFORNIA  
COUNTY OF Imperial } as

On 2/12/99 before me Edith R. Rodriguez

a Notary Public  
personally appeared

Mary K. Hatton

personally known to me or proved to me on this basis of  
satisfactory evidence to be the person(s) whose name(s)  
is/are subscribed to the within instrument and acknowledged  
to me that he/she/they executed the same in his/her/their  
authorized capacity(ies), and that by his/her/their  
signature(s) on the instrument the person(s), or the entity  
upon behalf of which the person(s) acted, executed the  
instrument.



WITNESS my hand and official seal.

Signature Edith R. Rodriguez

MAIL TAX

(This area for official notarial seal)

STATEMENTS TO: J.R. Preco, Inc., a California Corporation, 965 Aurora Drive, El Centro, CA 92243

RECORDING REQUESTED BY:  
Commonwealth Land Title  
AND WHEN RECORDED MAIL TO:

J.R. Preece, Inc. a California  
965 Aurora Drive  
El Centro, CA 92243

99008303

BOOK 1972 PAGE 632

DOLORES PROVENCIO

COUNTY RECORDER

BOOK 1972 PAGE 632

'99 APR 16 AM 9 09

OFFICIAL RECORDS  
IMPERIAL COUNTY, CA

TLS	20
RO	5
RF	5
MC	
IX	
TF	
NL	
BY	
PR	50

THIS SPACE RESERVED FOR RECORDER ONLY  
Gov. Code 27361.6

DOCUMENT TITLE (S): Grant Deed



# Commonwealth

COMMONWEALTH LAND TITLE COMPANY

THIS PAGE IS ADDED TO PROVIDE ADEQUATE SPACE FOR RECORDING INFORMATION  
(ADDITIONAL RECORDING FEE(S) APPLY)

Recording Requested by:  
Commonwealth Land Title Insurance  
Company

BOOK 1972 PAGE 622

WHEN RECORDED MAIL TO:  
J.R. Procca, Inc.,

**GRANT DEED**

APN: 051 511 86 01  
JPN: 051 300 05 01 UNINCORPORATED  
TITLE NO.:  
ESCROW NO: 132397M

The undersigned Grantor(s) declare(s) that the DOCUMENTARY TRANSFER  
TAX IS: \$ 177.10 County 9 City  
 Computed on the consideration or value of property conveyed; OR  
 Computed on the consideration or value less or encumbrances  
remaining at time of sale.  
Commonwealth Land Title

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,  
Troy G. Haggard and F. Pauline Haggard  
hereby GRANT(S) to

J.R. Procca, Inc., a California Corporation

all the real property situated in the , County of Imperial, State of California, described as:

Parcel 1:

The North 40 acres of Tract 53, Township 16 South, Range 12 East, S.B.M., County of Imperial, State of California, according to the Official plat thereof.

Parcel 2:

Tract 54, Township 16 South, Range 12 East, S.B.M., County of Imperial, State of California, according to the official plat thereof.

Parcel 3: EXCEPT The West 120 Acres of said Tract 54.

The Southeast quarter of Tract 55, Township 16 South, Range 12 East, S.B.M., County of Imperial County, State of California, according to the official plat thereof.



Dated: February 10, 1999

STATE OF CALIFORNIA  
COUNTY OF Imperial Yes  
On 2/19/99 before me TERESA M. SMELGER

Troy G. Haggard  
Troy G. Haggard  
F. Pauline Haggard  
F. Pauline Haggard

personally appeared Troy G. Haggard And  
F. Pauline Haggard

personally known to me or shown to me on this basis of satisfactory evidence to be the person(s) whose name(s) is/were subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.  
Signature TERESA M. SMELGER



MAIL TAX  
STATEMENTS TO: SAME AS ABOVE

(This area for official notarial seal)

RECORDING REQUESTED BY

AND WHEN RECORDED MAIL THIS DEED AND, UNLESS OTHERWISE SHOWN BELOW, MAIL TAX STATEMENT TO:

NAME: Melvin Jerry Preece Jr.  
ADDRESS: 965 Aurora Drive  
El Centro, CA 92243  
CITY, STATE & ZIP CODE  
TITLE ORDER NO. RECORD NO.

RECORDED  
OFFICIAL RECORDS  
IMPERIAL COUNTY, CA  
BOOK 2284 PAGE 102  
2004 MAR 2 PM 1 05  
COLORES PROVENCIO  
COUNTY RECORDER

TLS	70
RG	7
RF	2
MC	7
IX	7
TP	7
NL	
PY	
PR	

SPACE ABOVE THIS LINE FOR RECORDER'S USE

QUITCLAIM DEED

DOCUMENTARY TRANSFER TAX \$ 0.00

computed on full value of property conveyed, plus  
 computed on full value less liens and encumbrances remaining at time of sale.

*Melvin Jerry Preece Jr.*  
 Signature of Declarant or Agent Determining Tax Firm Name

Troy Lee Preece aka Troy Lee Mason  
 the undersigned grantor(s), for a valuable consideration, receipt of which is hereby acknowledged, do hereby remise, release and forever quitclaim to Melvin Jerry Preece Jr.  
 the following described real property in the City of El Centro County of Imperial State of CA

SE 1/4 of SE 1/4 SEC 21 T 16S R 12E  
 NE 1/4 of NE 1/4 SEC 28

Assessor's parcel No. 051-300-09-01  
 Executed on September 10, 2002 at National City, California  
Troy L. Preece  
Troy L. Mason

STATE OF California  
 COUNTY OF San Diego  
 On Sept. 10, 2002 before me, Lisa Rose Reynolds

personally appeared Troy Preece personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.  
*Lisa Rose Reynolds*  
 SIGNATURE OF NOTARY



CAPACITY CLAIMED BY SIGNER(S)  
 INDIVIDUAL(S)  
 CORPORATE OFFICER(S)  
 PARTNER(S)  
 ATTORNEY IN FACT  
 TRUSTEE(S)  
 GUARDIAN/CONSERVATOR  
 OTHER:  
 OTHER IS REPRESENTING:  
 Name of Person(s) or Entity:

MAIL TAX STATEMENTS TO: Melvin Jerry Preece Jr.  
965 Aurora Drive El Centro, CA 92243

Before you use this form, fill in all blanks, and make whatever changes are appropriate and necessary to your particular transaction. Consult a lawyer if you have the form's honesty for your purpose and use. Wolcotts makes no representation or warranty, express or implied, with respect to the marketability or fitness of this form for an intended use or purpose.

WOLCOTT'S FORM 790 ©1994 WOLCOTT'S FORMS, INC.  
 QUITCLAIM DEED Rev. 3-94b (price class 3A)



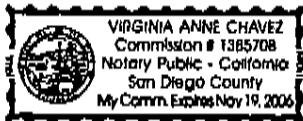
CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California }  
County of San Diego } ss.

On July 21st before me, Virginia Anne Chavez Notary  
personally appeared Tray Lee Proece also Tray Lee Mason

personally known to me  
 proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.  
Virginia Anne Chavez  
Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Quitclaim Deed

Document Date: 9/10/2002 Number of Pages: 2

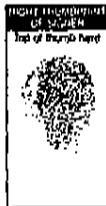
Signer(s) Other Than Named Above: None (including substituted signers)

Capacity(ies) Claimed by Signer

Signer's Name: Tray Lee Proece aka Tray Lee Mason

- Individual
- Corporate Officer — Title(s): \_\_\_\_\_
- Partner — Limited  General
- Attorney-in-Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_



8/25/2008  
2:24 PM  
DP

RECORDING REQUESTED BY:

PHILIP J. KRUM, JR., ESQ.

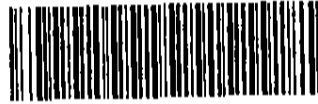
WHEN RECORDED RETURN TO:

1221 State Street  
El Centro, CA 92243

**Dolores Provencio**  
County Clerk / Recorder

P Public

Doc#: 2006-041068



Titles: 1	Pages: 3
Fees	12.00
Taxes	0.00
Other	0.00
PAID	\$12.00

**ORDER APPOINTING SUCCESSOR TRUSTEE**

3  
1

**MAIL TAX STATEMENTS TO:**

Mary Fitzurka  
1205 S. 19th Street  
El Centro, CA 92243

F U I L R D  
M. BAAS  
AUG 09 2006

CLERK SUPERIOR COURT  
SAN DIEGO COUNTY CA

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8 IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA  
9 IN AND FOR THE COUNTY OF SAN DIEGO  
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11 Trust created under the Will of ) Case No.: 106350  
12 JAMES WILLIAM ENGLAND, )  
13 Deceased. ) **ORDER APPOINTING SUCCESSOR**  
14 ) **TRUSTEE**  
15 ) [Probate Code Sections 17200(b)(10),  
16 ) 15643 (b)]  
17 )  
18 ) Date: August 1, 2006  
19 ) Time: 9:30 a.m.  
20 ) Department: Probate  
21 ) Judge: William H. Kronberger, Jr.

22 The petition of Mary Fitzurka beneficiary of the James W. England Trust under  
23 the will of the above named decedent and pursuant to an order of distribution of the  
24 decedent's estate dated February 18, 1976 (the "Trust") was duly presented to this  
25 Court.

26 On proof made to the satisfaction of the Court, the Court finds that the allegations  
27 of the petition are true; that the former trustee, Ova England died on July 3, 2005  
28 leaving a vacancy in the office of trustee; that there are compelling circumstances  
pursuant to Probate Code section 15602 (b) for the appointment of Mary Fitzurka as

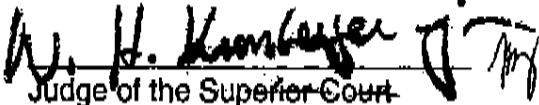
1 Successor Trustee without bond; that all notices of hearing have been given as required  
2 by law; and, good cause appearing, grants the petition as follows:

3 IT IS ORDERED that:

4 1. Mary Fitzurka is hereby appointed as Successor Trustee of the Trust to  
5 serve without bond; and

6 2. All sureties for the former trustee, Ova England are hereby released from  
7 all liability hereto.

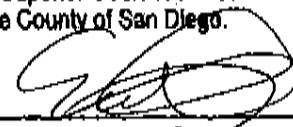
8  
9 Dated: AUG 09 2006

  
Judge of the Superior Court  
WILLIAM H. KRONBERGER, JR.

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25 The foregoing instrument is a full, true and correct  
copy of the original on file in this office.

26 Attest: AUG 18 2006

27 Clerk of the Superior Court of the State of California,  
in and for the County of San Diego.

28 By  Deputy  
Gine Holmanson



RECORDING REQUESTED BY  
and RETURN TO:

RONALD L. BVALSTAD  
ATTORNEY AT LAW  
CASA DE ORO PROFESSIONAL BUILDING  
9528 CAMPO ROAD, SUITE "O"  
SPRING VALLEY, CALIFORNIA 92077  
TELEPHONE 488-0197

(SPACE BELOW FOR FILING STAMP ONLY)

FILED  
FEB 18 1976

K. J. ZUMWALT, Clerk

BY \_\_\_\_\_  
DEPUTY

Attorney for Petitioner

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF SAN DIEGO

In the matter of the Estate of	)	NO. 106350
	)	ORDER SETTLING FIRST AND
JAMES WILLIAM ENGLAND	)	FINAL ACCOUNT; DECREE OF
	)	DISTRIBUTION ; ORDER
Deceased	)	APPOINTING SUCCESSOR
	)	TRUSTEE; ATTORNEY FEES AND
	)	TRUSTEE'S BOND

OVA ENGLAND as Executrix of the Last Will and Testament of JAMES WILLIAM ENGLAND, deceased, having filed herein a full account and report of her administration of said estate, which said account was for a final settlement, and having with said account filed a petition for the final distribution of said estate together with a petition to appoint a Trustee after declaration by the named Trustee and these petitions coming on regularly to be heard on January 30th, 1976, notice thereof having been given as required by law, the court after hearing the evidence, and finding that all the allegations of the petition as amended are true; that the account is settled showing real property and cash on hand in the sum of \$131,868.34; that the property of said estate is the separate property of the decedent, and that the inheritance tax due herein has been paid, and all Federal Estate

RECORDER'S MEMO:  
POOR RECORD IS DUE TO  
QUALITY OF ORIGINAL DOCUMENT

1 Taxes have been paid and the proration of both the Federal and  
2 State taxes is approved as prayed for, and, further, the Court  
3 finds that the Trustee named under the Will has declined to act  
4 and the Court is satisfied that the law requires that a Trustee  
5 be appointed,

6 IT IS ORDERED AND ADJUDGED AS FOLLOWS:

7 1. The administration of the estate is brought to a  
8 close and that said account and report be in all respects approved.

9 2. That due Notice to Creditors of said decedent has  
10 been given.

11 3. All acts and proceedings of the Executrix related to  
12 this petition are ratified, confirmed and approved as set forth  
13 in this order.

14 4. All California inheritance taxes have been paid and  
15 receipts are on file herein.

16 5. The Federal Estate Taxes have been paid and these  
17 taxes are prorated 1/3 to the Petitioner, OVA ENGLAND, and 2/3 to  
18 the estate.

19 6. The Executrix is directed to pay to RONALD L. SVALSTAD  
20 the attorney for the estate, attorney fees in the sum of  
21 \$3,358.00.

22 7. That OVA ENGLAND is entitled to payment for  
23 Executrix fees in the sum of \$3,358.00 together with reimburse-  
24 ment for monies advanced to the estate in the sum of \$1,700.54.  
25 That the estate may be distributed to the Trustee without the  
26 payment of these monies conditioned upon the Executrix receiving  
27 a promisory note from the Trustee for payment of these monies over  
28 a two year period.

1           8. The whole of said estate is the decedent's separate  
2 property.

3           9. Decedent died testate, and, pursuant to the Last  
4 Will and Testament, the whole of said estate is to be distributed  
5 as follows:

6                   "My separate Property described as follows, I will,  
7 devise and bequeath unto Bank of America National Trust and  
8 Savings Association, a National banking association, in TRUST,  
9 to hold, manage and distribute as hereinafter set forth."

10           Bank of America has declined to act as such Trustee; it  
11 is therefore ordered that OVA ENGLAND be appointed Trustee under  
12 the trust set forth in the Will of said decedent, to fill the  
13 vacancy caused by the declination, further that before distribution  
14 to said Trustee, the Trustee file with the Court bond in the sum  
15 of \$10,000.00, in the form required by law.

16           10. The property of said estate, hereinafter described,  
17 together with any other property belonging to the estate whether  
18 described herein or not, be distributed to OVA ENGLAND, AS  
19 TRUSTEE, pursuant to the terms of the Last Will and Testament of  
20 JAMES WILLIAM ENGLAND.

21                                   DESCRIPTION

22           Cash -- \$1,868.34

23           Parcel A -- That part of Tract Two Hundred Ninty  
24 Three (293), Township Sixteen (16) South, Range Twelve  
25 (12) East, S.B.M., according to United States Government  
26 Supplemental Plat of Resurvey approved May 3, 1913 and  
on file in the United States Land Office at Los Angeles,  
California, lying North of County Road as now constructed  
across said Tract.

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Parcel B:

Parcel B<sup>1</sup> - The West half (W 1/2) of Tract Forty-one B (41-B), in Township Sixteen (16) South, Range Twelve (12) East, S.B.M., according to Plat of United States Resurvey approved August 14, 1915.

Parcel B<sup>2</sup> - That portion of Tract 47, Township 16 S South, Range 12 East, S.B.M., lying West of Highway, EXCEPTING therefrom the North 990 feet thereof.

DATED: FEB 18 1976

GILBERT HARELSON

JUDGE OF SUPERIOR COURT

The foregoing instrument is a full, true and correct copy of the original on file in this office.

FEB 24 1976

ROBERT A. ZUMWALT,

Attest  
County Clerk and Clerk of the Superior Court of the State of California, and for the County of Imperial.

*Donna Stevenson*  
Deputy

DONNA STEVENSON

34

JOHN W. KENNERSON  
COUNTY RECORDER

MAR 1 11 29 AM '76

BOOK 1384 PAGE 939  
OFFICIAL RECORDS  
IMPERIAL COUNTY, CALIF.

FEE  
\$9.00

Recording Requested By:  
First American Title  
Nat'l Comm'l Services

**NCS - 347648-SD**

Recorded in Official Records, Imperial County

12/15/2008  
2:00 PM  
IV

**Dolores Provencio**  
County Clerk / Recorder

**TCS TITLE COURT SERVICES**

Recording requested by and when  
recorded mail to:

Rabley Holdings, Inc.  
c/o Sempra Energy  
101 Ash Street  
San Diego, CA 29101  
Attention: Marie Lewis

Doc#: **2008-035129**

Titles: 1 Pages: 7



Fees	35.00
Taxes	** Conf **
Other	0.00
PAID	\$35.00

Mail tax statements to:

Rabley Holdings, Inc.  
c/o Sempra Energy  
101 Ash Street  
San Diego, CA 29101  
Attention: Marie Lewis

The space above this line reserved for County Recorder's use

APN 051-350-010-000  
APN 051-350-011-000

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OTT  
SM

**GRANT DEED**

**DOCUMENTARY TRANSFER  
TAX DECLARATION FILED**

In accordance with Section 11932 of the California Revenue and Taxation Code, Grantor (as defined below) has declared the amount of transfer tax due in a separate statement that is not being recorded with this Grant Deed.

FOR GOOD AND VALUABLE CONSIDERATION, RECEIPT AND SUFFICIENCY OF WHICH ARE HEREBY ACKNOWLEDGED, IMPERIAL 1585, LLC, a Nevada limited liability company ("Grantor"), hereby grants to RABLEY HOLDINGS, INC., a Delaware corporation ("Grantee"), that certain land located in Imperial County, California, as more particularly described in Exhibit A attached hereto and incorporated by this reference (the "Land"), together with all of the following to the extent owned by Grantor: (a) all improvements and fixtures located on the Land (collectively, the "Improvements"), and (b) all rights, privileges and easements appurtenant to the Land, including but not limited to (A) all development rights, air rights, water, water rights and water stock relating to the Land, (B) all rights to any land lying in the bed of any existing dedicated street, road or alley adjoining the Land and to all strips and gores adjoining the Land, (C) any other easements, rights-of-way or appurtenances used in connection with the beneficial use and enjoyment of the Land, and (D) all rights to oil, mineral, gas and other hydrocarbon or geothermal substances, subsurface storage rights and other subsurface rights (collectively, the "Appurtenances"). The Land, the Improvements and the Appurtenances shall be referred to collectively herein as the "Property".

The grant of the Property herein described is expressly made subject to the Permitted Exceptions (as defined in that certain Purchase and Sale Agreement, dated as of September 16, 2008, between Grantor, as "Seller", and Grantee, as "Buyer").

This Grant Deed shall be governed by and construed in accordance with the laws of the State of California without giving effect to its choice of law provisions.

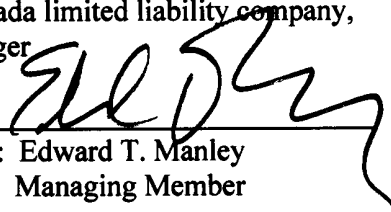
If either Grantor or Grantee brings any lawsuit, proceeding or action to enforce the rights and obligations set forth in this Grant Deed, then the prevailing party shall be entitled to recover from the non-prevailing party all costs and expenses, including but not limited to reasonable attorney's fees and costs, incurred in connection with such lawsuit, proceeding or action.

WHEREFORE, Grantor has executed this Grant Deed as of December 5, 2008.

GRANTOR

IMPERIAL 1585, LLC,  
a Nevada limited liability company

BY: NEW WEST DEVELOPMENT, LLC  
a Nevada limited liability company,  
Manager

By:   
Name: Edward T. Manley  
Title: Managing Member

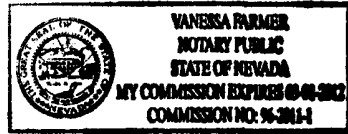
**ACKNOWLEDGEMENTS**

STATE OF NEVADA            )  
  ) ss.  
COUNTY OF CLARK        )

On December 5, 2008, before me, Vanessa Farmer, a Notary Public, personally appeared Edward T. Manley, Manager of New West Development, LLC, Manager of Imperial 1585, LLC, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signatures on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of Nevada the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature Vanessa Farmer

(SEAL)

**ILLEGIBLE NOTARY SEAL DECLARATION  
(GOVERNMENT CODE 27361.7)**

**I CERTIFY UNDER PENALTY OF PERJURY THAT THE NOTARY SEAL ON  
THE DOCUMENT TO WHICH THIS IS ATTACHED READS AS FOLLOWS:**

**NAME OF NOTARY: VANESSA FARMER**

**DATE OF COMMISSION: FEB 1, 2012**

**PRINCIPAL OFFICE IN: CLARK**

**NOTARY COMMISSION NUMBER: 96-2011-1**

**MANUFACTURER IDENTIFICATION NUMBER: NA**

**PLACE OF EXECUTION OF THIS DECLARATION: IMPERIAL COUNTY**

**DATE: 12-15-2008**

**PDQ ERRANDS & MORE  
(FIRM NAME)**

  
**(SIGNATURE)**



**EXHIBIT A TO GRANT DEED**  
**LEGAL DESCRIPTION OF THE PROPERTY**

*[See attached.]*

## Exhibit 'A'

### LEGAL DESCRIPTION

Real property in the unincorporated area of the County of Imperial, State of California, described as follows:

#### PARCEL 1:

THE SOUTH ONE-HALF OF THE SOUTHEAST QUARTER OF SECTION 34, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTED ALL THE OIL AND GAS IN SAID LANDS, AS SET OUT IN THE PATENT FROM THE UNITED STATES OF AMERICA TO GEORGE O. LIEN, RECORDED SEPTEMBER 28, 1954 IN BOOK 893, PAGE 676 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM UNTO THE IMPERIAL IRRIGATION DISTRICT, ITS SUCCESSORS AND ASSIGNS, A ONE HUNDRED PERCENT (100%) INTEREST IN ALL MINERALS, OF EVERY KIND AND CHARACTER, EITHER IN SOLID OR LIQUID FORM, INCLUDING, WITHOUT LIMITATION, ALL OIL, GAS AND HYDROCARBONS, ALL GEOTHERMAL SUBSTANCES THAT MIGHT BE PRODUCED FROM THE PROPERTY, INCLUDING (A) THE NATURAL HEAT OF THE EARTH, AND THE ENERGY PRESENT IN, RESULTING FROM, OR CREATED BY, OR WHICH MAY BE EXTRACTED FROM, THE NATURAL HEAT OF THE EARTH OR THE HEAT PRESENT BELOW THE SURFACE OF THE EARTH, IN WHATEVER FORM SUCH HEAT OR ENERGY NATURALLY OCCURS; (B) ALL NATURAL PRODUCTS OF GEOTHERMAL PROCESSES, INCLUDING, WITHOUT LIMITATION, INDIGENOUS HOT WATER, HOT BRINE, STEAM AND OTHER FLUIDS AND GASSES; (C) HOT WATER, HOT BRINE, STEAM AND OTHER FLUIDS AND GASSES RESULTING FROM WATER OR OTHER SUBSTANCES BEING ARTIFICIALLY INTRODUCED INTO THE SUBSURFACE OF THE PROPERTY; AND (D) ALL MINERALS, GASSES, SALTS, CHEMICALS, BY-PRODUCTS AND OTHER SUBSTANCES IN SOLUTION OR MIXED WITH GEOTHERMAL EFFLUENT OR OTHERWISE PRODUCED FROM, THROUGH AND ACROSS THE PROPERTY, AND/OR FROM GEOTHERMAL WELLS LOCATED IN OR ON PROPERTY OUTSIDE THE BOUNDARIES OF THE PROPERTY THAT HAVE A PRODUCTION INTERVAL LYING BELOW A DEPTH OF FIVE HUNDRED (500) FEET BELOW THE SURFACE OF THE PROPERTY, INCLUDING THE REASONABLE USE OF THE SURFACE FOR EXPLORATION AND DEVELOPMENT OF SUCH RESERVED MINERALS; EXCLUDING HOWEVER THOSE RIGHTS RESERVED BY THE UNITED STATES OF AMERICA TO GEORGE O. LIEN, RECORDED SEPTEMBER 28, 1954 IN BOOK 893, PAGE 676 OF OFFICIAL RECORDS.

#### PARCEL 2:

THAT PORTION OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 34, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, LYING SOUTH OF THE WESTSIDE MAIN CANAL AS SAID CANAL EXISTED SEPTEMBER 18, 1950.

EXCEPTING THEREFROM UNTO THE IMPERIAL IRRIGATION DISTRICT, ITS SUCCESSORS AND ASSIGNS, A ONE HUNDRED PERCENT (100%) INTEREST IN ALL MINERALS, OF EVERY KIND AND CHARACTER, EITHER IN SOLID OR LIQUID FORM, INCLUDING, WITHOUT LIMITATION, ALL OIL, GAS AND HYDROCARBONS, ALL GEOTHERMAL SUBSTANCES THAT MIGHT BE PRODUCED FROM THE PROPERTY, INCLUDING (A) THE NATURAL HEAT OF THE EARTH, AND THE ENERGY PRESENT IN, RESULTING FROM, OR CREATED BY, OR WHICH MAY BE EXTRACTED FROM, THE NATURAL HEAT OF THE EARTH OR THE HEAT PRESENT BELOW THE SURFACE OF

THE EARTH, IN WHATEVER FORM SUCH HEAT OR ENERGY NATURALLY OCCURS; (B) ALL NATURAL PRODUCTS OF GEOTHERMAL PROCESSES, INCLUDING, WITHOUT LIMITATION, INDIGENOUS HOT WATER, HOT BRINE, STEAM AND OTHER FLUIDS AND GASSES; (C) HOT WATER, HOT BRINE, STEAM AND OTHER FLUIDS AND GASSES RESULTING FROM WATER OR OTHER SUBSTANCES BEING ARTIFICIALLY INTRODUCED INTO THE SUBSURFACE OF THE PROPERTY; AND (D) ALL MINERALS, GASSES, SALTS, CHEMICALS, BY-PRODUCTS AND OTHER SUBSTANCES IN SOLUTION OR MIXED WITH GEOTHERMAL EFFLUENT OR OTHERWISE PRODUCED FROM, THROUGH AND ACROSS THE PROPERTY, AND/OR FROM GEOTHERMAL WELLS LOCATED IN OR ON PROPERTY OUTSIDE THE BOUNDARIES OF THE PROPERTY THAT HAVE A PRODUCTION INTERVAL LYING BELOW A DEPTH OF FIVE HUNDRED (500) FEET BELOW THE SURFACE OF THE PROPERTY, INCLUDING THE REASONABLE USE OF THE SURFACE FOR EXPLORATION AND DEVELOPMENT OF SUCH RESERVED MINERALS.

**PARCEL 3:**

THAT PORTION OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER AND THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER, ALL IN SECTION 34, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, LYING SOUTH OF THE WESTSIDE MAIN CANAL AS SAID CANAL EXISTED FEBRUARY 6, 1951.

EXCEPTING THEREFROM UNTO THE IMPERIAL IRRIGATION DISTRICT, ITS SUCCESSORS AND ASSIGNS, A ONE HUNDRED PERCENT (100%) INTEREST IN ALL MINERALS, OF EVERY KIND AND CHARACTER, EITHER IN SOLID OR LIQUID FORM, INCLUDING, WITHOUT LIMITATION, ALL OIL, GAS AND HYDROCARBONS, ALL GEOTHERMAL SUBSTANCES THAT MIGHT BE PRODUCED FROM THE PROPERTY, INCLUDING (A) THE NATURAL HEAT OF THE EARTH, AND THE ENERGY PRESENT IN, RESULTING FROM, OR CREATED BY, OR WHICH MAY BE EXTRACTED FROM, THE NATURAL HEAT OF THE EARTH OR THE HEAT PRESENT BELOW THE SURFACE OF THE EARTH, IN WHATEVER FORM SUCH HEAT OR ENERGY NATURALLY OCCURS; (B) ALL NATURAL PRODUCTS OF GEOTHERMAL PROCESSES, INCLUDING, WITHOUT LIMITATION, INDIGENOUS HOT WATER, HOT BRINE, STEAM AND OTHER FLUIDS AND GASSES; (C) HOT WATER, HOT BRINE, STEAM AND OTHER FLUIDS AND GASSES RESULTING FROM WATER OR OTHER SUBSTANCES BEING ARTIFICIALLY INTRODUCED INTO THE SUBSURFACE OF THE PROPERTY; AND (D) ALL MINERALS, GASSES, SALTS, CHEMICALS, BY-PRODUCTS AND OTHER SUBSTANCES IN SOLUTION OR MIXED WITH GEOTHERMAL EFFLUENT OR OTHERWISE PRODUCED FROM, THROUGH AND ACROSS THE PROPERTY, AND/OR FROM GEOTHERMAL WELLS LOCATED IN OR ON PROPERTY OUTSIDE THE BOUNDARIES OF THE PROPERTY THAT HAVE A PRODUCTION INTERVAL LYING BELOW A DEPTH OF FIVE HUNDRED (500) FEET BELOW THE SURFACE OF THE PROPERTY, INCLUDING THE REASONABLE USE OF THE SURFACE FOR EXPLORATION AND DEVELOPMENT OF SUCH RESERVED MINERALS.

APN: 051-350-010-000 (Affects Parcel 1) and 051-350-011-000 (Affects Parcels 2 and 3)

RECORDING REQUESTED BY  
ANDERHOLT & STOREY  
A PROFESSIONAL LAW CORPORATION

WHEN RECORDED MAIL TO  
NAME RANDALL R. WHITMER

MAILING 1803 FARMER DRIVE  
ADDRESS

CITY, STATE EL CENTRO, .CA  
ZIP CODE 92243

Recorded in Official Records, Imperial County

**Dolores Provencio**  
County Clerk / Recorder

P Public

Doc#: 2007-004712



2/08/2007  
3:08 PM  
AG

Titles:	1	Pages:	3
Fees			22.00
Taxes			0.00
Other			0.00
PAID			\$22.00

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

### TITLE(S)

CORRECTED GRANT DEED

APN: 051-350-008-000

\* This Deed is being Corrected to correct Title.

MAIL TAX STATEMENTS AS DIRECTED ABOVE

RECORDING REQUESTED BY:

ANDERHOLT & STOREY, APLC

WHEN RECORDED, MAIL THIS DEED AND,  
UNLESS OTHERWISE SHOWN BELOW, MAIL  
TAX STATEMENT TO:

Randall R. Whitmer  
1803 Farmer Drive  
El Centro, CA 92243

THIS SPACE FOR RECORDER'S USE ONLY

**CORRECTED GRANT DEED**

THE UNDERSIGNED GRANTOR(s) DECLARE(s)

DOCUMENTARY TRANSFER TAX IS \$ none - gift (R&T Code §11930)

unincorporated area  City of \_\_\_\_\_

Parcel No. 051-350-008-000

computed on full value of interest or property conveyed, or

computed on full value less value of liens or encumbrances remaining at time of sale, and

FOR VALUE CONSIDERATION, receipt of which is hereby acknowledged,

**THEODORE L. WHITMER and RANDALL R. WHITMER, as Successor Trustees of the SANTINA F. WHITMER 1996 TRUST**

hereby GRANT(S) to **THEODORE L. WHITMER, a married man as his sole and separate property, and RANDALL R. WHITMER, a married man as his sole and separate property, as Tenants in Common**

the following described real property in the County of Imperial, State of California:

**SEE LEGAL DESCRIPTION ATTACHED HERETO AS EXHIBIT "A"**

DATED: 2-2-07

*Theodore L. Whitmer*

THEODORE L. WHITMER, as Successor Trustee

DATED: 2-2-07

*Randall R. Whitmer*

RANDALL R. WHITMER, as Successor Trustee

STATE OF CALIFORNIA ) S.S.  
COUNTY OF IMPERIAL )

On 2-2-07, before me, Sarah Marie Enz, a Notary Public in and for said County and State, personally appeared Theodore L. Whitmer and Randall R. Whitmer, personally known to me (or proved to me on the basis of satisfactory evidence) to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same in their authorized capacities, and that by their signatures on the instrument the persons or the entity upon behalf of which the persons acted, executed the instrument.



WITNESS my hand and official seal.

*Sarah Marie Enz*  
Signature

(Seal)

Mail Tax Statement as Directed Above

**EXHIBIT "A"**

The Southeast Quarter of the Northeast Quarter of Section 33, and the Southwest Quarter of the Northwest Quarter of Section 34, all in Township 16 South, Range 12 East, S.B.M., according to the United States Government Plat of Re-Survey approved March 15, 1909, and on file in the United States Land Office at Los Angeles, California.

APN: 051-350-008-000

RECORDING REQUESTED BY  
ANDERHOLT & STOREY  
A PROFESSIONAL LAW CORPORATION

**Dolores Provencio**  
County Clerk / Recorder

P Public

Doc#: 2006 - 058290

Titles: 1      Pages: 3



Fees	22.00
Taxes	0.00
Other	0.00
<u>PAID</u>	<u>\$22.00</u>

WHEN RECORDED MAIL TO  
NAME TED L. WHITMER  
CAROLYN J. WHITMER  
MAILING 1095 SOUTH 18TH STREET  
ADDRESS  
CITY, STATE EL CENTRO, CA  
ZIP CODE 92243

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

**TITLE(S)**

GRANT DEED

APN: 051-350-008-000

3  
1  
SM

MAIL TAX STATEMENT TO ADDRESS LISTED ABOVE

RECORDING REQUESTED BY:

ANDERHOLT & STOREY, APLC

WHEN RECORDED, MAIL THIS DEED AND,  
UNLESS OTHERWISE SHOWN BELOW, MAIL  
TAX STATEMENT TO:

Ted L. Whitmer  
Carolyn J. Whitmer  
1095 South 18<sup>th</sup> Street  
El Centro, CA 92243

THIS SPACE FOR RECORDER'S USE ONLY

**GRANT DEED**

THE UNDERSIGNED GRANTOR(S) DECLARE(S)

DOCUMENTARY TRANSFER TAX IS \$ none - gift (R&T Code §11930)

unincorporated area  City of \_\_\_\_\_

Parcel No. 051-350-008-000

computed on full value of interest or property conveyed, or

computed on full value less value of liens or encumbrances remaining at time of sale, and

FOR VALUE CONSIDERATION, receipt of which is hereby acknowledged,

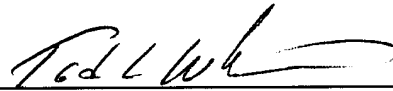
**THEODORE L. WHITMER, aka TED L. WHITMER, a married man as his sole and separate property**

hereby GRANT(S) to **TED L. WHITMER and CAROLYN J. WHITMER, as trustees of the WHITMER FAMILY TRUST created on December 15, 2006, his interest in,**

the following described real property in the County of Imperial, State of California:

**SEE LEGAL DESCRIPTION ATTACHED HERETO AS EXHIBIT "A"**

DATED: 12-15-06



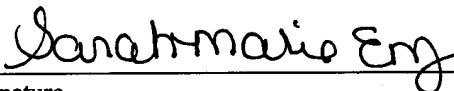
\_\_\_\_\_  
TED L. WHITMER

STATE OF CALIFORNIA            ) S.S.  
COUNTY OF IMPERIAL         )

On 12-15-06 before me, Sarah Marie Enz, a Notary Public in and for said County and State, personally appeared Ted L. Whitmer, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signatures on the instrument the persons or the entity upon behalf of which the persons acted, executed the instrument.



WITNESS my hand and official seal.



\_\_\_\_\_  
Signature

(Seal)

Mail Tax Statement as Directed Above



**EXHIBIT "A"**

The Southeast Quarter of the Northeast Quarter of Section 33, and the Southwest Quarter of the Northwest Quarter of Section 34, all in Township 16 South, Range 12 East, S.B.M., according to the United States Government Plat of Re-Survey approved March 15, 1909, and on file in the United States Land Office at Los Angeles, California.

APN: 051-350-008-000

RECORDING REQUESTED BY  
ANDERHOLT & STOREY  
A PROFESSIONAL LAW CORPORATION

WHEN RECORDED MAIL TO  
NAME Randall R. Whitmer

MAILING 1803 Farmer Drive  
ADDRESS

CITY, STATE El Centro, CA  
ZIP CODE 92243

Recorded in Official Records, Imperial County

**Dolores Provencio**  
County Clerk / Recorder

P Public

Doc#: 2006-054011



Titles: 1 Pages: 3

Fees	22.00
Taxes	0.00
Other	0.00
PAID	\$22.00

11/16/2006  
11:26 AM  
AG

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

## TITLE(S)

GRANT DEED

APN: 051-350-008-000

MAIL TAX STATEMENTS TO ADDRESS LISTED ABOVE

RECORDING REQUESTED BY:

ANDERHOLT & STOREY, APLC

WHEN RECORDED, MAIL THIS DEED AND,  
UNLESS OTHERWISE SHOWN BELOW, MAIL  
TAX STATEMENT TO:

Randall R. Whitmer  
1803 Farmer Drive  
El Centro, CA 92243

THIS SPACE FOR RECORDER'S USE ONLY

GRANT DEED

THE UNDERSIGNED GRANTOR(S) DECLARE(S)

DOCUMENTARY TRANSFER TAX IS \$ none - gift (R&T Code §11930)

unincorporated area  City of \_\_\_\_\_

Parcel No. 051-350-008-000

computed on full value of interest or property conveyed, or

computed on full value less value of liens or encumbrances remaining at time of sale, and

FOR VALUE CONSIDERATION, receipt of which is hereby acknowledged,

**THEODORE L. WHITMER and RANDALL R. WHITMER, as Trustees of the SANTINA F. WHITMER 1996 TRUST**

hereby GRANT(S) to **THEODORE L. WHITMER, a married man as his sole and separate property, and RANDALL R. WHITMER, a married man as his sole and separate property, as Tenants in Common**

the following described real property in the County of Imperial, State of California:

**SEE LEGAL DESCRIPTION ATTACHED HERETO AS EXHIBIT "A"**

DATED: 11-14-06

Theodore L. Whitmer  
THEODORE L. WHITMER

DATED: 11-14-06

Randall R. Whitmer  
RANDALL R. WHITMER

STATE OF CALIFORNIA ) S.S.  
COUNTY OF IMPERIAL )

On 11-14-06, before me, Sarah Marie Smitham, a Notary Public in and for said County and State, personally appeared Theodore L. Whitmer and Randall R. Whitmer, personally known to me (or proved to me on the basis of satisfactory evidence) to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same in their authorized capacities, and that by their signatures on the instrument the persons or the entity upon behalf of which the persons acted, executed the instrument.



WITNESS my hand and official seal.

Sarah Marie Smitham  
Signature

(Seal)

**EXHIBIT "A"**

The Southeast Quarter of the Northeast Quarter of Section 33, and the Southwest Quarter of the Northwest Quarter of Section 34, all in Township 16 South, Range 12 East, S.B.M., according to the United States Government Plat of Re-Survey approved March 15, 1909, and on file in the United States Land Office at Los Angeles, California.

APN: 051-350-008-000

RECORDING REQUESTED BY  
**TICOR TITLE INSURANCE COMPANY OF CALIFORNIA**

AND WHEN RECORDED MAIL TO

Name **Paul C. Rodriguez**  
**Alice L. Rodriguez**  
 Street Address **10362 Vista del Cerro**  
**Santee, CA 92071**  
 City & State

MAIL TAX STATEMENTS TO

Name **Same As Above**  
 Street Address  
 City & State

92-19800

BOOK 1710 PAGE 741

IMPERIAL COUNTY RECORDERS

SEP 18 10 40 AM '92

OFFICIAL RECORDS  
 IMPERIAL COUNTY, CALIF.

BOOK 1710 PAGE 741

REG	\$ 5
RIF	\$ 2
MC	\$ 1
TAX	\$ 1
TOTAL	\$ 9

SPACE ABOVE THIS LINE FOR RECORDER'S USE

CAT NO NND0582  
 TO 1023 CA (11-81)

**Individual Grant Deed**

THIS FORM FURNISHED BY TICOR TITLE INSURERS

AP# 51-330-21

ALL P.N.	<p>The undersigned grantor(s) declare(s):          Documentary transfer tax is \$ <u>56.10</u>          ( ) computed on full value of property conveyed, or          (XXX) computed on full value less value of liens and encumbrances remaining at time of sale.          (X) Unincorporated area: ( ) City of _____, and _____</p> <p>FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,  <b>Francisco Gonzalez and Guadalupe G. Gonzalez, Husband and Wife, as Joint Tenants</b></p> <p>hereby GRANT(S) to  <b>Paul C. Rodriguez and Alice L. Rodriguez, Husband and Wife, as Joint Tenants</b>          the following described real property in the City of <b>El Centro</b>          County of <b>IMPERIAL</b>, State of California.</p> <p>PARCEL 1:  <b>THAT PORTION OF THE SOUTHEAST QUARTER OF THE SOUTH EAST QUARTER OF SECTION 27, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.H., AND THAT PORTION OF LOT 5, OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 27, AND THAT PORTION OF LOT 7, OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 27, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.H., COUNTY OF IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, DESCRIBED AS FOLLOWS:</b></p> <p>"SEE EXHIBIT 'A' ATTACHED HERETO AND MADE A PART HEREOF FOR A COMPLETE LEGAL DESCRIPTION"</p> <p>Dated: <u>AUGUST 21, 1992</u></p> <p>STATE OF CALIFORNIA }          COUNTY OF <u>Imperial</u> } S.S.</p> <p>On <u>September 15, 1992</u> before me,  <u>Susan K. Stratiff</u></p> <p>a Notary Public in and for said County and State, personally appeared  <u>Francisco Gonzalez and Guadalupe G. Gonzalez</u></p> <p>personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.</p> <p>WITNESS my hand and official seal</p> <p>Signature <u>Susan K. Stratiff</u></p> <p>Francisco Gonzalez  <u>Guadalupe G. Gonzalez</u>          Guadalupe G. Gonzalez</p> <p><u>Francisco Gonzalez</u>          Francisco Gonzalez</p> <p>OFFICIAL SEAL          SUSAN K. STRATIFF          NOTARY PUBLIC - CALIFORNIA          PRINCIPAL OFFICE IN          IMPERIAL COUNTY          My Commission Expires JULY 25, 1995</p> <p>(This area for official notarial seal)</p> <p>Title Order No _____ Escrow or Loan No <u>116513-8</u></p>
-------------	--

MAIL TAX STATEMENTS AS DIRECTED ABOVE

## Exhibit "A"

## LEGAL DESCRIPTION

## PARCEL 1:

116513

That portion of the Southeast Quarter of the South East Quarter of Section 27, Township 16 South, Range 12 East, S.B.M., and that portion of Lot 5, of the Northeast Quarter of the Southeast Quarter of Section 27, and that portion of Lot 7, of the Northwest Quarter of the Southeast Quarter of Section 27, Township 16 South, Range 12 East, S.B.M., County of Imperial State of California, according to the Official Plat thereof, described as follows:

Beginning at the Southwest corner of the Southeast Quarter of the Southeast Quarter; Thence East along said South line 200 feet to the centerline of the extended (1947) row, wixom drain; Thence due North along said center line 890 feet; Thence Northwesterly to a point on the West line of said Lot 5 distant thereon 60 feet North of the Southwest corner of said Lot; Thence West 400- feet; Thence South 60 feet; to the South line of said Lot 7; thence East along said South line 400 feet to the Southeast corner thereof; Thence South along the West line of the Southeast Quarter of the Southeast Quarter of said Section, South 1320 feet, more or less, to the Point of Beginning.

## PARCEL 2:

That portion of the Southwest Quarter of the Southeast Quarter of Section 27, Township 16 South, Range 12 East, S.B.M., County of Imperial, State of California, according to the Official Plat thereof, lying Northerly and Easterly of the centerline of Fern Canal as now located.

RECORDING REQUESTED BY:

Katherine A. Locher, Trustee of the Carl R. Locher & Katherine A. Locher Revocable Trust

AND WHEN RECORDED, MAIL THIS DEED AND TAX STATEMENTS TO:

Carolyn M. Rhoads & Cathleen E. Whiting  
P. O. Box 996  
Shingle Springs, CA 9682

Recorded in Official Records, Imperial County

**Chuck Storey**  
County Clerk / Recorder

**P Public**

10/20/2011  
8:51 AM  
AG

Doc#: 2011 - 025073



Titles: 1 Pages: 2

Fees	17.00
Taxes	0.00
Other	0.00
PAID	\$17.00

Space above this line for Recorder's Use

Documentary Transfer Tax \$ 0

Gift/Inheritance

Liented to full value

Exempt under Revenue & Taxation  
Code 11911

Computed on full value of property, or

Computed on full value less liens and  
encumbrances assumed.

Signature of declarant determining tax

## QUITCLAIM DEED

FOR VALUABLE CONSIDERATION, receipt of which is acknowledged, I, KATHERINE A. LOCHER, TRUSTEE OF THE CARL R. LOCHER AND KATHERINE A. LOCHER REVOCABLE TRUST DATED APRIL 28, 2010, Grantor, do hereby remise, release, and forever quitclaim to CAROLYN MARIE RHOADS, an unmarried woman, as to an undivided one-half interest, and CATHLEEN ELEANOR WHITING, a married woman, as her sole and separate property, as to an undivided one-half interest, as tenants in common, Grantees, all that real property situated in the City of El Centro, County of Imperial, State of California, more particularly described as follows:

The Southwest quarter of the Southeast quarter of Section 27,  
Township 16 South, Range 12 East, SBM, County of Imperial, State  
of California, according to the Official Plat thereof

Assessor's Parcel No. 051-330-022

Executed on October 5, 2011, at Placerville, El Dorado County, California.

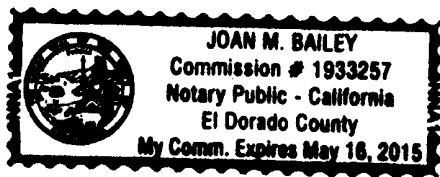
KATHERINE A. LOCHER, Trustee of the Carl R.  
Locher and Katherine A. Locher Revocable Trust  
dated April 28, 2010

STATE OF CALIFORNIA )  
 ) ss.  
COUNTY OF EL DORADO )

On October 5, 2011, before me, Joan M. Bailey, Notary Public, personally appeared Katherine A. Locher, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by his/her/their signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



*Joan M. Bailey*  
\_\_\_\_\_  
Notary Public



RECORDING REQUESTED BY

Recorded in Official Records, Imperial County

7/06/2011

4:25 PM

AG



Chuck Storey  
County Clerk / Recorder

STC Stewart Title Company

WHEN RECORDED MAIL TO  
AND MAIL TAX STATEMENTS TO

Delieu Scopesi  
4 Radcliffe Court  
Rancho Mirage, CA 92270

Doc#: 2011-015975

Titles: 1 Pages: 2



Fees	10.00
Taxes	0.00
Other	0.00
PAID	\$10.00

TITLE ORDER NO.

ESCROW OR LOAN NO.

APN NO. 051-330-024

### QUITCLAIM DEED

THE UNDERSIGNED GRANTOR(S) DECLARE(S)

DOCUMENTARY TRANSFER TAX is \$ None Due CITY TAX \$ None PER RPT 11911

computed on full value of property conveyed, or  computed on full value less value of liens or encumbrances remaining at time of sale,

Unincorporated area:  City of \_\_\_\_\_, and \_\_\_\_\_

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

I, Gino Scopesi, a Married Man and the Husband of Grantee, Delieu Scopesi, do

hereby remise, release and forever quitclaim to

Delieu Scopesi, a Married Woman, as her sole and separate property, any and all legal and/or equitable interests, if any, I may have in

the following described real property in the County of Imperial, State of California:

Please see Exhibit "A" legal description attached hereto.

Dated July 3, 2011

Gino Scopesi

State of California)

County of Riverside

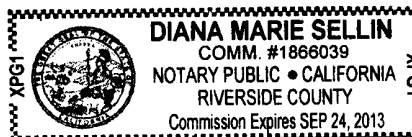
On July 1, 2011 before me, Diana Marie Sellin, a Notary Public in and for said State, personally appeared, Gino Scopesi

who proved to me the basis of satisfactory evidence) to be the person (s) whose name (s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity (ies), and that by his/her/their signature (s) on the instrument the person (s), or the entity upon behalf of which the person (s) acted, executed the instrument.

I certify under penalty of perjury under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature



Mail Tax Statement to: Same as Above

# Exhibit "A"

## Legal Description

Lots 5 and 7 and the Southeast quarter of the Southeast quarter of Section 27, Township 16 South, Range 12 East, San Bernardino Base and Meridian, in an unincorporated area of the County of Imperial, State of California, according to the official government plat thereof.

Excepting therefrom, that portion conveyed to Eugene Gannon by deed recorded May 26, 1914, in Book 46, Page 292, of Deeds.

Also excepting therefrom, that portion conveyed to Lucien E. Smith and Jewell C. Smith in deed recorded May 25, 1948, in Book 708, Page 216 and as corrected by instrument recorded July 16, 1952 in Book 841, Page 656, both of Official Records.

Also excepting therefrom, that portion conveyed to Lucien E. Smith and Jewell C. Smith in deed recorded May 25, 1948, in Book 708, Page 261, of Official Records.

Also excepting therefrom, that portion conveyed to Melvin J. Preece and Judy Lou Preece, husband and wife, by deed recorded September 29, 1977 in Book 1406, Page 1406 of Official Records.

Also excepting therefrom, the West 90 feet of the South 640 feet of the Southeast quarter of the Southeast quarter of said Section 27.

**Chuck Storey**  
County Clerk / Recorder

RECORDING REQUESTED BY:

**stewart title**

**STC Stewart Title Company**

WHEN RECORDED MAIL TO:  
AND MAIL TAX STATEMENTS TO:

Doc#: **2011 - 015974**

Titles: 1      Pages: 2



Fees	20.00
Taxes	0.00
Other	0.00
PAID	\$20.00

Delieu Scopesi,  
4 Radcliffe Court  
Rancho Mirage, CA 92270

**GRANT DEED**

APN NO.: 051-330-024  
Imperial County  
State of California

THE UNDERSIGNED GRANTOR(S) DECLARE(S)

DOCUMENTARY TRANSFER TAX is \$ None *PER RST 11911*

Computed on full value of property conveyed, or  computed on full value less value of liens or encumbrances remaining at time of sale,  
 Unincorporated area:  City of \_\_\_\_\_, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

**Delieu Scopesi, as Trustee of The Ruth M. Van Sant Living Trust, U/A dated July 11, 1991**

hereby GRANT(s) to

**Delieu Scopesi, a Married Woman, as her Sole and Separate Property**

the following described real property in the County of Imperial, State of California:

**Please see Exhibit "A" legal description attached hereto.**

Dated July 1, 2011

Delieu Scopesi  
Delieu Scopesi, as Trustee of  
The Ruth M. Van Sant Living Trust,  
U/A dated July 11, 1991

State of California)

County of Riverside

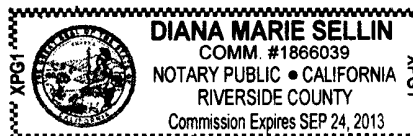
On July 1, 2011 before me, Diana Marie Sellin, a Notary Public in and for said State, personally appeared,

Delieu Scopesi  
who proved to me the basis of satisfactory evidence) to be the person (s) whose name (s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her their authorized capacity (ies), and that by his/her their signature (s) on the instrument the person (s), or the entity upon behalf of which the person (s) acted, executed the instrument.

I certify under penalty of perjury under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Diana Marie Sellin



Mail Tax Statement to: Same as Above

# Exhibit "A"

## Legal Description

Lots 5 and 7 and the Southeast quarter of the Southeast quarter of Section 27, Township 16 South, Range 12 East, San Bernardino Base and Meridian, in an unincorporated area of the County of Imperial, State of California, according to the official government plat thereof.

Excepting therefrom, that portion conveyed to Eugene Gannon by deed recorded May 26, 1914, in Book 46, Page 292, of Deeds.

Also excepting therefrom, that portion conveyed to Lucien E. Smith and Jewell C. Smith in deed recorded May 25, 1948, in Book 708, Page 216 and as corrected by instrument recorded July 16, 1952 in Book 841, Page 656, both of Official Records.

Also excepting therefrom, that portion conveyed to Lucien E. Smith and Jewell C. Smith in deed recorded May 25, 1948, in Book 708, Page 261, of Official Records.

Also excepting therefrom, that portion conveyed to Melvin J. Preece and Judy Lou Preece, husband and wife, by deed recorded September 29, 1977 in Book 1406, Page 1406 of Official Records.

Also excepting therefrom, the West 90 feet of the South 640 feet of the Southeast quarter of the Southeast quarter of said Section 27.

**First Solar Campo Verde Project Site**

Liebert Road/W. Wixom Road  
El Centro, CA 92243

Inquiry Number: 3276025.1  
March 14, 2012

# EDR Environmental Lien and AUL Search

## EDR Environmental Lien and AUL Search

The EDR Environmental Lien and AUL Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

***Thank you for your business.***

Please contact EDR at 1-800-352-0050  
with any questions or comments.

### Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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## EDR Environmental Lien and AUL Search

### TARGET PROPERTY INFORMATION

#### ADDRESS

Liebert Road/W. Wixom Road  
First Solar Campo Verde Project Site  
El Centro, CA 92243

#### RESEARCH SOURCE

##### Source 1:

Imperial county recorder  
Imperial, CA

#### PROPERTY INFORMATION

##### Deed 1:

Type of Deed: Deed  
Title is vested in: Federal National Mortgage Assoc.  
Title received from: Quality Loan Service Corp  
Deed Dated: 6/13/2011  
Deed Recorded: 6/15/2011  
Book: NA  
Page: na  
Volume: na  
Instrument: na  
Docket: NA  
Land Record Comments: see exhibit  
Miscellaneous Comments: na

**Legal Description:** see exhibit

**Legal Current Owner:** Federal National Mortgage Assoc.

**Parcel # / Property Identifier:** 051-350-012

**Comments:** see exhibit

#### ENVIRONMENTAL LIEN

Environmental Lien: Found  Not Found

#### OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found  Not Found

## **Deed Exhibit 1**



RECORDING REQUESTED BY:  
FIRST AMERICAN TITLE

Recorded in Official Records, Imperial County

6/15/2011  
3:01 PM  
IV

**Chuck Storey**  
County Clerk / Recorder

Trustee's Deed Upon Sale  
1 | Page

P Public

Recording requested by:

Doc#: 2011-014258

Titles: 1 Pages: 2

When recorded mail to:



Fees	10.00
Taxes	0.00
Other	0.00
<u>PATD</u>	<u>\$10.00</u>

Nationstar Mortgage LLC  
350 Highland Drive  
Lewisville, TX 75067

Forward tax statements to the address given above

TS #: CA-11-419941-AB  
Order #: 5021504  
A.P.N.: 051-350-12-00

Space above this line for recorders use

## Trustee's Deed Upon Sale

Transfer Tax: 0.00

The undersigned grantor declares:

The grantee herein **IS** the foreclosing beneficiary.

The amount of the unpaid debt together with costs was: **\$158,576.56**

The amount paid by the grantee at the trustee sale was: **\$156,778.84**

The documentary transfer tax is: **None**

Said property is in the City of: **EL CENTRO**, County of **IMPERIAL**

**QUALITY LOAN SERVICE CORPORATION**, , as Trustee, (whereas so designated in the Deed of Trust hereunder more particularly described or as duly appointed Trustee) does hereby **GRANT** and **CONVEY** to

### Federal National Mortgage Association

(herein called Grantee) but without covenant or warranty, expressed or implied, all right title and interest conveyed to and now held by it as Trustee under the Deed of Trust in and to the property situated in the county of **IMPERIAL**, State of California, described as follows:

**THAT PORTION OF THE SOUTHEAST QUARTER OF SECTION OF SECTION 34, TOWNSHIP 16 SOUTH, RANGE 12 EAST, S.B.M., IN AN UNINCORPORATED AREA OF THE COUNTY IMPERIAL, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF, AND ON FILE IN THE UNITED STATES LAND OFFICE, SHOWN AS "ZANJERO SITE" ON THAT CERTAIN RECORD OF SURVEYMAP RECORDED IN BOOK 1, PAGE 6 OF RECORDS OF SURVEY OF IMPERIAL COUNTY.**

This conveyance is made in compliance with the terms and provisions of the Deed of Trust executed by **MICHAEL D. SMITH AND ROSE M. LOCHER, HUSBAND AND WIFE, AS JOINT TENANTS**, as trustor, dated **4/11/2006**, and recorded on **4/21/2006** as instrument number **2006-019700**, in Book xxx, Page

**MAIL TAX STATEMENT  
AS DIRECTED ABOVE**

Trustee's Deed Upon Sale

2 | Page

xxx, of Official Records in the office of the Recorder of IMPERIAL, California, under the authority and powers vested in the Trustee designated in the Deed of Trust or as the duly appointed trustee, default having occurred under the Deed of Trust pursuant to the Notice of Breach and Election to Sell under the Deed of Trust recorded on 2/14/2011, instrument no 2011004319, Book , Page , of Official records. Trustee having complied with all applicable statutory requirements of the State of California and performed all duties required by the Deed of Trust including sending a Notice of Default and Election to Sell within ten/thirty days after its recording and a Notice of Sale at least twenty days prior to the Sale Date by certified mail, postage pre-paid to each person entitled to notice in compliance with California Civil Code 2924b

Default occurred as set forth in a Notice of Breach and Election to Sell which was recorded in the office of the Recorder of said County.

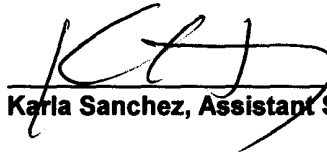
All requirements of law regarding the mailing of copies of notices or the publication of a copy of the Notice of Breach and Election to Sell or the personal delivery of the copy of the Notice of Breach and Election to Sell and the posting and publication of copies of the Notice of Sale have been complied with.

Said property was sold by said Trustee at public auction on 6/9/2011 at the place named in the Notice of Sale, in the County of IMPERIAL, California, in which the property is situated. Grantee, being the highest bidder at such sale, became the purchaser of said property and paid therefore to said trustee the amount being \$156,778.84 in lawful money of the United States, or by the satisfaction, pro tanto, of the obligations then secured by said Deed of Trust.

Date:

6-13-11

QUALITY LOAN SERVICE CORPORATION,



By: Karla Sanchez, Assistant Secretary

State of: California)

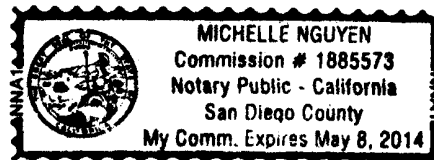
County of: San Diego)

On JUN 13 2011 before me, Michelle Nguyen a notary public, personally appeared Karla Sanchez, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature  (Seal)  
Michelle Nguyen



THIS OFFICE IS ATTEMPTING TO COLLECT A DEBT AND ANY INFORMATION OBTAINED WILL BE USED FOR THAT PURPOSE.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
FIRST SOLAR CAMPO VERDE PROJECT SITE**

---

**APPENDIX F  
AAI USER QUESTIONNAIRES**



**AAI Questionnaire  
Imperial Property  
Imperial County, CA  
June, 2011**

In accordance with ASTM 1527-05 and in order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the user (client or client representative) must provide the following information (if available) to the *environmental professional (URS)*. Failure to provide this information could result in a determination that “*all appropriate inquiry*” (AAI) is not complete.

1. Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

NO

2. Are you aware of any area use limitations (AULs), such as engineering controls, land use restriction or institutional controls that are in place at the property and/or have been filed or recorded in a registry under federal, trial, state or local law?

NO

3. As the *user* of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property, so that you would have specialized knowledge of the chemicals and processes used by this type of business?

NO

4. Does the purchase price being paid for this property reasonable reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

YES

5. Are you aware of commonly known or reasonably ascertainable information about the property that would help the *environmental professional* to identify conditions indicative of releases or threatened releases?

NO



a. Do you know the past uses of the property?

YES-FARMING

b. Do you know of specific chemicals that are present or once were present at the property?

NO

c. Do you know of spills or chemical releases that have taken place at the property?

NO

d. Do you know of any environmental cleanups that have taken place at the property?

NO

6. As the *user* of this ESA, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

NO

In addition to the above questions, certain information should be collected, if available, and provided to the *environmental professional*. This information is intended to assist the *environmental professional*, but is not necessarily required to qualify for one of the LLPs.

7. The reason why the ESA is required (i.e. sale, purchase, exchange, etc.).

8. The complete name, correct address and/or parcel number for the property (a map or other documentation showing property location and boundaries is helpful).

9. Assessor Parcel Numbers (APNs)

- 051-300-025-000
- 051-300-029-000
- 051-300-030-000
- 051-270-027-000
- 051-290-038-000
- 051-270-047-000
- 051-270-037-000
- 051-330-005-000
- 051-350-005-000
- 051-330-015-000
- 051-330-020-000



051-360-003-000  
051-360-001-000  
051-360-002-000  
051-360-018-000

10. A description of the property (i.e. acreage, square footage, number of buildings, other structures, age of buildings, above/underground storage tanks, etc.)
11. Knowledge or previous owners and/or previous uses of the property?
12. Current or previous deeds?
13. The site contact name and number.
14. Previous reports available? Any other available documentation, correspondence, etc. concerning the environmental condition of the property?

---

Completed by: \_\_\_\_\_

Date Completed: \_\_\_\_\_



## SITE HISTORY INTERVIEW

Name and title of person interviewed

Current Owner of the Property

Past Owners of the Property (give dates)

Current Use of the Property

Past Use of the Property (give dates)

What types of structures are and were historically located on the property? Are there residences? If so is there evidence of a heating oil tank, or septic system?

NONE

Were hazardous materials historically used on the property? What types? (Pesticides, fertilizers, heating oil)

NO

Was chemical (pesticide) use or mixing conducted on the property?

What types of wastes if any were historically generated on the property? How were they disposed of?

What types of wastes are currently generated on the property?



Have there been any previous environmental investigations of the property? If so get copies. Are there any reports that describe the geology of the subject property.

**Describe Current Condition of Project Site**

Is there evidence of Asbestos, PCBs, mercury, lead based paint issues with any structures needing to be demolished (observation only, no sampling)?

Is there evidence of refuse, trash, or evidence of dumping or waste disposal activities?

Is there evidence of soil staining, vegetation abnormalities, evidence of spills?

Have there ever been USTs or ASTs on the subject property. If so, list the type and age of each tank (This would include agricultural tanks)

Are there vaults, utility access points?

Evidence of underground utilities/piping?

Are any wells located on the property? If so describe type and age.

Are any pipelines on the property?





Jake Stephens <jstephens@greensunenergy.com>

---

## Environmental survey

---

Mary Fitzurka <mnfitzurka@yahoo.com>  
To: Jake Stephens <jstephens@ussolarholdings.com>

Thu, Jun 23, 2011 at 1:31 PM

Jake will you please check for the exact acreage as I might be slightly off (question # 9).

Answer to environmental survey

1-No

2-No

3-No

4-Yes

5-Yes

a. farming

b. no

c. no

d. no

6-No

7-Sale

8-James W. England Estate - Mary Fitzurka trustee

Ova V. England Estate, Mary N. Fitzurka and Mrtin D. Fitzurka

9-339.7 acres

10-Farming

11-James W. England

Ova V. England

Mary N. Fitzurka

Martin D. Fitzurka

12-Mary N. Fitzurka

1205 S. 19th St.

El Centro, CA 92243

760-352-9650

760-554-0160 cell #

13-None

Mary N. Fitzurka

---

**From:** Jake Stephens <[jstephens@ussolarholdings.com](mailto:jstephens@ussolarholdings.com)>

**To:** Mary Fitzurka <[mnfitzurka@yahoo.com](mailto:mnfitzurka@yahoo.com)>

**Sent:** Thu, June 23, 2011 12:59:27 PM

**Subject:** Environmental survey

[Quoted text hidden]

---



**AAI Questionnaire  
McVey Property  
Imperial County, CA  
June, 2011**

In accordance with ASTM 1527-05 and in order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the user (client or client representative) must provide the following information (if available) to the *environmental professional* (URS). Failure to provide this information could result in a determination that "*all appropriate inquiry*" (AAI) is not complete.

1. Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

No.

2. Are you aware of any area use limitations (AULs), such as engineering controls, land use restriction or institutional controls that are in place at the property and/or have been filed or recorded in a registry under federal, tribal, state or local law?

No.

3. As the *user* of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property, so that you would have specialized knowledge of the chemicals and processes used by this type of business?

No.

4. Does the purchase price being paid for this property reasonable reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

We believe the purchase price reflects fair market value.

5. Are you aware of commonly known or reasonably ascertainable information about the property that would help the *environmental professional* to identify conditions indicative of releases or threatened releases?



- a. Do you know the past uses of the property?  
No.
  - b. Do you know of specific chemicals that are present or once were present at the property?  
No.
  - c. Do you know of spills or chemical releases that have taken place at the property?  
No.
  - d. Do you know of any environmental cleanups that have taken place at the property?  
No.
6. As the *user* of this ESA, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?  
No.

In addition to the above questions, certain information should be collected, if available, and provided to the *environmental professional*. This information is intended to assist the *environmental professional*, but is not necessarily required to qualify for one of the LLPs.

7. The reason why the ESA is required (i.e. sale, purchase, exchange, etc.).  
Sale.
8. The complete name, correct address and/or parcel number for the property (a map or other documentation showing property location and boundaries is helpful).  
Assessor Parcel Number (APN) 051-360-032-000
9. A description of the property (i.e. acreage, square footage, number of buildings, other structures, age of buildings, above/underground storage tanks, etc.)  
208.46 gross acres with 196.1 net farmable acres irrigated by concrete ditch delivery via the Wormwood canal, Gate 94 in Imperial County, CA.  
No buildings or other structures.



10. Knowledge or previous owners and/or previous uses of the property?

No.

11. Current or previous deeds?

Copy of deed in Tierra Management, LLC office, manager of McVey Properties, LLC.

12. The site contact name and number.

Property Manager – Jesse Couch – (928) 210-7794

13. Previous reports available? Any other available documentation, correspondence, etc. concerning the environmental condition of the property?

No.

---

Completed by: Jesse Couch

Date Completed: 6-28-11



## SITE HISTORY INTERVIEW

Name and title of person interviewed

Jesse Couch

Current Owner of the Property

McVey Properties, LLC

Past Owners of the Property (give dates)

Douglas Adams Cook, Co-Trustee of the PBM 325 417 S Associated Road Brea, CA 92821. ? – April 15, 2005 (settlement date).

Current Use of the Property

Agricultural (hay) production.

Past Use of the Property (give dates)

Unknown before 2005.

What types of structures are and were historically located on the property? Are there residences? If so is there evidence of a heating oil tank, or septic system?

None since 2005.

Were hazardous materials historically used on the property? What types? (Pesticides, fertilizers, heating oil)

Normal chemicals associated with agricultural practices.

Was chemical (pesticide) use or mixing conducted on the property?

Unknown.

What types of wastes if any were historically generated on the property? How were they disposed of?

Unknown.

What types of wastes are currently generated on the property?

Tail water from agricultural irrigation.



Have there been any previous environmental investigations of the property? If so get copies. Are there any reports that describe the geology of the subject property.

No environmental investigations since 2005 and no known reports describing geology of property.

**Describe Current Condition of Project Site**

Is there evidence of Asbestos, PCBs, mercury, lead based paint issues with any structures needing to be demolished (observation only, no sampling)?

No.

Is there evidence of refuse, trash, or evidence of dumping or waste disposal activities?

No.

Is there evidence of soil staining, vegetation abnormalities, evidence of spills?

No.

Have there ever been USTs or ASTs on the subject property. If so, list the type and age of each tank (This would include agricultural tanks)

Unknown.

Are there vaults, utility access points?

Unknown.

Evidence of underground utilities/piping?

Unknown.

Are any wells located on the property? If so describe type and age.

No wells.

Are any pipelines on the property?

Unknown.



**AAI Questionnaire  
Tierra Property  
Imperial County, CA  
June, 2011**

In accordance with ASTM 1527-05 and in order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the user (client or client representative) must provide the following information (if available) to the *environmental professional* (URS). Failure to provide this information could result in a determination that “*all appropriate inquiry*” (AAI) is not complete.

1. Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

No.

2. Are you aware of any area use limitations (AULs), such as engineering controls, land use restriction or institutional controls that are in place at the property and/or have been filed or recorded in a registry under federal, tribal, state or local law?

No.

3. As the *user* of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property, so that you would have specialized knowledge of the chemicals and processes used by this type of business?

No.

4. Does the purchase price being paid for this property reasonable reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

We believe the price reflects fair market value.

5. Are you aware of commonly known or reasonably ascertainable information about the property that would help the *environmental professional* to identify conditions indicative of releases or threatened releases?





- a. Do you know the past uses of the property?  
No.
  - b. Do you know of specific chemicals that are present or once were present at the property?  
No.
  - c. Do you know of spills or chemical releases that have taken place at the property?  
No.
  - d. Do you know of any environmental cleanups that have taken place at the property?  
No.
6. As the *user* of this ESA, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?  
No.

In addition to the above questions, certain information should be collected, if available, and provided to the *environmental professional*. This information is intended to assist the *environmental professional*, but is not necessarily required to qualify for one of the LLPs.

- 7. The reason why the ESA is required (i.e. sale, purchase, exchange, etc.).  
Sale.
- 8. The complete name, correct address and/or parcel number for the property (a map or other documentation showing property location and boundaries is helpful).

Assessor Parcel Numbers (APN) 051-330-019-000 and 051-350-014-000

- 9. A description of the property (i.e. acreage, square footage, number of buildings, other structures, age of buildings, above/underground storage tanks, etc.)

285.9 gross acres with 243.69 net farmable acres irrigated by concrete delivery ditch via the Fern Side Main Canal, Gate 11-A.



10. Knowledge or previous owners and/or previous uses of the property?

No.

11. Current or previous deeds?

Deed on file in Tierra Management office.

12. The site contact name and number.

Property Manager – Jesse Couch – (928) 210-7794

13. Previous reports available? Any other available documentation, correspondence, etc. concerning the environmental condition of the property?

Unknown.

---

Completed by: \_\_\_\_\_

*Jesse Couch*

Date Completed: \_\_\_\_\_

*6-28-11*



## SITE HISTORY INTERVIEW

Name and title of person interviewed

Jesse Couch – Property Manager

Current Owner of the Property

Tierra Partners, LLC

Past Owners of the Property (give dates)

Brookfield California Land Holdings, LLC 1522 Brookhollow Dr., Suite 1 Santa Ana, CA. ? – January 9, 2010.

Current Use of the Property

Agricultural (hay) production.

Past Use of the Property (give dates)

Unknown before 2009.

What types of structures are and were historically located on the property? Are there residences? If so is there evidence of a heating oil tank, or septic system?

None known before 2009.

Were hazardous materials historically used on the property? What types? (Pesticides, fertilizers, heating oil)

Normal chemicals associated with agricultural use.

Was chemical (pesticide) use or mixing conducted on the property?

Unknown.

What types of wastes if any were historically generated on the property? How were they disposed of?

Unknown.

What types of wastes are currently generated on the property?

Tail water from agricultural irrigation.



Have there been any previous environmental investigations of the property? If so get copies. Are there any reports that describe the geology of the subject property.

No investigations since 2009 and no reports known to exist that describe geology of property.

**Describe Current Condition of Project Site**

Is there evidence of Asbestos, PCBs, mercury, lead based paint issues with any structures needing to be demolished (observation only, no sampling)?

No.

Is there evidence of refuse, trash, or evidence of dumping or waste disposal activities?

No.

Is there evidence of soil staining, vegetation abnormalities, evidence of spills?

No.

Have there ever been USTs or ASTs on the subject property. If so, list the type and age of each tank (This would include agricultural tanks)

Unknown.

Are there vaults, utility access points?

Unknown.

Evidence of underground utilities/piping?

Unknown.

Are any wells located on the property? If so describe type and age.

No wells.

Are any pipelines on the property?

Unknown.

# **AIR TRAFFIC HAZARDS ANALYSIS**

---

# **Air Traffic Hazards Analysis for the Campo Verde Solar Project Gen-Tie Line Alternatives**

Prepared for:

**Campo Verde Solar, LLC**

Prepared by:

**ENValue**

*February 2012*

# AIR TRAFFIC HAZARD ANALYSIS

## CAMPO VERDE SOLAR PROJECT

### Gen-Tie Structures

---

#### PROJECT OVERVIEW

The Campo Verde Solar Project is a proposed photovoltaic (PV) solar generating facility located in Imperial County approximately 7 miles southwest of the community of El Centro. This analysis evaluates the potential for the transmission structures associated with the gen-tie line that will transmit the energy generated at the Campo Verde Solar Project to impact air traffic in the area.

The gen-tie would be a double-circuit 230 kV transmission line. The solar project will be located on private lands and will build one of three gen-tie options being considered for the project to access the Imperial Valley Substation. Two of the gen-tie options would cross federal lands managed by the Bureau of Land Management (BLM) and one is located exclusively on private land. **Figure 1** shows the location of the solar project and the three gen-tie options being considered and they are described below:

- **Gen-Tie Route across BLM Land** - This Gen-Tie option would originate at the project substation/switchyard at the southern end of the project site and would cross BLM land south to the Imperial Valley Substation. The Gen-Tie would be built as a double-circuit 230 kV line and parallel follow existing roads. The Gen-Tie would cross portions of the proposed solar site and approximately 0.9 miles of BLM land.
- **Alternative Gen-Tie across BLM Land** - This alternative Gen-Tie would follow the existing IID S-line and associated access road south from the solar site to the Imperial Valley Substation. This Gen-Tie would cross portions of the solar site, approximately 0.4 miles of BLM land, and 0.4 miles of private land off the solar site.
- **Private Land Gen-Tie Alternative** - This alternative Gen-Tie would originate from the western side of the project site and cross approximately 1.75 miles of private lands to the west. The Gen-Tie would follow existing field roads and ditches to the Imperial Solar Energy Center West site. From this point, the proposed project would use available capacity on Imperial Solar Energy Center West's gen-tie line that has an approved right-of-way to the Imperial Valley Substation.

These options are described further below.

#### Proposed Gen-Tie Across BLM Land

The proposed Gen-Tie on BLM land would be a double-circuit 230 kV gen-tie line that would provide the interconnection for the Campo Verde Solar Project. After leaving the

solar site, this gen-tie line would be approximately 1.0 miles long with about 0.9 miles located on BLM-managed land.

This alternative gen-tie route would exit the southern portions of the solar site where it would cross IID's Westside Main Canal onto BLM managed land. On BLM managed land it would proceed south approximately 0.2 miles, southeast for approximately 0.6 miles and south for approximately 0.1 miles to the Imperial Valley Substation.

Approximately four structures would be located on the solar site and ten structures would be located on BLM land. **Figure 2** shows the proposed location of this gen-tie route and the associated structures.

### **Alternative Gen-Tie Across BLM Land**

The Alternative Gen-Tie across BLM land would also involve developing a double-circuit 230 kV line that would provide the interconnection for the Campo Verde Solar Project. It would parallel the existing IID S-line and would be approximately 0.8 miles long off the solar site with about 0.4 miles located on BLM land and 0.4 miles located on private lands off the solar site.

This alternative would begin on the southern portion of the solar site where it would cross IID's Westside Main Canal and proceed south approximately 0.4 miles on private land where it would enter BLM land and continue south for approximately 0.4 more miles to the Imperial Valley Substation.

The structures and facilities for this alternative would be the same as that described for the proposed gen-tie. Approximately four structures are proposed to be located on BLM land for this alternative and three would be located on private lands off the solar sites.

**Figure 3** shows the proposed location of this gen-tie route and associated structures.

### **Private Land Gen-Tie Alternative**

The Private Land (non-BLM ROW) Alternative would be approximately 1.75 miles long and located completely on private lands. This alternative would commence at the western portion of the Campo Verde Solar Project site where it would cross approximately 1.75 miles of privately-owned agricultural lands, cross IID's Westside Main Canal, and enter the Imperial Solar Energy Center West site. From the Imperial Solar Energy Center West site, it would utilize available capacity on the Imperial Solar Energy Center's gen-tie line that has an approved right-of-way to the Imperial Valley Substation.

**Figure 4** shows the proposed location of this gen-tie route and associated structures.

## **STRUCTURES**

The proposed Gen-Tie line would be designed for two 230kV circuits with three conductors per circuit. The line would also have two shield wires with either one composed of extra high strength (EHS) steel wire and one or both including an OPGW (Optical Ground Wire) constructed of aluminum and steel core which may carry glass fibers within its core for communications. Single steel pole structures with the span



length between structures ranging from 400 to 800 feet would be used. Assemblies of insulators would be used to position and support each of the conductor bundles while maintaining electrical design clearances between the conductors and the towers.

The project would use self-supporting single steel poles made of self-weathering or galvanized steel to better blend into the surrounding environment. An illustration of the double-circuit 230 kV steel pole structures that would be used for this project is provided in **Figure 5a** and **5b**. Structure heights would vary from approximately 100 to 135 feet depending on terrain. The standard height is expected to be approximately 120 feet. Span lengths would range from approximately 400 to 800 feet.

## **AIR HAZARD ANALYSIS**

As mentioned above, only one of the three gen-tie options being considered would be built to provide the needed interconnection for the Campo Verde Solar Project. Also, the gen-tie structures are expected to average about 120 feet in height.

Until final design is completed, it is currently not known which of the individual structures would need to be designed with a height greater than 120 feet in order to meet required clearances. Therefore, a height of up to 135 feet for each of the structures associated with the gen-tie alternatives was used in this analysis in order to be conservative.

## **FAA Notice Criteria Tool**

The requirements for filing with the Federal Aviation Administration (FAA) for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. You must file with the FAA at least 45 days prior to construction if:

- A structure will exceed 200ft above ground level
- A structure will be in proximity to an airport and will exceed the slope ratio
- A structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...)
- A structure will be in an instrument approach area and might exceed part 77 Subpart C
- A structure will be on an airport or heliport

More details are provided in the Code of Federal Regulations [CFR Title 14 Part 77.9](#).

The FAA has an online Notice Criteria Tool to determine whether a structure would potentially create a hazard and would require notice to the FAA.

Data for a representative structure from each of the three gen-tie alternatives was entered into the FAA Notice Criteria Tool. The structures entered into the Tool were selected to reflect worst-case conditions – closest proximity to local airports or highest ground elevation.

The results from the screening tool indicate that notice to the FAA would not be required for the structures associated with any of the three gen-tie alternatives. The notice tool results are shown in Appendix A.

## **DoD Preliminary Screening Tool**

The DoD Preliminary Screening Tool provides a preliminary review of potential impacts to Long-Range and Weather Radar(s), Military Training Route(s) and Special Airspace(s) prior to official OE/AAA filing. This tool produces a map relating the structure to any of the DoD/DHS and NOAA resources listed above. The use of this tool provides a first level of feedback and single points of contact within the DoD/DHS and NOAA to discuss impacts/mitigation efforts on the military training mission and NEXRAD Weather Radars. For this project, this tool was used to determine whether there would be potential impacts to military airspace.

The results from this screening tool show that neither of the two gen-tie options on BLM land would have potential impacts to military airspace. The results for the private land gen-tie suggested additional consultation with the local military installation to determine whether impacts could occur. They have been contacted but have not yet provided additional information. The screening tool results are shown in Appendix B.

**APPENDIX A**  
**FAA NOTICE TOOL RESULTS**

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference [CFR Title 14 Part 77.9](#).

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
- your structure will be in proximity to an airport and will exceed the slope ratio
- your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...)
- your structure will emit frequencies, and does not meet the conditions of the [FAA Co-location Policy](#)
- your structure will be in an instrument approach area and might exceed part 77 Subpart C
- your structure will be on an airport or heliport

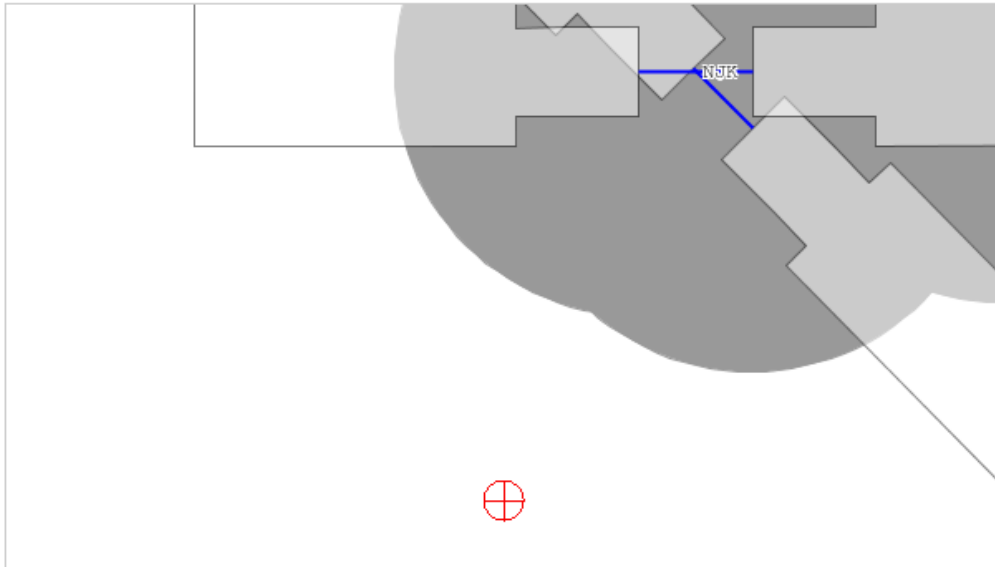
If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the [Air Traffic Areas of Responsibility map](#) for Off Airport construction, or contact the [FAA Airports Region / District Office](#) for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

Latitude:	<input type="text" value="32"/> Deg	<input type="text" value="43"/> M	<input type="text" value="55"/> S	<input type="text" value="N"/>
Longitude:	<input type="text" value="115"/> Deg	<input type="text" value="43"/> M	<input type="text" value="23"/> S	<input type="text" value="W"/>
Horizontal Datum:	<input type="text" value="NAD83"/>			
Site Elevation (SE):	<input type="text" value="-25"/> (nearest foot)			
Structure Height (AGL):	<input type="text" value="135"/> (nearest foot)			
Traverseway:	<input type="text" value="No Traverseway"/>			
	(Additional height is added to certain structures under 77.9(c))			
Is structure on airport:	<input checked="" type="radio"/> No			
	<input type="radio"/> Yes			
	<input type="button" value="Submit"/>			

### Results

You do not exceed Notice Criteria.



## FAA NOTICE CRITERIA TOOL RESULTS

### Structure Location on BLM Land - West Route

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference [CFR Title 14 Part 77.9](#).

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
- your structure will be in proximity to an airport and will exceed the slope ratio
- your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...)
- your structure will emit frequencies, and does not meet the conditions of the [FAA Co-location Policy](#)
- your structure will be in an instrument approach area and might exceed part 77 Subpart C
- your structure will be on an airport or heliport

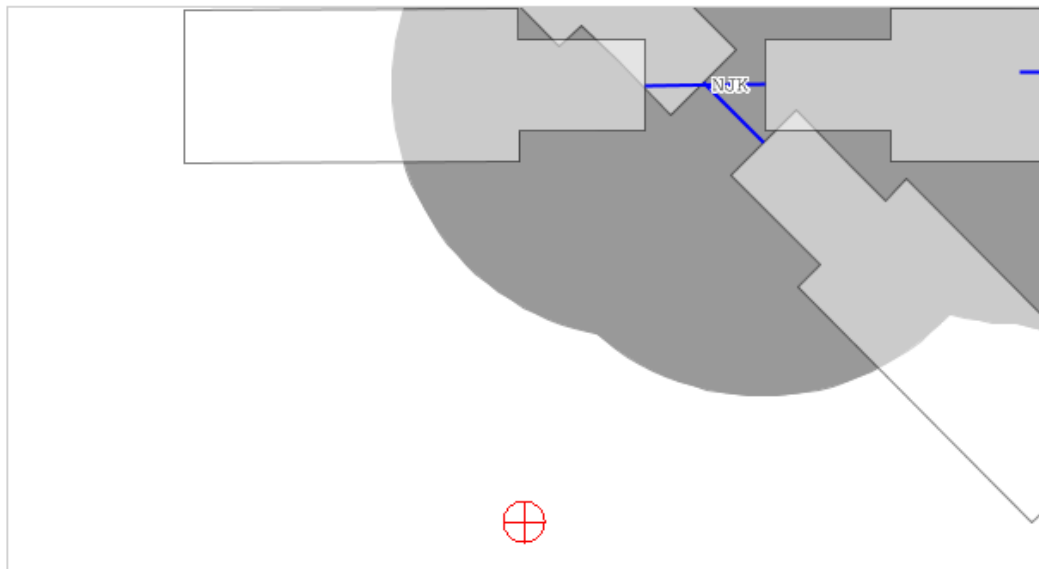
If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the [Air Traffic Areas of Responsibility map](#) for Off Airport construction, or contact the [FAA Airports Region / District Office](#) for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

Latitude:	<input type="text" value="32"/> Deg <input type="text" value="44"/> M <input type="text" value="01"/> S <input type="text" value="N"/>
Longitude:	<input type="text" value="115"/> Deg <input type="text" value="43"/> M <input type="text" value="6"/> S <input type="text" value="W"/>
Horizontal Datum:	<input type="text" value="NAD83"/>
Site Elevation (SE):	<input type="text" value="-25"/> (nearest foot)
Structure Height (AGL):	<input type="text" value="135"/> (nearest foot)
Traverseway:	<input type="text" value="No Traverseway"/> (Additional height is added to certain structures under 77.9(c))
Is structure on airport:	<input checked="" type="radio"/> No <input type="radio"/> Yes
<input type="button" value="Submit"/>	

### Results

You do not exceed Notice Criteria.



## FAA NOTICE CRITERIA TOOL RESULTS

Structure Location on Private Land – At Project Switchyard

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference [CFR Title 14 Part 77.9](#).

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
- your structure will be in proximity to an airport and will exceed the slope ratio
- your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...)
- your structure will emit frequencies, and does not meet the conditions of the [FAA Co-location Policy](#)
- your structure will be in an instrument approach area and might exceed part 77 Subpart C
- your structure will be on an airport or heliport

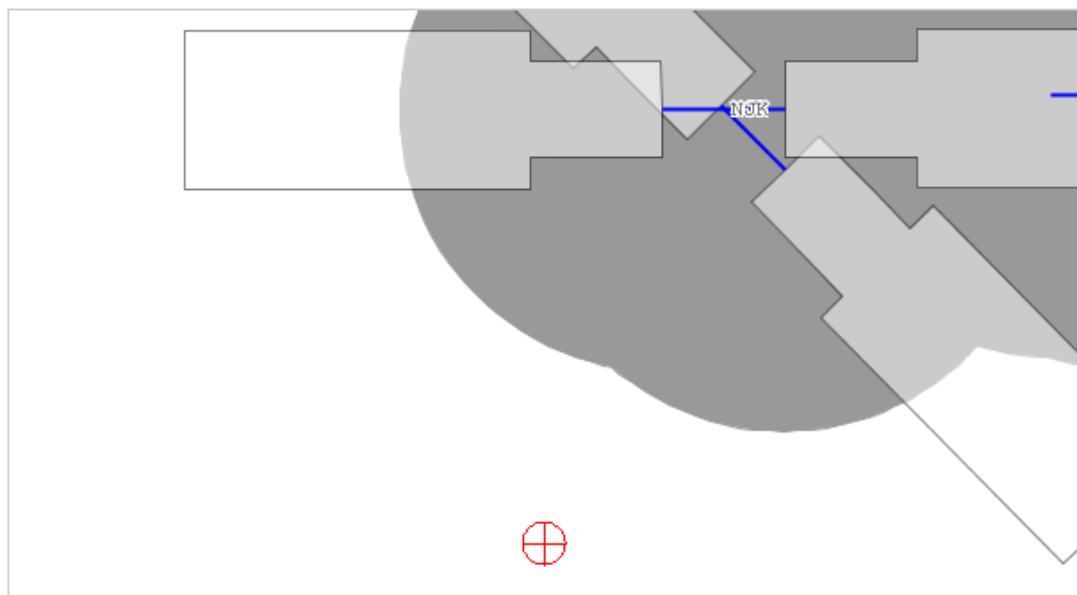
If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the [Air Traffic Areas of Responsibility map](#) for Off Airport construction, or contact the [FAA Airports Region / District Office](#) for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

Latitude:	<input type="text" value="32"/> Deg	<input type="text" value="44"/> M	<input type="text" value="15"/> s	<input type="text" value="N"/>
Longitude:	<input type="text" value="115"/> Deg	<input type="text" value="42"/> M	<input type="text" value="59"/> s	<input type="text" value="W"/>
Horizontal Datum:	<input type="text" value="NAD83"/>			
Site Elevation (SE):	<input type="text" value="5"/> (nearest foot)			
Structure Height (AGL):	<input type="text" value="135"/> (nearest foot)			
Traverseway:	<input type="text" value="No Traverseway"/>			
<small>(Additional height is added to certain structures under 77.9(c))</small>				
Is structure on airport:	<input checked="" type="radio"/> No			
	<input type="radio"/> Yes			
	<input type="button" value="Submit"/>			

### Results

You do not exceed Notice Criteria.



## FAA NOTICE CRITERIA TOOL RESULTS

Structure location on BLM Land – At Imperial Valley Substation

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference [CFR Title 14 Part 77.9](#).

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
- your structure will be in proximity to an airport and will exceed the slope ratio
- your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...)
- your structure will emit frequencies, and does not meet the conditions of the [FAA Co-location Policy](#)
- your structure will be in an instrument approach area and might exceed part 77 Subpart C
- your structure will be on an airport or heliport

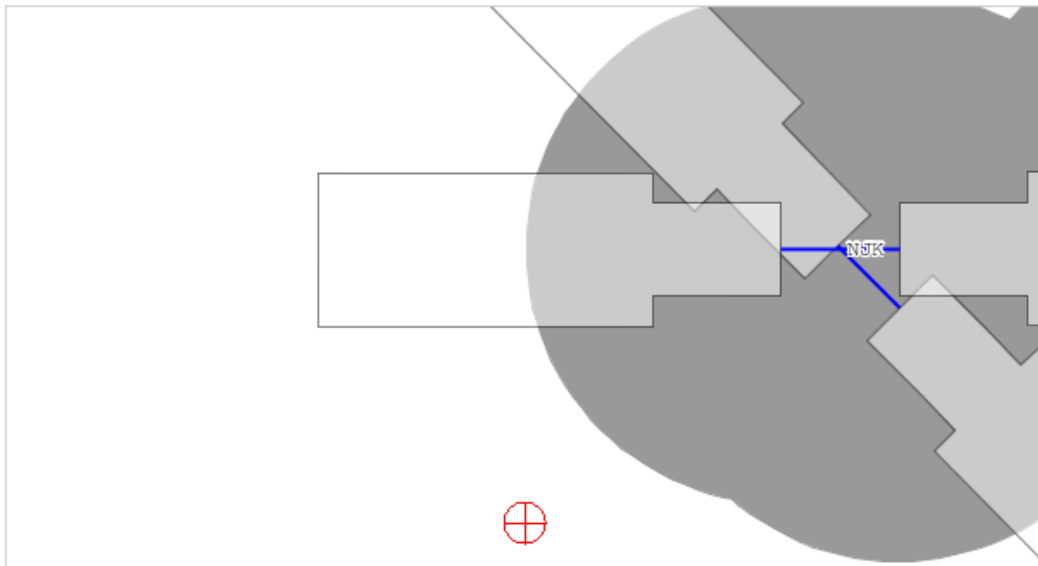
If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the [Air Traffic Areas of Responsibility map](#) for Off Airport construction, or contact the [FAA Airports Region / District Office](#) for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

Latitude:	<input type="text" value="32"/> Deg <input type="text" value="46"/> M <input type="text" value="10"/> S <input type="text" value="N"/>
Longitude:	<input type="text" value="115"/> Deg <input type="text" value="45"/> M <input type="text" value="10"/> S <input type="text" value="W"/>
Horizontal Datum:	<input type="text" value="NAD83"/>
Site Elevation (SE):	<input type="text" value="-38"/> (nearest foot)
Structure Height (AGL):	<input type="text" value="135"/> (nearest foot)
Traverseway:	<input type="text" value="No Traverseway"/>
<small>(Additional height is added to certain structures under 77.9(c))</small>	
Is structure on airport:	<input checked="" type="radio"/> No <input type="radio"/> Yes
<input type="button" value="Submit"/>	

### Results

You do not exceed Notice Criteria.



## FAA NOTICE CRITERIA TOOL RESULTS

### Structure location on Private Land – Non-BLM Gen-Tie Option (Northernmost Structure)

**APPENDIX B**  
**DoD SCREENING TOOL RESULTS**



## DoD Preliminary Screening Tool

### Disclaimer:

- The DoD Preliminary Screening Tool enables developers to obtain a preliminary review of potential impacts to Long-Range and Weather Radar(s), Military Training Route(s) and Special Airspace(s) prior to official OE/AAA filing. This tool will produce a map relating the structure to any of the DoD/DHS and NOAA resources listed above. The use of this tool is **100 % optional** and will provide a first level of feedback and single points of contact within the DoD/DHS and NOAA to discuss impacts/mitigation efforts on the military training mission and NEXRAD Weather Radars. **The use of this tool does not in any way replace the official FAA processes/procedures.**

### Instructions:

- Select a screening type for your initial evaluation. Currently the system supports pre-screening on:
  - Air Defense and Homeland Security radars(Long Range Radar)
  - Weather Surveillance Radar-1988 Doppler radars(NEXRAD)
  - Military Operations
- Enter either a single point or a polygon and click submit to generate a long range radar analysis map.
- Military Operations is only available for a single point.
- At least three points are required for a polygon, with an optional fourth point.
- The largest polygon allowed has a maximum perimeter of 100 miles.

Screening Type:  Geometry Type:

Point	Latitude				Longitude			
	Deg	Min	Sec	Dir	Deg	Min	Sec	Dir
1	32	43	55	N	115	43	23	W

Horizontal Datum:

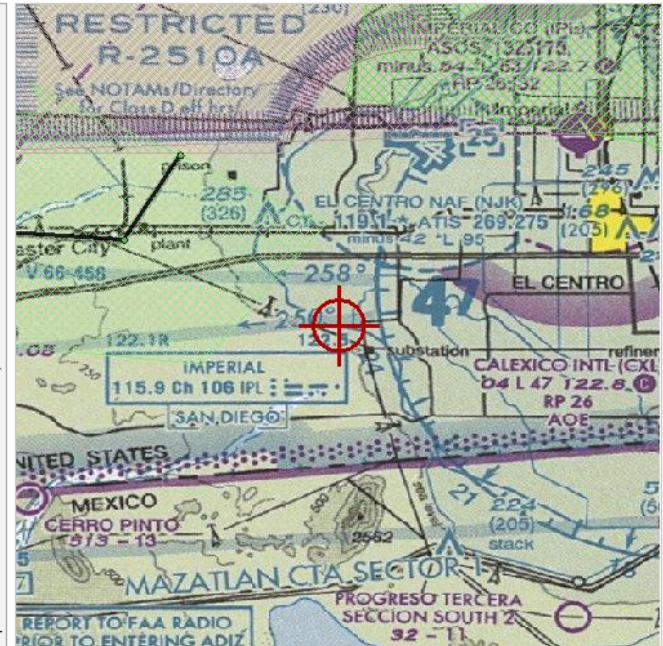
The preliminary review of your proposal does not return any likely impacts to military airspace. Please contact Gary Munsterman at the USAF Regional Environmental Coordinator at (415)977-8884 for confirmation and documentation.

The preliminary review of your proposal does not return any likely impacts to military airspace. Please contact the US Navy Representative, FAA Western Service Area at the USN Regional Environmental Coordinator at (425) 227-2740 for confirmation and documentation.

The preliminary review of your proposal does not return any likely impacts to military airspace. Please contact LTC Thomas C. Petty at the USA Regional Environmental Coordinator at (425) 227-2955 for confirmation and documentation.

The preliminary review of your proposal does not return any likely impacts to military airspace. Please contact the US Marine Corps Representative, FAA Western Service Area at the USMC Regional Environmental Coordinator at (425) 227-2665 for confirmation and documentation.

**This is a preliminary review of your proposal and does not preclude official FAA processes.**  
Your search data is not retained and the privacy of all your searches is assured.



Any questions interpreting the map, please email Steve Sample with your question/s and phone number at [steven.sample@pentagon.af.mil](mailto:steven.sample@pentagon.af.mil)

## DoD PRELIMINARY SCREENING TOOL RESULTS

### Structure Location on BLM Land - West Route

## DoD Preliminary Screening Tool

### Disclaimer:

- The DoD Preliminary Screening Tool enables developers to obtain a preliminary review of potential impacts to Long-Range and Weather Radar(s), Military Training Route(s) and Special Airspace(s) prior to official OE/AAA filing. This tool will produce a map relating the structure to any of the DoD/DHS and NOAA resources listed above. The use of this tool is **100 % optional** and will provide a first level of feedback and single points of contact within the DoD/DHS and NOAA to discuss impacts/mitigation efforts on the military training mission and NEXRAD Weather Radars. **The use of this tool does not in any way replace the official FAA processes/procedures.**

### Instructions:

- Select a screening type for your initial evaluation. Currently the system supports pre-screening on:
  - Air Defense and Homeland Security radars(Long Range Radar)
  - Weather Surveillance Radar-1988 Doppler radars(NEXRAD)
  - Military Operations
- Enter either a single point or a polygon and click submit to generate a long range radar analysis map.
- Military Operations is only available for a single point.
- At least three points are required for a polygon, with an optional fourth point.
- The largest polygon allowed has a maximum perimeter of 100 miles.

Screening Type:  Geometry Type:

Point	Latitude				Longitude			
	Deg	Min	Sec	Dir	Deg	Min	Sec	Dir
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Horizontal Datum:

The preliminary review of your proposal does not return any likely impacts to military airspace. Please contact Gary Munsterman at the USAF Regional Environmental Coordinator at (415)977-8884 for confirmation and documentation.

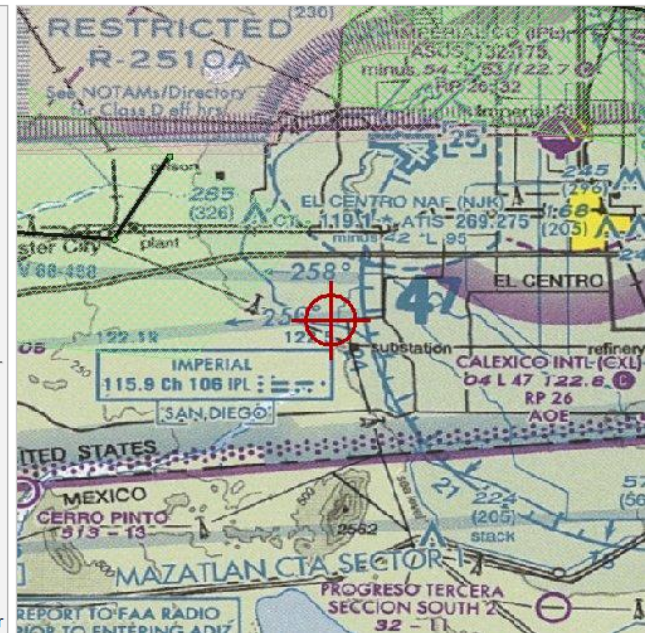
The preliminary review of your proposal does not return any likely impacts to military airspace. Please contact the US Navy Representative, FAA Western Service Area at the USN Regional Environmental Coordinator at (425) 227-2740 for confirmation and documentation.

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## DoD PRELIMINARY SCREENING TOOL RESULTS

### Structure Location on Private Land – At Project Switchyard

## DoD Preliminary Screening Tool

faa.gov Tools:  Print this page

### Disclaimer:

- The DoD Preliminary Screening Tool enables developers to obtain a preliminary review of potential impacts to Long-Range and Weather Radar(s), Military Training Route(s) and Special Airspace(s) prior to official OE/AAA filing. This tool will produce a map relating the structure to any of the DoD/DHS and NOAA resources listed above. The use of this tool is **100 % optional** and will provide a first level of feedback and single points of contact within the DoD/DHS and NOAA to discuss impacts/mitigation efforts on the military training mission and NEXRAD Weather Radars. **The use of this tool does not in any way replace the official FAA processes/procedures.**

### Instructions:

- Select a screening type for your initial evaluation. Currently the system supports pre-screening on:
  - Air Defense and Homeland Security radars(Long Range Radar)
  - Weather Surveillance Radar-1988 Doppler radars(NEXRAD)
  - Military Operations
- Enter either a single point or a polygon and click submit to generate a long range radar analysis map.
- Military Operations is only available for a single point.
- At least three points are required for a polygon, with an optional fourth point.
- The largest polygon allowed has a maximum perimeter of 100 miles.

Screening Type:  Geometry Type:

Point	Latitude				Longitude			
	Deg	Min	Sec	Dir	Deg	Min	Sec	Dir
1	<input type="text" value="32"/>	<input type="text" value="44"/>	<input type="text" value="15"/>	<input type="text" value="N"/>	<input type="text" value="115"/>	<input type="text" value="42"/>	<input type="text" value="59"/>	<input type="text" value="W"/>

Horizontal Datum:

The preliminary review of your proposal does not return any likely impacts to military airspace. Please contact Gary Munsterman at the USAF Regional Environmental Coordinator at (415)977-8884 for confirmation and documentation.

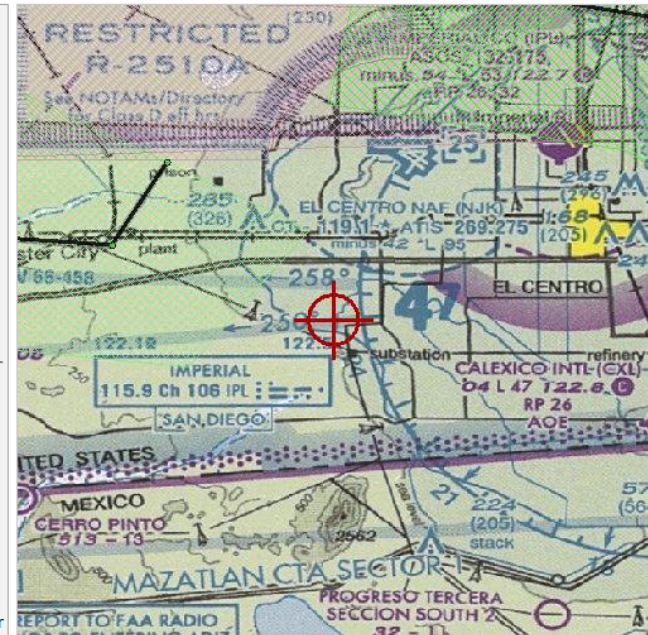
The preliminary review of your proposal does not return any likely impacts to military airspace. Please contact the US Navy Representative, FAA Western Service Area at the USN Regional Environmental Coordinator at (425) 227-2740 for confirmation and documentation.

The preliminary review of your proposal does not return any likely impacts to military airspace. Please contact LTC Thomas C. Petty at the USA Regional Environmental Coordinator at (425) 227-2955 for confirmation and documentation.

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Any questions interpreting the map, please email Steve Sample with your question/s and phone number at [steven.sample@pentagon.af.mil](mailto:steven.sample@pentagon.af.mil)

## DoD PRELIMINARY SCREENING TOOL RESULTS

### Structure location on BLM Land – At Imperial Valley Substation

## DoD Preliminary Screening Tool

### Disclaimer:

- The DoD Preliminary Screening Tool enables developers to obtain a preliminary review of potential impacts to Long-Range and Weather Radar(s), Military Training Route(s) and Special Airspace(s) prior to official OE/AAA filing. This tool will produce a map relating the structure to any of the DoD/DHS and NOAA resources listed above. The use of this tool is **100 % optional** and will provide a first level of feedback and single points of contact within the DoD/DHS and NOAA to discuss impacts/mitigation efforts on the military training mission and NEXRAD Weather Radars. **The use of this tool does not in any way replace the official FAA processes/procedures.**

### Instructions:

- Select a screening type for your initial evaluation. Currently the system supports pre-screening on:
  - Air Defense and Homeland Security radars(Long Range Radar)
  - Weather Surveillance Radar-1988 Doppler radars(NEXRAD)
  - Military Operations
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Screening Type:  Geometry Type:

Point	Latitude				Longitude			
	Deg	Min	Sec	Dir	Deg	Min	Sec	Dir
1	<input type="text" value="32"/>	<input type="text" value="46"/>	<input type="text" value="10"/>	<input type="text" value="N"/>	<input type="text" value="115"/>	<input type="text" value="45"/>	<input type="text" value="10"/>	<input type="text" value="W"/>

Horizontal Datum:

Your structure falls within the confines of VR288, and may have an impact on military operations. For a more detailed review, please contact Scott Hall at (951)655-4849. This POC will review the analysis and identify any additional areas of concern. Upon completion of this process, the POC will provide you a letter stating the results of the review.

**This is a preliminary review of your proposal and does not preclude official FAA processes.**  
Your search data is not retained and the privacy of all your searches is assured.



Any questions interpreting the map, please email Steve Sample with your question/s and phone number at [steven.sample@pentagon.af.mil](mailto:steven.sample@pentagon.af.mil)

## DoD PRELIMINARY SCREENING TOOL RESULTS

### Structure location on Private Land – Non-BLM Gen-Tie Option (Northernmost Structure)

# **APPENDIX I**

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## **CONCEPTUAL DRAINAGE STUDY AND STORMWATER QUALITY ANALYSIS**

**CAMPO VERDE SOLAR CONCEPTUAL DRAINAGE STUDY  
AND STORM WATER QUALITY ANALYSIS**

Date: January 16, 2012

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## **1.0 INTRODUCTION**

### **1.1 STUDY DESCRIPTION**

The purpose of this study is to describe the existing and proposed hydrologic conditions for the Campo Verde Solar project. The study will show that the proposed condition does not substantially increase the peak runoff flowrate from the site, substantially maintains existing drainage patterns, detains runoff in accordance with County of Imperial standards, and results in no significant impact to the Imperial Irrigation District (IID) Drain system.

This study also includes an analysis of storm water quality concerns as they pertain to the site with respect to the California Environmental Quality Act (CEQA) and demonstrates that there are no significant impacts from the project in accordance with CEQA Guidelines, Appendix G.

### **1.2 PROJECT DESCRIPTION**

The proposed 1,998-acre Campo Verde Solar project is located between Drew Road and the Westside Main Canal, south of Interstate 8. The site is located in an unincorporated area of the County of Imperial, approximately 10 miles west of El Centro. The project proposes to construct a solar energy power plant within a limit of work of approximately 1,812 acres. See Vicinity Map in Appendix A.

The (IID) has constructed a network of Canals and Drains that are located both within the project and along portions of the perimeter of the project. The IID Canals convey water to customers and the IID Drains collect and convey agricultural and storm water runoff from (surface and subsurface). The subject properties are served by IID Canals and discharge to IID Drains that are on and adjacent to the subject properties.

Storm water detention can be defined as the impoundment of runoff resulting from a rainfall event, and either slow release of impounded water to receiving water bodies or infiltration into underlying soil. The general purpose of detention is to attenuate (lessen) peak flow rates of runoff from a site.

Detention requirements over the project site will be satisfied by a combination of detention basins (typically less than 3.5' deep) located outside the solar arrays and detention of runoff in shallow ponded areas (less than 12" deep) under the arrays such that the County of Imperial standard of 3" of detention over the project site is satisfied. Locations and sizes of detention basins and limits of shallow ponding will be determined at the time of final engineering. The design of the project proposes to utilize both connection to existing discharge locations to the IID Drain System and percolation into the underlying soil. Preliminary infiltration tests have been performed for the site and are provided for reference in Appendix B.

### **1.3 HYDROLOGIC SETTING**

The perimeter of the project site is surrounded by public roads, IID Canals, and IID Drains (see Appendix E-1, Existing Basin Map). Based upon review of topography and field investigation, it is determined that offsite flow does not enter the project development areas. Therefore further analysis of offsite runoff is a part of this study. Under existing conditions, two types of flow, agricultural and storm water, are discharged to the IID Drains through a combination of surface runoff collection and subsurface perforated tile drain collection. During the life of the proposed project, agricultural runoff from the project limits to the Drains will cease and the Drains will only receive storm water runoff.

The site is underlain by a network of perforated tile drains (typically clay pipes). This network of tile drains were installed by prior landowners (farmers) to collect runoff that percolates into the soil. Tile drains will only be removed from the site if they are in conflict with proposed septic leachfield systems.

In accordance with IID requirements, tile drains will be cut and capped near the point of discharge to the IID Drains, thus tile drain flow will be removed as a source of water to the IID Drains.

IID facilities that accept flow from the project include the Dixie Drain #3, Dixie Drain #3A, Dixie Drain #3C, Wixom Drain, Diehl Drain, and Fig Drain. Some of these facilities combine within the project limits such that flow from the project is conveyed in only three Drains, the Dixie Drain #3, Wixom Drain, and the Fig Drain. Dixie Drain #3 discharges to the Salt Creek approximately 1.2 miles north of the project and flow is conveyed in the Salt Creek approximately 6.3 miles before ultimately discharging to the New River. The Wixom and Fig Drains discharge to the Fig Evaporation Pond immediately north and east of the project site, which then discharges to the New River approximately 1.1 miles from the site.

Based upon a conversation with the IID, the IID Drain system was not designed to convey runoff from large storm events. Rather, the primary purpose of the Drains is to convey agricultural runoff. The Drains typically have the capacity to convey flow from the 5-year to 10-year storm event. Runoff from larger storm events (for example the 100-year event) is detained within low lying areas of agricultural fields until the peak of the storm has passed, after which the detained runoff is slowly discharged to the Drains via pipe connections from surface collection and/or tile drains that are typically 12" in diameter or less.

To mimic the existing condition and provide storage of storm water runoff, the County of Imperial requires that projects provide storage for 3" of runoff from project sites. The County of Imperial further requires that storage areas provided with development be designed such that they are able to drain within 72 hours. In addition, the IID does not allow pipe connections from development to IID Drains that are greater than 12" in diameter. The final design of the project will satisfy each of these requirements.

The project is located within FEMA flood hazard Zone X. Zone X corresponds to areas that are located above the flood level having a 1% chance of occurrence (the 100-year event). Please see the FEMA FIRMettes (reduced size maps providing FIRM information for a project site rather than the entire area covered by a full sized FIRM) located in Appendix For illustration of the project location with respect to FEMA flood hazard zones.

## 2.0 HYDROLOGIC ANALYSIS

### 2.1 METHOD OF ANALYSIS

Hydrologic calculations are made within this section of the study in accordance with the following parameters/criteria:

1. The total volume of water to be detained will be equal to 3" of runoff from the project per County of Imperial Public Works Department requirement.
2. Project preference is for a combination of detention basins outside the arrays to be approximately 3'-3.5' deep and detention of runoff in shallow ponded areas (less than 12" deep) under the arrays.
3. Infiltration of runoff into native soils is preferred, where percolation rates allow.
4. Discharge of runoff to IID Drains via 12" storm drain connection per IID standards for connection of private facilities, may be utilized where necessary. Existing surface connection points to the IID Drain system will either remain in their existing location and continue to be used if necessary, relocated as necessary, or cut and capped if no longer needed. Addition of connection points to the IID Drain system is not proposed.
5. The volume of runoff from the 100-year storm is calculated by the Rational Method with weighted C value.
6. Information gained from the National Resource Conservation Service (NRCS) website is used to determine hydrologic soil classification.
7. National Oceanic and Atmospheric Administration (NOAA) precipitation data is used for determination of the 100-year storm rainfall.

See Appendix C for reference material pertaining to County standards and Rational Method parameters (including off coefficient).

### 2.2 RATIONAL METHOD PARAMETERS

The Rational Method, used for determination of runoff volumes, is provided by the equation below:

$$V = C \times P \times A$$

V = Volume of runoff, acre-feet

C = Runoff coefficient

P = Precipitation, converted to feet

A = Area, acres

### 2.2.1 RUNOFF COEFFICIENT

The runoff coefficient is an empirical value to estimate the runoff expected from rainfall. The value for the runoff coefficient is based on site characteristics that influence runoff including topography, land use, vegetation, and soil type. To assign runoff coefficients to existing and proposed conditions, multiple references were reviewed and compared for consistency. Chapter 810 of the CalTrans Highway Design Manual (HDM, which is commonly used and accepted for use in the County of Imperial) and Chapter 13 of the Wisconsin DOT Facilities Development Manual (which provides runoff coefficient reference for row crops, has been accepted for use by the County of Imperial on a similar, recent project, and due to its relevance to the existing land use of farming row crops) were reviewed.

#### a. Soil Group Determination:

The runoff coefficient was determined for existing and proposed conditions through consideration of two separate sources and reference to the soil classes found onsite as given in the NRCS Soil Survey for Imperial County. From the soil survey, the following soil types are located onsite:

Table 1 – Soil Types

Soil Map Symbol	Soil Type Name	Soil Description	Hydrologic Soil Group
102	Badland	-	D
110	Holtville	Silty clay	C
114	Imperial	Silty clay loam	C
115	Imperial	Silty clay loam	C
121	Meloland	Loamy fine sand to silt loam	C
122	Meloland	Loamy fine sand to silt loam, silty clay loam	C
123	Meloland	Loamy fine sand to silt loam, silty clay loam	C
142	Vint	Loamy fine sand	B
144	Vint	Loamy fine sand	B

GIS information from the soil survey was overlaid into the project limits to determine the distribution of soil groups as a percentage of the site and to graphically determine the locations of the different hydrologic soil groups for use in hydrologic calculations. Table 2 below provides the site breakdown in tabular format and the Soils Group Map in Appendix C graphically shows the locations of soil groups.

Table 2 – Soil Group Distribution

Hydrologic Soil Group	% of Site
A	0%
B	12.4%
C	86.2%
D	1.4%

**b. Existing Condition "C" Factor:**

For the existing condition, Figure 819.2A of the CalTrans HDM was reviewed to determine a runoff coefficient for cultivated field areas. Below is a summary of the components of the runoff coefficient per Figure 819.2A.

Table 3 – Existing "C" Factor Per HDM Figure 819.2A

Component	Manual Description	Site Condition	"C" Contribution
Relief	Relatively flat, slopes 0%-5%	Slopes generally < 0.5%	0.08
Soil Infiltration	Clay/shallow loams or sandy/silty loams	Silty clay loams, fine sandy loams	0.08
Vegetal Cover	90% of area in good cover	Well cultivated crops > 90% cover	0.05
Surface Storage	Well defined system of small drainageways	Rows crops graded to convey irrigation well	0.09
Aggregate C Factor			0.30

The runoff coefficient determined from Figure 819.2A of the HDM was then cross-checked against Figure 2, Detail B of Procedure 13-10-5 from the WDOT Manual for consistency with another accepted reference for runoff coefficient from cultivated areas. Figure 2, Detail B provides a range of runoff coefficients based on land use, soil group, slope of topography, and storm recurrence interval. The project site is soil groups C (86.2%), B (12.4%), and D (1.4%), topographic slope is between 0% and 2%, and the recurrence interval being considered is the 100-year event. For a land use of row crops, the runoff coefficients for each soil group and the weighted "C" factor for the site are provided in Table 4 below.

Table 4 – Existing "C" Factor Per WDOT Manual, Figure 2, Detail B

Hydrologic Soil Group	"C" Factor	% of Site	Weighted "C" Factor
B	0.26	12.4	0.032
C	0.30	86.2	0.2586
D	0.34	1.4	0.0476
Project Site Weighted "C" Factor			0.296

Determination of the existing condition runoff coefficient from both methods is consistent and for hydrologic calculation purposes, an existing condition runoff coefficient of 0.30 is to be used.

**c. Proposed Condition “C” Factor:**

For the proposed condition, a study was performed on a representative portion of the project (Basin D3, see Exhibit E-2, Proposed Basin Map for the location of the study area), and the results of the study were then applied throughout the project. For the study, the following elements were considered:

- a. Perimeter Roadways – typical developed areas feature a 20’ wide perimeter roadway consisting of native material compacted to 90%. Figure 2, Detail B of the WDOT Manual gives a runoff coefficient range of 0.40 - 0.60 for gravel roads and shoulders and a value of 0.60 is selected for the 100-year storm. The CalTrans HDM does not provide a runoff coefficient for gravel or base roads.
- b. Array clearing and compaction – at minimum, array areas are to be prepared which may include conventional grading, disked and rolled and may be scarified and recompacted, pending results of pile testing to be performed during final engineering. Due to the potential for soils under the arrays to be compacted, they are assigned the same runoff coefficient (0.60) as the perimeter roadways. Note that final compaction requirements are dependent on pile testing, which will be performed at the time of final engineering. Assignment of a runoff coefficient of 0.60 to arrays is a conservative, worst-case approach taken at this preliminary phase.
- c. Power Conversion Station (PCS) Shelters – each array block will require a sheltered PCS on impervious concrete foundation. Both Figure 2B of the HDM and Figure 2, Detail B of the WDOT Manual give a runoff coefficient range of 0.75 – 0.95 for roofs, and a value of 0.95 is selected for the 100-year storm.
- d. Detention basins – runoff from arrays will typically be directed to detention basins located downstream of arrays. Calculations assume soils in the detention basins are in a saturated state or inundated when considering the 100-year storm. Therefore a runoff coefficient of 1.00 is used for the footprints of detention basins.
- e. Remaining areas – remaining areas within the developable limit of work outside of the above listed elements considered have the potential to be developed as part of the project and are therefore assigned a runoff coefficient equal to that of the gravel/base roads and areas under the arrays (0.60).

The weighted runoff coefficient for the study area is determined in the table below:

Table 5 – Proposed “C” Factor

Description	Runoff Coefficient	Area, ac	% of Total Area	Weighted C
Detention Basin	1	11.3	7.1%	0.071
PCS Shelters	0.95	0.2	0.1%	0.001
Arrays/Roads/Fencing/Etc.	0.6	149.2	92.8%	0.557
Total		160.7	100.0%	0.629

The runoff coefficient for the proposed condition to be used in hydrologic calculations is 0.63. As the proposed project site is similar in composition, this weighted coefficient is used for the entire site.

### 2.2.2 PRECIPITATION

A precipitation estimate for the 100-year storm is obtained through referencing data available on the NOAA website for Imperial Valley. A storm duration of 24-hours is assumed, and the corresponding precipitation estimate is 3.76 inches. NOAA data is provided in Appendix D.

### 2.2.3 AREA

The project site has been delineated into tributary drainage basins for the existing and proposed conditions (see Appendix E-1 and E-2 for Basin Maps). Ultimate points of discharge to the IID Drains for the existing and proposed conditions are similar, however - due to grading required for the development of arrays - for the proposed condition some of the smaller existing drainage sub-basins are combined into larger drainage basins.

The project site is divided into 3 watersheds that are tributary to four distinct Drains that are the ultimate points of discharge from the subject site – the Dixie Drain #3 (for which basins are noted with a “D”), the Wixom Drain (for which basins are noted with a “W”), the Diehl Drain (for which basins are noted with a “L”), and the Fig Drain (for which basins are noted with a “F”).

Table 6 on the following page provides a summary of the drainage basin and sub-basin areas for the existing and proposed conditions. Note that flow from the Diehl Drain is discharged to the Fig Drain within the project limits. As such, the Drains conveying flow from the project to ultimate receiving waters are the Dixie Drain #3, Wixom Drain, and the Fig Drain.

Note that Table 6 assumes that flow is detained and discharged into receiving Drains. As discussed in Section 2.3.2.b of this study, preliminary infiltration tests show that the site has the potential to infiltrate runoff, thus limiting discharge to the Drain system.

In the proposed condition, as some of the drainage sub-basins are combined into larger drainage basins, in three instances flows are routed from one IID Drain tributary basin to another IID Drain tributary area. These three instances are summarized below:

1. Flow from Basin W2 will be routed/combined with flow from Basin D7
2. Flow from Basin L1 will be routed/combined with flow from Basin W3
3. Flow from Basin L2 will be routed/combined with flow from Basin F1

Although there is a routing of flow from being tributary to one IID Drain to being tributary to another IID Drain (for example from the Wixom Drain to the Dixie Drain #3 in instance 1 above), because the project proposes to infiltrate runoff, there will not be an impact to the receiving Drain. Further the routing of flow described above results in a net decrease in area potentially tributary to the Fig Drain, Diehl Drain, and the Wixom Drain in the proposed condition when compared to the existing condition. In the proposed condition, the area potentially tributary to the Dixie Drain #3 will be increased when compared to the existing condition. However, this increase is occurring within sub-basin D7, which (as discussed in Section 2.3.2.b) is comprised of Type B soils that typically have high rates of infiltration, and it is anticipated that runoff stored in the detention basin will be able to percolate into the subsoil within 72 hours, per County requirement. Therefore, it is not anticipated that the increase in tributary area will result in an increase in storm water runoff being discharged to the Dixie Drain #3. Final design will be based on additional infiltration tests in this area.

Table 6 – Basin Areas

Receiving Drain: Dixie Drain #3			
Existing Condition		Proposed Condition	
Basin Name	Area (ac)	Basin Name	Area (ac)
D1	223.5	D1	223.5
D2	135.3	D2	135.3
D3A	78.4	D3	160.7
D3B	82.3	D4	70.2
D4	70.2	D5	325.2
D5A	132.7	D6	27.0
D5B	67.3	D7	174.7
D5C	50.9	Total	1,116.5
D5D	65.7		
D5E	8.5		
D6	27.0		
D7	84.1		
Total	1,025.9		

Receiving Drain: Wixom Drain			
Existing Condition		Proposed Condition	
Basin Name	Area (ac)	Basin Name	Area (ac)
W1	165.7	W1	165.7
W2	90.6	W2	0
W3	75.8	W3	109.5
W4	8.9	W4	8.9
Total	341.0	Total	284.1

Receiving Drain: Fig Drain			
Existing Condition		Proposed Condition	
Basin Name	Area (ac)	Basin Name	Area (ac)
L1	33.7	L1	0
L2	28.9	L2	0
F1	26.6	F1	55.5
F2	81.0	F2	81.0
F3	125.8	F3	125.8
F4A	74.2	F4	220.7
F4B	57.9	F5	46.2
F4C	71.4	Total	529.2
F4D	17.2		
F5	46.2		
Total	562.9		



## 2.3 CALCULATIONS/RESULTS

### 2.3.1 EXISTING CONDITIONS

#### a. Storm Water Runoff:

Volumes of storm water runoff for the existing condition are provided in Table 7. The volume reported as “County Storage” is the volume based on 3.00” of runoff. The volume reported as “100-year Runoff” is the estimated volume anticipated based on a “C” factor of 0.30 and 100-year 24-hour precipitation of 3.76 inches.

Table 7: Existing Condition Storm Water Runoff

Receiving Drain: Dixie Drain #3			
Basin Name	Area (ac)	County Storage (ac-ft)	100-year Runoff (ac-ft)
D1	223.5	55.9	21.0
D2	135.3	33.8	12.7
D3A	78.4	19.6	7.4
D3B	82.3	20.6	7.7
D4	70.2	17.6	6.6
D5A	132.7	33.2	12.5
D5B	67.3	16.8	6.3
D5C	50.9	12.7	4.8
D5D	65.7	16.4	6.2
D5E	8.5	2.1	0.8
D6	27.0	6.7	2.5
D7	84.1	21.0	7.9
Total	1,025.9	256.5	96.4

Receiving Drain: Wixom Drain			
Basin Name	Area (ac)	County Storage (ac-ft)	100-year Runoff (ac-ft)
W1	165.7	41.4	15.6
W2	90.6	22.6	8.5
W3	75.8	19.0	7.1
W4	8.9	2.2	0.8
Total	341.0	85.2	32.1

Receiving Drain: Fig Drain			
Basin Name	Area (ac)	County Storage (ac-ft)	100-year Runoff (ac-ft)
L1	33.7	8.4	3.2
L2	28.9	7.2	2.7
F1	26.6	6.6	2.5
F2	81.0	20.3	7.6
F3	125.8	31.4	11.8
F4A	74.2	18.5	7.0
F4B	57.9	14.5	5.4
F4C	71.4	17.9	6.7
F4D	17.2	4.3	1.6
F5	46.2	11.6	4.3
Total	562.9	140.7	52.9

**b. Agricultural Runoff:**

In the existing condition, runoff from agricultural activities is discharged to the Drain system. The IID meters agricultural runoff to their Drain system. Metered values of agricultural runoff are not available, so an average annual volume of agricultural runoff from within the project limits to the Drain system cannot be determined.

However, in general, the average annual amount of water applied to fields and subsequently discharged to the Drain system from agricultural runoff is greater than that which is discharged from storm water runoff. For example, the average annual rainfall in Imperial Valley is approximately 2.9 inches (0.24 acre-feet per acre per year) and by contrast, alfalfa, the dominant crop grown in Imperial Valley, requires at least 6 acre-feet of irrigation water per acre per year under the surface/flood irrigation practices typically used at the site. The use of such flood irrigation practices result in annual agricultural runoff to the IID Drains that far exceeds the annual storm water runoff to the IID Drains.

**2.3.2 PROPOSED CONDITIONS**

**a. Storm Water Runoff:**

Under proposed conditions, the existing drainage characteristics of the project site will remain substantially the same. Existing low lying areas receiving runoff will continue to do so in the proposed conditions. Section 2.2.3 discusses the areas of existing and proposed drainage basins and sub-basins and the three instances where there is a proposed routing of flow between basins, resulting in a change in area potentially tributary to IID Drains. As shown in Section 2.3.2.b, on-site soils are able to infiltrate runoff and there is no resultant impact to IID Drains due to the proposed routing.

To enable the development of the solar arrays, private dirt roads and ditches within the project will be re-graded as necessary, and the cultivated areas will be re-graded to provide smooth transitions across arrays and to produce positive surface drainage to the onsite detention basins. A private perimeter access road will be constructed around the arrays. As discussed previously, the project proposes to detain the estimated runoff from the 100-year storm event in detention basins located outside arrays (basins will be approximately 3'-3.5' deep). Additional detention of runoff necessary to comply with the County standard to store 3" of runoff will occur under the arrays as necessary to a depth less than 12".

Table 8 on the following page provides the required volumes of detention to meet both the County standard of 3" of runoff from the project and the design concept to detain the 100-year runoff outside of the arrays. Note that the required storage to meet the County standard is the same for the existing and proposed conditions due to the fact that the County does not consider the runoff coefficient in its standard.

Table 8: Proposed Condition Storm Water Runoff

Receiving Drain: Dixie Drain #3			
Basin Name	Area (ac)	County Storage (ac-ft)	100-year Runoff (ac-ft)
D1	223.5	55.9	44.1
D2	135.3	33.8	26.7
D3	160.7	40.2	31.7
D4	70.2	17.6	13.9
D5	325.2	81.3	64.2
D6	27.0	6.7	5.3
D7	174.7	43.7	34.5
Total	1,116.5	279.1	220.4

Receiving Drain: Wixom Drain			
Basin Name	Area (ac)	County Storage (ac-ft)	100-year Runoff (ac-ft)
W1	165.7	41.4	32.7
W2	-	-	-
W3	109.5	27.4	21.6
W4	8.9	2.2	1.8
Total	284.1	71.0	56.1

Receiving Drain: Fig Drain			
Basin Name	Area (ac)	County Storage (ac-ft)	100-year Runoff (ac-ft)
L1	-	-	-
L2	-	-	-
F1	55.5	13.9	11.0
F2	81.0	20.3	16.0
F3	125.8	31.4	24.8
F4	220.7	55.2	43.6
F5	46.2	11.6	9.1
Total	529.2	132.3	104.5

Note: See section 2.2.3 regarding routing of flow from basins W2, L1, and L2.

On the Proposed Conditions Basin Map in Appendix E-2, locations of proposed detention basins are provided for reference. Note that the site plan shown on the Proposed Conditions Basin Map is consistent with the layout for the fixed-tilt array layout. The project is also considering array layouts for a tracking module. Upon selection of product by the project applicant, the final array layout will be shown, and location/sizes of detention basins will be finalized and discussed in the project final hydrology study.

**b. Potential for Infiltration of Runoff:**

Preliminary infiltration tests (provided in Appendix B) were performed to determine infiltration rates at two locations within the project site for the purposes of preliminary planning. The two locations are shown on the Soils Group Map in Appendix C. Two tests were performed at each location – one 12" below the existing ground surface and one 2" below existing ground surface. Infiltration rates are summarized in Table 9 below. As shown on the Soil Group Map, Location 1 is within an area with soils of Group B and Location 2 is within an area soils of Group C.

Table 9: Infiltration Summary

Location	Depth	Infiltration Rate (min/in)	Infiltration Rate (in/hr)
1	2"	11.24	5.34
1	12"	8.00	7.50
2	2"	11.41	5.26
2	12"	41.50	1.45

Additional infiltration testing is planned for the project; however the infiltration rates at 12" depths were utilized for preliminary calculations. For detention basins located in underlying soils of Soil Group B, the 7.50 in/hr rate determined at Location 1 is estimated. For detention basins located in underlying soils of Soil Group C, the 1.45 in/hr rate determined at Location 2 is estimated. Per County standards, infiltration is feasible if a basin is able to infiltrate detained runoff within 72 hours.

To determine the time required to infiltrate into the underlying soil, the area of ponding was determined to be the area of the detention basin. The volumetric rate of infiltration was determined as the product of the percolation rate and the area of ponding. The time to percolate for each sub-basin was then calculated to demonstrate that the detained runoff can percolate into the underlying soil within 72 hours. Table 10 provides the time to percolate for each sub-basin.

Table 10: Time for Detained Volume to Infiltrate

Receiving Drain: Dixie Drain #3						
Basin Name	Area (ac)	County Storage (ac-ft)	Infiltration Rate (in/hr)	Basin Area (ac)	Infiltration Rate (ac-ft/hr)	Time to Infiltrate (hr)
D1	223.5	55.9	1.45	13.3	1.6	34.8
D2	135.3	33.8	1.45	8.2	1.0	34.1
D3	160.7	40.2	1.45	9.4	1.1	35.4
D4	70.2	17.6	1.45	3.6	0.4	40.4
D5	325.2	81.3	1.45	19.3	2.3	34.9
D6	27.0	6.7	1.45	1.4	0.2	39.8
D7	174.7	43.7	7.50	12.31	7.7	5.7

Receiving Drain: Wixom Drain						
Basin Name	Area (ac)	County Storage (ac-ft)	Infiltration Rate (in/hr)	Basin Area (ac)	Infiltration Rate (ac-ft/hr)	Time to Infiltrate (hr)
W1	165.7	41.4	1.45	9.4	1.1	36.5
W2	-	-	-	-	-	-
W3	109.5	27.4	1.45	5.6	0.7	40.5
W4	8.9	2.2	1.45	0.5	0.1	36.8

Receiving Drain: Fig Drain						
Basin Name	Area (ac)	County Storage (ac-ft)	Infiltration Rate (in/hr)	Basin Area (ac)	Infiltration Rate (ac-ft/hr)	Time to Infiltrate (hr)
L1	-	-	-	-	-	-
L2	-	-	-	-	-	-
F1	55.5	13.9	1.45	2.7	0.3	42.5
F2	81.0	20.3	1.45	4.9	0.6	34.2
F3	125.8	31.4	1.45	7.2	0.9	36.1
F4	220.7	55.2	1.45	11.3	1.4	40.4
F5	46.2	11.6	1.45	2.7	0.3	35.4

From Table 10, based on preliminary infiltration rates, it is evident that all of the basins have the potential to infiltrate into the underlying soil in less than 72 hours. As mentioned previously, additional infiltration testing is planned for the project. In the event that, based on additional infiltration testing, any detention basin(s) will not be able to infiltrate within 72 hours, they will be required to discharge to the IID Drain system through use of existing 12" storm drain connections.

**c. Agricultural Runoff:**

In the proposed condition, runoff from agricultural activities will cease during the life of the project. As such, the total volume of runoff (storm water plus agricultural runoff) discharged to the IID Drain system will decrease during the life of the project.

## 3.0 STORM WATER QUALITY ANALYSIS

### 3.1 HYDROLOGIC UNIT CONTRIBUTION

The project is located in the Brawley Hydrologic Area, in the Imperial Hydrologic Unit. The corresponding number designation is 723.10.

The Imperial Hydrologic Unit consists of the majority of the Imperial Valley, encompassing over 1.3 million acres of land. The watershed includes vast acreages of agricultural land; towns such as El Centro, Calexico, and Brawley, along with a large network of IID operated canals and drainage ditches. The watershed is atypical of most watersheds in California, as it currently and historically has been shaped by man-made forces. The watershed's primary watercourses, the New and Alamo rivers, flow north, from the Mexican border toward their final destination, the Salton Sea. The Salton Sea, a 376 square mile inland lake was created in 1905 through a routing mistake and subsequent flood on the Colorado River. The Sea has been fed primarily by agricultural runoff from the New and Alamo Rivers ever since.

303(d) listed water quality impairments and TMDLs are present for the receiving waters of the project, and are discussed in Section 3.3.2.

## 3.2 WATER QUALITY ENVIRONMENT

### 3.2.1 BENEFICIAL USES

According to Table 2-3 of the Water Quality Control Plan for the Colorado River Basin Region (WQCP), the beneficial uses for the project's receiving waters are:

#### a. Imperial Valley Drains:

FRSH – Freshwater Replenishment

REC I – Water Contact Recreation (unauthorized, infrequent fishing activity)

REC II – Non-Contact Water Recreation (unauthorized)

WARM – Warm Freshwater Habitat

WILD – Wildlife Habitat

RARE – Preservation of Rare, Threatened or Endangered Species (only exists in some of the waterways)

It shall be noted that the above beneficial uses for the Imperial Valley Drain system are broadly based considering the fact that many of the Drains are open channel conveyance systems.

#### b. New River:

FRSH – Freshwater Replenishment

IND- Industrial Service Supply (potential)

REC I – Water Contact Recreation (hazardous due to contamination)

REC II – Non-Contact Water Recreation

WARM – Warm Freshwater Habitat

WILD – Wildlife Habitat

RARE – Preservation of Rare, Threatened or Endangered Species

#### c. Salt Creek:

FRSH – Freshwater Replenishment

GWR – Ground Water Recharge

REC I – Water Contact Recreation (hazardous due to contamination)

REC II – Non-Contact Water Recreation

- WARM – Warm Freshwater Habitat
- WILD – Wildlife Habitat
- RARE – Preservation of Rare, Threatened or Endangered Species

**d. Salton Sea:**

- AQUA- Aquaculture
- IND- Industrial Service Supply (potential)
- REC I – Water Contact Recreation
- REC II – Non-Contact Water Recreation
- WARM – Warm Freshwater Habitat
- WILD – Wildlife Habitat
- RARE – Preservation of Rare, Threatened or Endangered Species

**3.2.2 303(d) STATUS**

According to the California 2006 303d list published by the State Water Resources Control Board (SWRCB), the project’s receiving waters have beneficial use impairments as follows.

Table 11: 303(d) Impairments

RECEIVING WATER	HYDROLOGIC UNIT CODE	303(d) IMPAIRMENT(S)	DISTANCE FROM PROJECT (miles)
Imperial Valley Drains (Dixie Drain 3, Dixie Drain 3-A, Dixie Drain 3-B, Wixom Drain, and Diehl Drain)	723.10	None	<0.1 miles
New River	723.10	1,2,4 Trimethylbenzene Chlorodane Chloroform Chlorpyrifos DDT Diazanon Dieldrin Mercury meta-para xylenes Nutrients Organic/Low DO o-xylenes PCBs p-Cymene p-Dicholorobenzene Pesticides Selenium Toluene Toxaphene Toxicity Trash	1.1 miles
Salton Sea	728.00	Nutrients, Salinity, Selenium	31 miles



### 3.2.3 TMDL STATUS

TMDLs established for receiving waters of the project are summarized in Tables 12 and 13 below.

Table 12: TMDLs

RECEIVING WATER	HYDROLOGIC UNIT CODE	TMDLs	DISTANCE FROM PROJECT (miles)
New River	723.10	Pathogens Sediment/Siltation	1.1 miles

The 2002 Pathogens TMDL sets numeric targets on the New River with 30 day mean, and instantaneous maximum limits for Fecal Coliforms, *E. Coli*, and Enterococci. Those limits are shown in the table below.

Table 13: TMDL Limits

	Fecal Coliforms	<i>E. Coli</i>	Enterococci
30 day Geometric Mean	200	126	33
Instantaneous Maximum	<10% Over 400	400	100

The New River's main sources of pathogens (indicated by fecal coliforms and *E. coli* bacteria) are discharges of municipal wastes from the Mexicali Valley in Mexico and non-disinfected but treated wastewater from five domestic Imperial Valley wastewater treatment plants. Natural sources of pathogens play a relatively insignificant role. The significance of contributions from confined animal feeding operations and other nonpoint sources of pollution in the Imperial Valley are not fully known at this time (California EPA TMDL Implementation Plan, 2002).

The 2002 Sediment/Siltation TMDL sets numeric targets on the New River for Total Suspended Solids (TSS). The target is 200 mg/L which would achieve a low to moderate level of protection. According to the 2002 TMDL implementation plan, an overall 17% reduction from the current TSS level is required to meet the minimum targets set forth by the TMDL.

High sedimentation in the New River has led to increased mobilization of agricultural pesticides and a highly turbid environment for sensitive aquatic species. The main source of sediment to the New River is agricultural runoff from the Imperial Valley and Mexico.

## 3.3 REGULATORY FRAMEWORK

### 3.3.1 State Water Resources Control Board

In the State of California, the State Water Resources Control Board (SWRCB) and local Regional Water Quality Control Boards (RWQCBs) have assumed the responsibility of implementing the US EPA's NPDES Program and other programs under the CWA such as the Impaired Waters Program and the Antidegradation Policy. The primary quality control law in California is the Porter-Cologne Water Quality Act (Water Code Sections 13000 et seq.). Under Porter-Cologne, the SWRCB issues joint federal NPDES Storm Water permits and state Waste Discharge Requirements (WDRs) to operators of municipal separate storm sewer systems (MS4s), industrial facilities, and construction sites to obtain coverage for the storm water discharges from these operations.

**a. Basin Plan Requirement:**

In addition to its permitting programs, the SWRCB, through its nine RWQCBs, developed Regional Water Quality Control Plans (or Basin Plans) that designate beneficial uses and water quality objectives for California’s surface waters and groundwater basins, as mandated by both the CWA and the state’s Porter-Cologne Water Quality Control Act. Water quality standards are thus established in these Basin Plans and provide the foundation for the regulatory programs implemented by the state. The Colorado River Basin RWQCB Basin Plan, which covers the project area, designates beneficial uses for surface waters and ground waters.

**b. General Construction Permit:**

The General Construction Permit (GCP), (Order 2009-0009-DWQ, NPDES Permit No. CAS000002), issued by the SWRCB, regulates storm water and non-storm water discharges associated with construction activities disturbing 1 acre or greater of soil. Construction sites that qualify must submit a Notice of Intent (NOI) with the SWRCB to gain permit coverage or otherwise be in violation of the CWA and California Water Code.

The GCP requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for each individual construction project greater than or equal to 1 acre of disturbed soil area. The SWPPP must list Best Management Practices (BMPs) that the discharger will use to control sediment and other pollutants in storm water and non-storm water runoff. The GCP requires that the SWPPP is prepared by a Qualified SWPPP Developer (QSD) and implemented at the site under the review/direction of a Qualified SWPPP Practitioner (QSP).

The project includes over 1 acre of grading within the County of Imperial, and is therefore subject to the storm water discharge requirements of the GCP. The Project will submit a NOI and prepare a SWPPP prior to the commencement of soil disturbing activities. In the Colorado River Basin Region, where the project resides, the SWRCB is the permitting authority, while the County of Imperial and Colorado River Basin RWQCB provide local oversight and enforcement of the GCP.

**c. Phase II MS4 Permit:**

In 2003, the State Water Resources Control Board issued the Phase II regulations concerning Small Municipal Storm Sewer Systems (MS4) (Water Quality Order No. 2003-0005-DWQ). This NPDES permit was issued by the State of California to all qualifying municipalities and agencies who operate a storm drain system and meet certain size criteria for MS4 system discharges into waters of the United States. Pursuant to the Permit, dischargers are required to develop a Storm Water Management Plan (SWMP) and enroll in the program. The County of Imperial has enrolled in the Permit, but does not have specific storm water related criterion for new development, related to the NPDES Program. If and when the County does develop said criterion, new development projects will be required to comply with the provisions set forth by the County of Imperial.

### 3.4 POTENTIAL POLLUTANTS

There is no sampling data available for the existing site condition. The following constituents have commonly been found on agricultural areas and could potentially affect water quality:

- Organic compounds found in pesticides used on agricultural fields
- Agricultural waste
- Loose sediments
- Excess nutrients from fertilizers

In addition to potential pollutants due to the existing agricultural land use, potential pollutants due to the proposed land use of a solar power station include the following:

- Heavy metals from infrastructure and vehicular use
- Trash and debris from human activity
- Oil and grease from vehicular use

Potential pollutants are summarized in Table 14 below.

Table 14: Potential Pollutants

SEDIMENT
HEAVY METALS
ORGANIC COMPOUNDS
TRASH & DEBRIS
OXYGEN DEMANDING SUBSTANCES
NUTRIENTS
OIL & GREASE

In examining these anticipated pollutants, the proposed project has the potential to be a source of pollutants based on historic/existing land use and typical activities involved in operating a solar power station. Through proper planning and operation of the facility however, the concentrations can be reduced to levels which will not contribute to the impairment of beneficial uses in downstream surface waters. In addition, through the source control BMPs outlined in Table 17 of Section 3.7.2., the amounts of these pollutants will be reduced to the maximum extent practicable, through behavioral and programmatic means.

Primary pollutants of concern consist of those pollutants which are anticipated onsite, and are coupled with an existing impairment on surface waters downstream of the project site. Table 15 on the following page provides the primary pollutants of concern for the Campo Verde Solar Power Station project site.

Table 15: Primary Pollutants of Concern

PRIMARY POLLUTANTS OF CONCERN	SPECIFIC 303(D) IMPAIRMENT
HEAVY METALS	Mercury, Selenium
OXYGEN DEMANDING SUBSTANCES	Organic/Low DO
TRASH AND DEBRIS	Trash
ORGANIC COMPOUNDS	Chloroform, PCBs, p-Cymene, p-Dichlorobenzene, Toxaphene
OIL AND GREASE	meta-para xylenes, o-xylenes, Toluene

**Heavy Metals.** The primary sources of metals in storm water are metals typically used in transportation, buildings and infrastructure and also paints, fuels, adhesives and coatings. Potential sources of heavy metals from the project include vehicular use, building construction, solar array construction, and underground pipes. Copper, lead, and zinc are the most prevalent metals typically found in urban runoff. Other trace metals, such as cadmium, chromium, manganese, and mercury are typically not detected in urban runoff or are detected at very low levels. Trace metals have the potential to cause toxic effects on aquatic life and are a potential source of groundwater contamination.

**Oxygen Demanding Substances** Plant debris, food waste, and some chemical wastes fall into a category of water pollutants known as oxygen demanding substances. Such substances use dissolved oxygen in water when they decay or chemically react. If dissolved oxygen levels in water become too low, aquatic animals can become stressed or die.

Animal wastes, food wastes, leaves and twigs, and other miscellaneous organic matter carried by storm water runoff into surface water can lead to reduced oxygen levels. Potential sources of oxygen demanding substances from the project include human use and landscaping. Slow-moving waters are particularly susceptible to oxygen depletion because aeration of the water by turbulence is lacking. Therefore, oxygen that is depleted in slow-moving waters due to the presence of excess organic matter or unnatural chemical compounds is not replaced. Reduced oxygen levels in these waters are often particularly severe after a storm.

**Trash and Debris** Improperly disposed or handled trash (from human use of the site) such as paper, plastics and debris including the biodegradable organic matter such as leaves, grass cuttings, and food waste can accumulate on the ground surface where it can be entrained in urban runoff. A large amount of trash and debris can have significant negative impacts on the recreational value of water body. Excessive organic matter can create a high biochemical oxygen demand in a stream and lower its water quality.

**Organic Compounds.** Organic compounds are carbon-based, and are typically found in pesticides, solvents, and hydrocarbons. Dirt, grease, and other particulates can also adsorb organic compounds in rinse water from cleaning objects, and can be harmful or hazardous to aquatic life either indirectly or directly. Organic compounds are therefore potentially present in runoff from the site due to prior agricultural use (pesticides) and vehicular use (hydrocarbons and grease).

**Oil and Grease.** Oil and Grease in storm water typically stems from parking lots, roadways, machinery areas, or anywhere else leaks from machinery can occur. Potential sources of oil and grease from the project include vehicular and machine/equipment use. Typical compounds which are indicators of oil and grease problems are BTEX, (Benzene, Toluene, Ethylbenzene, and Xylenes), and visual clues, such as oily sheens on the water surface.

**Nutrients.** The primary sources of nutrients in storm water are fertilizers. Potential sources of nutrients from the project include historic agricultural land use and landscaping. Nitrogen and phosphorus are the most prevalent nutrients typically found in urban runoff. Failing septic tanks are also potential sources of nutrients in runoff.

### 3.5 GROUNDWATER QUALITY

Geographically, the project site is located within the Imperial Groundwater Basin. The Imperial Valley Groundwater basin is bounded on the east by the Sand Hills and on the west by the impermeable rocks of the Fish Creek and Coyote Mountains. To the north, the basin is bounded by the Salton Sea, which is the discharge point for groundwater in the basin. Major hydrologic features include the Alamo and New Rivers, which flow north towards the Salton Sea.

Per Table 2-5 of the WQCP, beneficial uses of groundwater within the Imperial Hydrologic Unit include:

MUN – Municipal and Domestic Supply;  
IND – Industrial Service Supply.

The MUN beneficial use for groundwater within the Imperial Hydrologic Unit is limited only to a small portion of the ground water unit. Within the project area, groundwater is not used for municipal uses. Rather, all municipal and domestic water supply is obtained from the IID Canals. Wells do not exist within project boundary. Wells are located south of the Westside Main Canal. However the proposed infiltration basins are located at least 1,400' from the Westside Main Canal and an impact to the wells due to seepage from the basins is not anticipated. Per Table 2-1 of the WQCP, IND is defined as a use of water for industrial activities that do not depend on water quality. Therefore, impacts from the project on leading to a loss in beneficial uses of groundwater are not anticipated.

### 3.6 WATER QUALITY – CONSTRUCTION PHASE

Construction of the project includes site preparation, foundation construction, erection of major equipment and structures, installation of piping, electrical systems, control systems, and start-up/testing. In addition, the construction of transmission lines, utility pole pads, conductors, and associated structures will be required.

During the construction phase, sedimentation and erosion can occur because of tracking from earthmoving equipment, erosion and subsequent runoff of soil, and improperly designed stockpiles. The utilization of proper erosion and sediment control BMPs is critical in preventing discharge to surface waters/drains. The project proposes to employ proper SWPPP practices to minimize any discharges in order to meet the Best Available Technology/Best Conventional Technology (BAT/BCT) standard set forth in the General Construction Permit.

Although the project site is relatively flat, the large amount of potential disturbed area results in the potential for erosion/sediment issues.

In addition to erosion and sedimentation, the use of materials such as fuels, solvents, and paints has the potential to effect surface water quality. Many different types of hazardous compounds will be used during the construction phase, with proper containment being of high importance. Poorly managed construction materials can lead to the possibility for exposure of potential contaminants to precipitation. When this occurs, these constituents become visible and/or non-visible pollutants entrained in storm water runoff. If they are not intercepted or are left uncontrolled, the polluted runoff would otherwise freely sheet flow from the project to the IID Drains and could cause pollution accumulation in the receiving waters. A list of anticipated construction materials and their associated construction activity are provided in the table below.

Table 16: Potential Construction Related Pollutants

CONSTRUCTION ACTIVITY	CONSTRUCTION MATERIAL	SITE	VISUALLY OBSERVABLE?
Paving	Hot Asphalt		Yes - Rainbow Surface or Brown Suspension
	Asphalt Emulsion		
	Liquid Asphalt (tack coat)		
	Cold Mix		
	Crumb Rubber		Yes – Black, solid material
	Asphalt Concrete (Any Type)		Yes - Rainbow Surface or Brown Suspension
Substation and Transmission Line Construction	Gasoline/Diesel		No
	Mineral and Crankcase Oil		
	Lubricants		
	Cleaning Solvents		
Equipment Cleaning	Acids		No
	Bleaches		
	Detergents		Yes - Foam
	Solvents		No
Concrete Work	Portland Cement (PCC)		Yes - Milky Liquid
	Masonry products		No
	Sealant (Methyl Methacrylate - MMA)		No

CONSTRUCTION ACTIVITY	CONSTRUCTION MATERIAL	SITE	VISUALLY OBSERVABLE?
Concrete Work	Incinerator Bottom Ash, Bottom Ash, Steel Slag, Foundry Sand, Fly Ash, Municipal Solid Waste		No
	Mortar		Yes - Milky Liquid
	Concrete Rinse Water		Yes - Milky Liquid
	Non-Pigmented Curing Compounds		No
	Lime		No
Painting	Paint		Yes
	Paint Strippers		No
	Resins		
	Sealants		
	Solvents		
	Lacquers, Varnish, Enamels, and Turpentine		
	Thinners		
Portable Toilet Facilities	Portable Toilet Waste		Yes
Adhesives	Adhesives		No
Dust Control	Water		No
	Liquid Polymer or Polymer Blend		
Vehicle Maintenance	Antifreeze and Other Vehicle Fluids		Yes - Colored Liquid
	Batteries		No
	Fuels, Oils, Lubricants		Yes - Rainbow Surface Sheen and Odor
Soil Amendment/Stabilization	Polymer/Copolymer		No
	Quicklime		No
	Herbicide, Pesticide		No
	Lignin Sulfonate		No
	Psyllium		
	Guar/Plant Gums		
Gypsum			
Wood (Treated) Work	Ammoniacal-Copper-Zinc-Arsenate, Copper-Chromium-Arsenic, Ammoniacal-Copper-Arsenate, Copper Naphthenate		No
	Creosote		Yes - Rainbow Surface or Brown Suspension

Prior to the beginning of construction, a complete SWPPP will be provided to show evidence that the development of the project will comply with the GCP and associated local NPDES regulations. Also, in accordance with the GCP, a Notice of Intent (NOI) for coverage of projects under the GCP will be filed with the SWRCB. The Waste Discharge Identification (WDID) Number will be issued to the project before any land disturbance may begin.

Accordingly, the SWPPP will be implemented at the project site, and revised as necessary, as administrative or physical conditions change. The Region 7 Colorado River Basin RWQCB, upon request, must instruct the developer to make the SWPPP available for public review. The SWPPP will fully describe Best Management Practices (BMPs) that address pollutant source reduction and provide measures/controls necessary to mitigate potential pollutant sources. These include, but are not limited to: erosion controls, sediment controls, tracking controls, non-storm water management, materials & waste management, and good housekeeping practices. The above-mentioned BMPs for construction activities are discussed further below. The SWPPP will be prepared by a Qualified SWPPP Developer (QSD) and implemented at the site under the review/direction of a Qualified SWPPP Practitioner (QSP).

### 3.6.1 Erosion Controls

Erosion Control, also referred to as soil stabilization, is a source control measure designed to prevent soil particles from detaching and becoming transported in storm water runoff. Erosion Control BMPs protect the soil surface by covering and/or binding the soil particles. The scheduling of soil disturbing activities should be minimized during the wet season, which is Aug 1- Oct 1, and Nov 1-May 1. If such activities occur in the wet season, all exposed slopes or areas with loose soil will be stabilized. This may involve the application of soil binders, or geotextiles and mats. Due to the flat surface, creating temporary earth dikes or drainage swales may also be employed/installed prior to large, forecasted storm events to divert runoff away from exposed areas and into more suitable locations. If implemented correctly, erosion controls can effectively reduce the sediment loads entrained in storm water runoff from construction sites. Below is a list of approved construction BMPs that can be implemented for the proposed Project's SWPPP.

#### Erosion Controls

- EC-1 Scheduling
- EC-2 Preservation of Existing Vegetation
- EC-5 Soil Binders
- EC-6 Straw Mulch
- EC-7 Geotextiles and Mats
- EC-8 Wood Mulching
- EC-9 Earth Dikes and Swales
- EC-10 Velocity Dissipation Devices
- EC-11 Slope Drains

### 3.6.2 Sediment Controls

Sediment controls are structural measures that are intended to complement and enhance the soil stabilization/erosion control measures and reduce sediment discharges from construction areas. Sediment controls are designed to intercept and filter out soil particles that have been detached and transported by the force of water. In addition, silt fencing will be installed along the perimeter of work areas upstream of discharge points, and will also be placed around stockpiles, and areas of soil disturbance. Check dams or chevrons will be situated in areas where high velocity runoff is anticipated/potential (such as in drainage ditches/swales). Gravel bag berms or fiber rolls should be used to intercept sheet flows on streets or at the toe of slopes (such as along streets or canal and drain



access roads) to minimize sediment mobilization. Street sweeping will also be scheduled in areas where sediment can be tracked from the project site onto paved streets or roads. Below is a list of approved construction BMPs that can be implemented for the proposed Project's SWPPP.

#### Sediment Controls

SE-1	Silt Fence	SE-7	Street Sweeping
SE-2	Desilting Basin (Detention Basins)	SE-8	Sandbag Barrier
SE-3	Sediment Trap	SE-9	Straw Bale Barrier
SE-4	Check Dam	SE-10	Chemical Treatment
SE-5	Fiber Rolls	SE-11	Chemical Treatment
SE-6	Gravel Bag Berm		

#### **3.6.3 Tracking Controls**

The proposed project site will stabilize all construction entrance/exit points to reduce the tracking of sediments onto paved streets and roads by construction vehicles. Construction roadways should also be stabilized to minimize off-site tracking of mud and dirt. Wind erosion controls will be employed in conjunction with tracking controls. Below is a list of approved construction BMPs that can be implemented for the proposed Project's SWPPP.

#### Tracking Controls

TC-1	Stabilized Construction Entrance / Exit
TC-2	Stabilized Construction Roadway
TC-3	Entrance / Outlet Tire Wash
WE-1	Wind Erosion Control

#### **3.6.4 Non-Storm Water Management Controls**

Non-storm water discharges consist of all discharges from a municipal storm water conveyance which do not originate from precipitation events (i.e., all discharges from a conveyance system other than storm water).

Paving and grinding operations on the project site, along with any operations which involve using water on landscape are classified as having potential for non-storm water pollutants. This also includes illegal connection and dumping on the construction site, vehicle equipment cleaning, fueling, and maintenance. The construction of project may involve the use of heavy equipment and hazardous materials. Adequate BMPs and protections will be in place at all times.

#### Non-Storm Water Management Controls

NS-1	Water Conservation Practices	NS-9	Vehicle & Equipment Fueling
NS-2	Dewatering Operations	NS-10	Vehicle & Equipment Maint.
NS-3	Paving and Grinding Operations	NS-11	Pile Driving Operations
NS-4	Temporary Stream Crossing	NS-12	Concrete Curing
NS-5	Clear Water Diversion	NS-13	Concrete Finishing
NS-6	IC/ID Detection and Reporting	NS-14	Material Use Over Water
NS-7	Potable Water / Irrigation	NS-15	Demolition Over Water
NS-8	Vehicle & Equipment Cleaning	NS-16	Temporary Batch Plants

#### **3.6.5 Materials and Waste Management**

Waste management consists of implementing procedural and structural BMPs for collecting, handling, storing and disposing of wastes generated by a construction project to prevent the release of waste

materials into storm water discharges. All materials with the potential to contaminate storm water runoff should be delivered and stored in designated areas with secondary containment measures (i.e. covered and bermed). Chemicals, drums, and bagged materials will not be stored directly on soil, but on pallets instead. Personnel will also be trained on the proper use of the materials.

Construction staging areas will be located on the site. These areas will include construction yards that serve as field offices, reporting locations for workers, parking space for vehicles and equipment, and sites for material storage. Facilities will be fenced as necessary. Security guards will be stationed where needed.

A temporary barrier around stockpiles should be installed and a cover provided during the rainy season. Spill cleanup procedures and kits should be made readily available near hazardous materials and waste. Solid wastes, such as trash and debris, should be collected on a regular basis and stored in designated areas. Concrete and paint washout areas should be installed and properly maintained in areas conducting the associated activities. Below is a list of approved construction BMPs that can be implemented for the proposed project’s SWPPP.

Waste Management and Materials

- WM-1 Material Delivery & Storage
- WM-2 Material Use
- WM-3 Stockpile Management
- WM-4 Spill Prevention and Control
- WM-5 Solid Waste Management

- WM-6 Hazardous Waste
- WM-7 Contaminated Soil
- WM-8 Concrete Waste
- WM-9 Sanitary / Septic Waste

**3.6.6 Monitoring Program**

A monitoring program will also be included in the SWPPP that outlines storm event inspections of the project site and a sampling plan in accordance with the GCP. The monitoring program will be prepared by a QSD and implemented at the site under the review/direction of a QSP. The goals of [the program] are (1) to identify areas contributing to a storm water discharge; (2) to evaluate whether measures to reduce pollutant loadings identified in the SWPPP are adequate, properly installed, and functioning in accordance with the terms of the General Construction Permit; and (3) whether additional control practices or corrective maintenance activities are needed. If a discharge is observed during these inspections, a sampling and analysis of the discharge is required.

Sampling and Analysis

Any breach, malfunction, leakage, or spill observed which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water shall trigger the collection of a sample of discharge...The goal of the sampling and analysis is to determine whether the BMPs employed and maintained on site are effective in preventing the potential pollutants from coming in contact with storm water and causing or contributing to an exceedance of water quality objectives in the receiving waters. In any case of breakage and potential for non-visible pollution, sampling and analysis will be required to ensure that the beneficial uses of downstream receiving waters are protected. In addition, sampling is required for any site which directly discharges runoff into a receiving water listed in the GCP listed as impaired for sedimentation.

### 3.7 WATER QUALITY – POST-CONSTRUCTION

#### 3.7.1 Site Design BMPs

The project is designed to include Site Design BMPs which reduce runoff, prevent storm water pollution associated with the project, and conserve natural areas onsite.

Table 17: Site Design BMPs

	DESIGN CONCEPT	DESCRIPTION
#1	MINIMIZE IMPERVIOUS FOOTPRINT	The project site will include a significant amount of undeveloped land and pervious area. The footprint for the solar arrays will be predominately pervious ground. A minimal amount of Class II base paving for access roads and parking will be constructed.
#2	CONSERVE NATURAL AREAS	Only a small amount of existing site area can be classified as natural landscape, and will only be disturbed in necessary areas at the project.
#3	PROTECT SLOPES AND CHANNELS	The project site and surrounding areas is comprised of extremely flat topography. Erosion of slopes due to stabilization problems is not a concern, except where flow enters detention basins. Basins will feature 8:1 side slopes where flow enters. Stabilization needs will be evaluated at final engineering.
#4	MINIMIZE DCIAs (DIRECTLY CONNECTED IMPERVIOUS AREAS)	Minimal storm drain will be constructed onsite. The impervious areas will drain and will be allowed to pond in the detention basins and/or under the arrays. This will effectively limit all DCIAs on the project site.

#### 3.7.2 Source Control BMPs

“Source control BMPs (both structural and non-structural)” means land use or site planning practices, or structures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source Control BMPs minimize the contact between pollutants and urban runoff. The following table identifies source control BMPs that would be applicable to the proposed project.

Table 18: Source Control BMPs

SOURCE CONTROL BMP		DESCRIPTION
#1	DESIGN TRASH STORAGE AREAS TO REDUCE POLLUTION INTRODUCTION	Any outdoor trash storage areas will be designed not to allow run-on from adjoining areas, screened or walled to prevent off-site transport of trash.
#2	ACTIVITY RESTRICTIONS	Restrictions include activities that have the potential to create adverse impacts on water quality.
#3	NON-STORM WATER DISCHARGES	Illegal dumping educational materials as well as spill response materials will be provided to employees.
#4	OUTDOOR LOADING AND UNLOADING	Material handling will be conducted in a manner as to prevent any storm water pollution. .
#5	SPILL PREVENTION, CONTROL, AND CLEANUP	The project will require a Spill Prevention, Control, and Countermeasure (SPCC) Plan, and a Hazardous Materials Business Plan in accordance with Federal and State requirements.
#6	EDUCATION	Employees will receive materials for storm water pollution prevention in the form of brochures and other information in a format approved by the County of Imperial.
#7	INTEGRATED PEST MANAGEMENT	If any pesticide is required onsite, the need for pesticide use in the project design will be reduced by: <ul style="list-style-type: none"> <li>• Keeping pests out of buildings using barriers, screens and caulking</li> <li>• Physical pest elimination techniques, such as squashing, trapping, washing or pruning out pests</li> <li>• Relying on natural enemies to eat pests</li> <li>• Proper use of pesticides as a last line of defense</li> </ul>
#8	VEHICLE AND EQUIPMENT FUELING, CLEANING, AND REPAIR	All vehicles will be serviced offsite whenever possible. If servicing is required onsite, it must be conducted in an area isolated from storm drain inlets or drainage ditch inlets. The area must be bermed and precluded from run on. Any spillage must be fully contained and captured and disposed of per County of Imperial Hazardous Waste requirements.
#9	WASTE HANDLING AND DISPOSAL	Materials will be disposed of in accordance with Imperial County Hazardous Material Management guidelines, and will be sent to appropriate disposal facilities. Under no circumstances shall any waste or hazardous materials be stored outside without secondary containment.