

**DOCKET**

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Ms. Melissa Jones  
Executive Director  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814-5512

**Subject: Cultural Resources Alternatives Assessment for the Proposed  
Blythe Solar Energy Project, Volume I  
Docket No. (09-AFC-6)**

Enclosed for filing with the California Energy Commission is the original of the  
**Cultural Resources Alternatives Assessment for the Proposed Blythe Solar  
Energy Project, Volume I** for the Blythe Solar Power Project (09-AFC-6).

Sincerely,



Marie Mills



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT  
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1516 NINTH STREET, SACRAMENTO, CA 95814  
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**APPLICATION FOR CERTIFICATION  
FOR THE BLYTHE SOLAR  
POWER PLANT PROJECT**

**Docket No. 09-AFC-6**

**PROOF OF SERVICE**  
(Revised 1/26/10)

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**DECLARATION OF SERVICE**

I, Marie Mills, declare that on February 3, 2010, I served and filed copies of the attached **Cultural Resources Alternatives Assessment for the Proposed Blythe Solar Energy Project, Volume I** dated **January 2010**. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: **[[http://www.energy.ca.gov/sitingcases/solar\\_millennium\\_blythe](http://www.energy.ca.gov/sitingcases/solar_millennium_blythe)]**

The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

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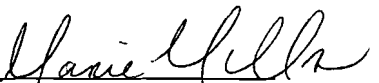
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Attn: Docket No. **09-AFC-6**  
1516 Ninth Street, MS-4  
Sacramento, CA 95814-5512  
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I declare under penalty of perjury that the foregoing is true and correct.

  
Marie Mills

**ALTERNATIVES ASSESSMENT FOR THE PROPOSED  
BLYTHE SOLAR POWER PROJECT:  
CULTURAL RESOURCES**

VOLUME I

ALTERNATIVES  
Chuckwalla Valley  
El Centro  
Blythe Disturbed Lands  
East of Lancaster  
Johnson Valley

*Prepared for:*  
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## INTRODUCTION

### ***Response to Data Request DR-CR-144***

*California Energy Commission Data Requests, Set 1 (#1-260) dated December 7, 2009*

### **BACKGROUND**

Energy Commission and BLM cultural resources staff must conduct both California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) analyses of the proposed project. The latter requires a robust analysis of project alternatives, so the applicant must identify and analyze a reasonable range of alternative project sites, configurations, or technologies and provide to staff the conclusions of that analysis and the data acquired and used to conduct the analysis.

The Energy Commission, with the assistance of BLM, has identified a reasonable range of alternatives for the proposed project, but cultural resources data on these alternatives were not included in the AFC or AFC Data Adequacy Supplement. Staff needs these data to conduct the required NEPA alternatives analysis comparing the proposed project's impacts to cultural resources with those of the alternatives.

### **DATA REQUEST**

**144.** Pursuant to achieving a BLM Class III inventory for the alternative project site location(s), please provide to staff, under confidential cover, the following:

- Copies of DPR 523 site forms for all previously known cultural resources from California Historical Resources Information System (CHRIS) record searches, and from BLM records (if pertinent), for the alternative locations, out to 1.0 mile beyond the sites' and linear facility corridors' boundaries;
- Copies of CHRIS reports of previous archaeological excavations and architectural surveys conducted within the boundaries of the alternative sites and their linear facility corridors;
- A copy of the results of the Native American Heritage Commission's (NAHC) sacred lands database search for each alternative location;
- Copies of all letters sent to and received from Native Americans identified by the NAHC as interested in development at each alternative location;
- A pedestrian archaeological survey of 100 percent of the acreage of the alternative location, including a visit to all previously recorded archaeological sites to verify location and to update content and condition;
- An examination of historic maps to identify former and extant buildings and structures, including trails, roads, and other infrastructure, aged 45 years or older, for each alternative location;
- A windshield built-environment survey of all of the trails, roads, and historic-period use areas in each alternative location, identified from the examination of historic maps; and a visit to all previously recorded built-environment sites to verify location and to update content and condition;



- Copies of DPR 523 site forms (with as precise dates as possible) for all cultural resources newly identified or updated through the applicant's additional pedestrian archaeological surveys and windshield built environment surveys for each alternative location;
- A map at a scale of 1:24,000 depicting the locations of all previously known and newly identified cultural resources for each alternative location; and
- A discussion of the comparative advantages and disadvantages of the proposed project and each alternative location, with respect to cultural resources.

## **RESPONSE**

In this submittal, Solar Millennium, LLC, and Chevron Energy Solutions (Applicants) provide records search data from the CHRIS information centers for five off-site alternatives: Chuckwalla Valley, El Centro, Blythe Disturbed Lands, East of Lancaster, and Johnson Valley. The Blythe Disturbed Lands alternative was provided by the CEC in their Data Requests dated December 7, 2009. The other four alternatives were proposed by the Applicants in the initial Application for Certification (AFC) filing on August 24, 2009 for the Blythe Solar Power Project (BSPP).

Reconfiguration alternatives, which include all or part of the originally proposed BSPP location, are also being developed and will be submitted in a separate document. At that time, the Applicants will provide a more complete assessment of the comparative advantages and disadvantages of the original BSPP location and the proposed alternatives with respect to cultural resources.

Data Request # 144 contains ten bulleted sub-requests, which have been amended by the CEC after consultation with the Bureau of Land Management (BLM). At present, the Applicants understand the CEC's direction to be that only the following bulleted sub-requests are required:

- Copies of DPR 523 site record forms from CHRIS for previously recorded sites within the alternative locations and a one-mile buffer around the proposed locations – provided in separate binders.
- Copies of CHRIS reports of archaeological investigations conducted within the boundaries of the alternatives – provided in separate binders.
- Copies of the letters received from the NAHC regarding the existence of Sacred Lands sites and potentially interested Native American groups and individuals to be contacted – attached to this document after the summary of results (for Chuckwalla Valley, El Centro, and Blythe Disturbed Lands).
- Copies of letters sent to the Native American contacts identified by the NAHC for each alternative – attached to this document after the summary of results (for Chuckwalla Valley, El Centro, and Blythe Disturbed Lands).

- Maps of previously recorded cultural resources and the extents of previous archaeological investigations within each alternative – provided along with the bound CHRIS site forms and reports. These maps are at a scale of 1:24,000 and reproduce the hand-drawn locational data available at the CHRIS information centers.
- A brief discussion of the comparative advantages and disadvantages of the alternative locations – incorporated into this document as part of the discussion of records search results.

Of critical importance in this assessment is the quantity and quality of survey coverage at each alternative. Those alternatives with greater survey coverage dating to within the last five years provide a more secure basis for analysis and comparison (CEQA, Public Resources Code 5024.1[g][4]). Also of significance in this evaluation are the number and types of cultural resources previously identified, the nature of previous land use, the existence of culturally sensitive natural features such as inland lakes and transportation corridors, the existence of sacred sites of importance to modern Native American groups, and the potential for large, complex archaeological deposits.

The five alternatives for which data are presented in this submittal are summarily compared in Table 1. The compiled records search information for each of the alternatives is presented following the table. Confidential CHRIS reports, DPR site record forms, and 1:24,000 location maps are bound separately.

**Table 1. Blythe Solar Power Project Off-Site Alternatives: Cultural Resources Assessment**

Alternative Name	Previous Investigations (n)		Survey Coverage	Previously Identified Cultural Resources (n) <sup>a</sup>		Sacred Sites	Special Considerations	Ranking Relative to BSPP
	Total	<5 years old		Prehistoric	Historical			
<b>BSPP</b> [Location proposed in the AFC for the Blythe Solar Power Project]	3	1	>50%	35 <sup>b</sup>	199	None known to the NAHC.	Large number of Desert Training Center/California-Arizona Maneuvers Area sites, including the former Blythe Army Air Base. Pleistocene-era pebble terraces seem to be a focus of prehistoric activity.	-
<b>Chuckwalla Valley<sup>d</sup></b>	18	2	20%	29	5	None known to the NAHC.	Most surveys are too old to be entirely comparable. Proximity of Ford Dry Lake and the Coco-Maricopa Trail increase the likelihood of prehistoric cultural resources.	Worse
<b>El Centro<sup>c</sup></b>	11	5	<10%	101	20	None known to the NAHC.	Large prehistoric village site with human remains. Similar as-yet-unidentified sites expected along the ancient shoreline of Lake Cahuilla. Many more prehistoric sites than the BSPP.	Much Worse
<b>Blythe Disturbed Lands (CEC)</b>	18	3	<20%	35	36	None known to the NAHC.	Majority of the area disturbed through agriculture and other activities. Potential for intact cultural resources is therefore considerably lower than at undisturbed alternatives.	Better
<b>East of Lancaster</b>	21	6	<10%	10	9	Response has not been received.	Significant archaeological sites including a California Point of Historical Interest, prehistoric rock art, and historical mining features.	Worse
<b>Johnson Valley</b>	10	1	<5%	5	0	Response has not been received.	Minimal survey coverage has nonetheless identified extensive prehistoric habitation sites, including the historic and prehistoric Old Woman Springs site, a California Point of Historical Interest.	Worse
<p><i>Notes:</i> <sup>a</sup> The recent BSPP survey (Keller 2009) identified more than one thousand isolates, most of which are WWII-era items that would not have been historical-period in age when some surveys were completed at the various alternatives. To create a more comparable data set, we have not included isolates from the BSPP 2009 survey in these totals.  <sup>b</sup> Total includes three sites with prehistoric and historical-period components.  <sup>c</sup> Several investigations are ongoing in the El Centro area but are not yet reported at the CHRIS information center. In addition, a number of informal, opportunistic surveys recorded sites in the area.  <sup>d</sup> Many of the surveys in the Chuckwalla Valley area were conducted more than 20 years ago using survey methods that do not meet current standards.</p>								

## CHUCKWALLA VALLEY ALTERNATIVE

AECOM conducted a records search at the Eastern Information Center (EIC) on December 17-18, 2009 for the Chuckwalla Valley Alternative to the BSPP. The search included a review of archaeological site records and survey maps on file at the EIC. In addition, the NAHC was contacted on December 17, 2009 to conduct a search of their sacred lands files.

### Previous Investigations

The record search at the EIC identified 18 previous investigations within the Chuckwalla Valley Alternative. These consist entirely of Class III archaeological surveys (Table 2). The majority of the surveys are located in the north portion of the alternative near Ford Dry Lake Bed, Interstate 10, and Southern California Edison's Devers-Palo Verde 500 kV transmission line. It is estimated that these investigations cover approximately 20 percent of the Chuckwalla Alternative including the one-mile buffer. However, only two of these surveys, covering less than 20 acres, are less than five years old. According to the California Environmental Quality Act (CEQA), Public Resources Code 5024.1.(g)(4):

If the survey is five or more years old at the time of its nomination for inclusion in the California Register, the survey is updated to identify historical resources which have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminishes the significance of the resource.

Thirteen of the 18 surveys were conducted over 20 years ago when varying surveying methods were used; many of which do not meet current standards. An example of such a survey is the Bureau of Land Management (BLM) sponsored survey of known geothermal resource areas around Ford Dry Lake Bed (American Pacific Environmental Consultants 1981). This project surveyed 1,600 acres over a period of four days at transect intervals of 50 meters. In addition, Desert Training Center sites were not greater than fifty years in age when these surveys were conducted so sites from this important period were not considered historic resources at the time.

**Table 2. Previous Surveys within the Chuckwalla Valley Records Search Limits**

Report Number (RI-)	Year	Author	Title
0010	1986	McCarthy, Daniel F.	<i>Environmental Impact Evaluation: A Cultural Resources Assessment of a Proposed Prison Site Near Blythe in Riverside County, California</i>
0012	1990	Romani	<i>Archaeological Assessment for the Proposed California State Prison, Riverside II- Project #115H2 Chuckwalla Valley State Prison, Riverside County, California</i>
0160	1977	Greenwood, Roberta	<i>Archaeological Resources Survey: West Coast - Mid-Continent Pipeline Project Long Beach to Colorado</i>
0190	1981	Hammond, Stephen R.	<i>Archaeological Survey Report for the Proposed Safety Project on Interstate Route 10 Between Chiriaco Summit and Wiley's Well Overcrossing Riverside County, California</i>

<b>Report Number (RI-)</b>	<b>Year</b>	<b>Author</b>	<b>Title</b>
0220	1977	Cowan, Richard and Kurt Wallof	<i>Interim Report – Fieldwork and Data Analysis: Cultural Resources Survey of the Proposed Southern California Edison Palo Verde-Devers 500 kV Power Transmission Line.</i>
0221	1982	WESTEC Services, Inc	<i>Cultural Resource Inventory and National Register Assessment</i>
0222	1977	Wallof, Kurt, Richard A. Cowan	<i>Cultural Resource Survey of the proposed Southern California Edison Palo Verde-Devers 500 kV Power Transmission Line</i>
0284	1977	Weaver, Richard A.	<i>Cultural Resource Identification - Sundesert Nuclear Project</i>
0813	1980	Indior, R.A.	<i>Geothermal Temperature Gradient Holes</i>
0982	1980	Crew, Harvey, James fitting	<i>An Archaeological Survey of Geothermal Drilling Sites in Riverside County, California</i>
1249	1978	Bureau of Land Management (BLM)	<i>California Desert Program: Archaeological Sample Unit Records for the Big Maria Planning Unit.</i>
1279	1981	American Pacific Environmental Consultants, Inc	<i>A Cultural Resources Inventory of the Ford Dry Lake Known Geothermal Resource Area</i>
1664	1982	WESTEC Services, Inc	<i>Cultural Resource Inventory of Seisdata Services Chuckwalla Geophysical Test Corridor, Riverside County, California</i>
3029	1989	Padon, Beth, Scott Crownover, Jane Rosenthal and Rebecca Conard	<i>Cultural Resources Assessment Southern California Gas Company Proposed Line 5000, Riverside County</i>
4619	2002	Chandler, Evelyn N., Cary D. Cotterman, and Valerie Van Hemelryck	<i>Archaeological Survey and Paleontological Literature and Records review for the Proposed Erosion Control Project at Ironwood State Prison Located Near Blythe, Riverside County, California</i>
5245	2005	Compass Rose Archaeological, Inc.	<i>Negative Archaeological Survey</i>
7543	2007	Dalu, Chris	<i>A Class III Cultural Resources Survey of Six Proposed CDFG Guzzler Locations, EA# CA-660-08-07, Eastern Riverside County, California</i>
7790	2003	Schaefer, Jerry	<i>A Class II Cultural Resources Assessment for the Desert-Southwest Transmission Line, Colorado Desert, Riverside and Imperial Counties, California.</i>

### **Previously Recorded Cultural Resources**

The records search identified 34 previously recorded cultural resources within the Chuckwalla Valley Alternative and one-mile buffer: 29 prehistoric cultural resources and 5 historical-period cultural resources (Table 3). The prehistoric cultural resources include 21 isolates and 8 sites. Isolates consist primarily of lithic flakes and flaked stone tools, but a handful of groundstone artifacts and sherds were reported. Prehistoric archaeological sites include three pot drops, a

lithic scatter, two prehistoric habitation sites, one flake, and one groundstone and hammer stone. The five historical-period cultural resources located within the records search area are a well site, a historical-period refuse deposit, a WWII-era bivouac site, one service station, and a segment of U.S. Route 60.

Of the 34 previously recorded cultural resources only five occur within the proposed footprint of the Chuckwalla Valley Alternative: two sites, two isolates, and one resource whose form was missing from the EIC files. The remainder lie in the buffer and the vast majority of these are located along the edges of the Ford Dry Lake in the north. The results of a 1981 BLM survey (American Pacific Environmental Consultants 1981) suggested to the authors that small groups traveling along the Coco-Maricopa Trail camped along the southern shoreline of the lake. They predicted the great majority of cultural resources would be found within 650 meters of the ancient shoreline. This prediction remains to be tested as very little survey has been conducted away from the lake bed.

**Table 3. Previously Recorded Cultural Resources at the Chuckwalla Valley Alternative**

Primary Number (P-33-)	Permanent Trinomial (CA-RIV-)	Description	Date(s) Recorded	Within Project	Within one-mile Radius of Project
<i>Archaeological Sites</i>					
	1126	Lithic scatter	1976	X	
	1131	Pot drop and associated artifact scatter	1976; 1981		X
2239-20	1132	Hopkins Well	1976; 1982		X
	1265	One flake	1977		X
	1543	Lithic scatter with groundstone	1976		X
	2157	Prehistoric habitation site	1981		X
	3801	Pot drop	1989		X
	3802	Prehistoric habitation site	1989		X
12427	7049	Bedrock milling	2001		X
13596	9092	Historic refuse deposit	2004; 2005	X	
13597		Historic refuse deposit	2004; 2005		X
13658		Remains of roadside service station	2004		X
14176		Two Pot drops	2005		X
17766		Segment of U.S. Route 60	2009		X
<i>Isolates</i>					
12820		isolate - Flake			X
12925		isolate - Debitage	1989		X
12926		isolate - Flake	1989		X
12927		isolate - Prehistoric pot sherd	1980		X
12928		isolate - Flake	1980		X

Primary Number (P-33-)	Permanent Trinomial (CA-RIV-)	Description	Date(s) Recorded	Within Project	Within one-mile Radius of Project
12931		isolate - Groundstone fragment, mano fragment	1981		X
12932		isolate - Flaked stone tool	1981		X
13473		isolate - Flaked stone tool	1978		X
13514		isolate - Flake	1981		X
13517		isolate - Flaked stone tool	1981		X
13519		isolate - Flaked stone tool	1981		X
13520		isolate - Flake	1981		X
13521		isolate - Prehistoric pot sherd	1981		X
13522		isolate - Flaked stone tool and two flakes	1981		X
13595		isolate - Prehistoric pot sherd	2004; 2005	X	
13618		isolate - Flaked stone tool	1990		X
13657		isolate - Hammerstone	2004		X
14155		isolate - Flake	2005	X	
17852	9239	isolate - Flake	2009		X
9043	9043	unavailable		X	
663	663	unavailable			X

### NAHC Results

The December 28, 2009 letter received from the NAHC indicated that no sacred lands are known to exist within the Chuckwalla Valley Alternative. In a hand-written note, Mr. David Singleton, Program Analyst for the NAHC, suggested that the Applicants check the location of the Chuckwalla Valley Alternative site in relation to the archaeological site known as Alligator Rock. The Alligator Rock site is not within the proposed Chuckwalla Valley Alternative project site or one-mile records search buffer. The NAHC also provided a list of Native American contacts specific to the alternative area for follow up consultation. Informational letters have been sent to the contacts identified by the NAHC.

### Summary

Adequate survey coverage of the Chuckwalla Valley Alternative does not exist to provide a complete comparison to the BSPP. Less than one percent of the records search area has been surveyed within the last five years and only five cultural resources have been recorded within the Chuckwalla Valley Alternative footprint. Previous archaeological work suggests that many more undocumented sites exist in the project area.

The ancient Ford Dry Lake shoreline adjacent to the northern boundary of the Chuckwalla Valley Alternative records search area exhibits a high frequency of prehistoric cultural resources.

While the facility footprint of the alternative is situated south of the dry lake, additional prehistoric cultural resources are expected in diminishing frequency as one moves away from the shoreline. One WWII-era cultural resource has been recorded within the Chuckwalla Valley Alternative. This resource was found along a narrow survey corridor associated with a transmission line. Using the results of the BSPP as a guide, a larger block survey in the Chuckwalla project area would undoubtedly record many additional Desert Training Center materials. The Chuckwalla Valley Alternative records search area is also located along the Coco-Maricopa Trail.

Although minimal survey coverage exists in the Chuckwalla Valley Alternative (estimated to be less than 1,600 acres), 29 prehistoric cultural resources are known. A complete inventory of the alternative would likely produce many more prehistoric resources than were recorded at the BSPP. Thus, the Chuckwalla Valley Alternative is expected to have a greater impact to cultural resources, particularly prehistoric resources, than the BSPP.



## EL CENTRO ALTERNATIVE

AECOM conducted a records search at the South Coastal Information Center (SCIC) on December 21, 2009 for the El Centro Alternative to the BSPP. The search included a review of archaeological site records and survey maps on file at the SCIC. In addition, the NAHC was contacted on December 21, 2009 to conduct a search of their sacred lands files.

### Previous Investigations

The record search identified 11 previous investigations within the El Centro Alternative and one mile buffer. In the El Centro area, several investigations are ongoing are therefore not included in this analysis. These current investigations include at least one solar related project for Sterling Energy Systems Solar Two Project. Locations of ongoing surveys are not plotted on SCIC maps, but cultural resources where site numbers have been obtained are. Of the 11 projects on file at the SCIC, one is a Class II sample survey, nine are Class III surveys, and one is a testing-level investigation (Table 4). It is estimated that these investigations cover less than 10 percent of the El Centro Alternative records search area. Five of the surveys are less than five years old.

In addition to formal surveys, it is apparent from the site records that Imperial Valley College and the BLM have conducted occasional judgmental surveys throughout the project area and recorded cultural resources where no formal reports were filed or surveys plotted at the information center. This accounts for the large number of recorded sites that are not associated with reported investigations.

Of the 11 reports included in this submittal, several are notable in their results and observations. Schaefer (1981) recorded 22 cultural resources during a Phase II sample survey for San Diego Gas and Electric's proposed La Rosita 230 kV interconnection project. During this survey, the association between the ancient Lake Cahuilla shoreline and large complex archaeological sites was clearly identified. The most culturally sensitive zone was noted as occurring between the 40 and 50 foot contours. Von Werlof (1983) surveyed several long transects for proposed geophysical work on West Mesa, two of which crossed through the records search area. Two of the Class III surveys are associated with proposed flood control dikes for the Westside Main Flood Control Area where nine sites and four isolates were recorded (Collins and von Werlof 1993; Collins and von Werlof 1996). In 2005 and 2006, RECON surveyed over 10,000 acres of target ranges including a small portion of the far northwest side of the records search area (Underwood 2005; 2006).

**Table 4. Previous Surveys within the El Centro Records Search Limits**

Report Number (SD-)	Year	Author	Title
N/A	1981	Cornerstone Research	<i>Archaeological Investigations of a Quarry Workshop and of Stone Ring Formations, Stoddard Valley, California</i>
1100251	1981	Cultural Systems Research, Inc	<i>Volume I Phase II Archaeological Survey of the La Rosita 230 Kv Interconnection Project</i>

<b>Report Number (SD-)</b>	<b>Year</b>	<b>Author</b>	<b>Title</b>
1100297	1983	Jay von Werlhof	<i>Archaeological Examinations of Petty Ray Geophysical Transects on West Mesa</i>
1100480	1993	Imperial Irrigation District	<i>Cultural Resource Survey and Assessment the Westside Main (WSMFC) Flood Control Area</i>
1100552	1996	Imperial Irrigation District	<i>Cultural Resource Survey and Assessment the Westside Main (WSMFC) Flood Control Area</i>
1100853	2001b	BLM	<i>Cultural Resources Inventory Report</i>
1100873	2001	BLM	<i>Cultural Resources Inventory Report</i>
1100988	2005	Jackson Underwood and Collett, Russ	<i>Phase I Cultural Resource Survey of a Portion of Target Area 103 Range 2510, Naval Air facility El Centro, Imperial County, California</i>
1100991	2006	Jackson Underwood	<i>Phase I Survey of a Portion of the Parachute Drop Zone, Range 2510, Naval Air Facility El Centro, Imperial County, California</i>
1101057	1980	Andrew Pignuolo, Philips, Roxanne and Gallegos, Dennis	<i>Cultural Resource Study of the Mount Signal and Dixie Ranch Imperial County Prison Alternatives, Imperial County, California</i>
1101071	2000	Applied Earthworks	<i>Phase I Archaeological Survey of the Proposed Imperial Site, New Mental Health Treatment Facility Project</i>

### **Previously Recorded Cultural Resources**

The records search identified 121 previously recorded cultural resources within the El Centro Alternatives records search area: 101 prehistoric cultural resources and 20 historical-period cultural resources (Table 5). The 101 prehistoric cultural resources located within the records search area include 42 isolates and 59 sites. Isolates consist primarily of lithic flakes and cores, but a handful of groundstone artifacts and sherds were reported. Archaeological sites include a village site, 13 temporary camps, roasting pits, trail segments, rock features, lithic scatters, lithic and ceramic scatters, and cairns. Four site records were unavailable at the time of the records search. The 20 historical-period cultural resources located within the records search area include debris scatters, railroad segments, wagon trails, buildings, and one isolated artifact.

Most notable in this sample of sites is CA-IMP-269, a prehistoric site described as an extensive habitation site with thousands of artifacts and at least a dozen human cremations. The site is located in the one mile buffer of the El Centro Alternative and along the culturally sensitive 40 to 50 foot contour interval above ancient Lake Cahuilla. This contour interval extends into the El Centro Alternative plant site and additional prehistoric sites are predicted to occur along the contour interval in unsurveyed areas.

**Table 5. Previously Recorded Cultural Resources at the El Centro Alternative**

Primary Number (P-13-)	Permanent Trinomial (CA-IMP-)	Description	Date(s) Recorded	Within Project	Within one-mile Radius of Project
<i>Archaeological Sites</i>					
	117	Historic Debris (canteen)	1/20/1977		X
000269	269	Temporary Camp	3/28/2008		X
	321	Temporary Camp	10/2/1974		X
	372	Roasting Pit	1/30/1976	X	
	373	Roasting Pit	1/30/1976	X	
	1245	Temporary Camp Fire Affected Rock	1/20/1977	X	
	1246	Concentration	1/20/1977		X
	1417	Temporary Camp	3/1/2008		X
	1418	Ceramic Scatter	9/7/1976		X
	1419	Lithic and Ceramic Scatter	9/17/1976		X
	1426	Village	9/17/1976		X
	1662	Temporary Camp	1/1/1976		X
	2097	Lithic Scatter	1/27/1978		X
	2364	Lithic Workshop	2/9/1978		X
	2438	Lithic Scatter	4/1/1978		X
	2439	Lithic Scatter	4/1/1978		X
	2441	Lithic Scatter	4/1/1978		X
	2872	Trail Segment	4/29/1978		X
	2874	Cairn	4/22/1978		X
	3191	Historic Ruins	10/22/1977		X
	3192	Historic Buildings	10/25/1977		X
	3295	Historic Debris (canteen)	1/20/1977		X
	3296	Historic Debris	1/20/1977		X
	3352	Historic Wagon Trail	1856		X
	3360	Historic Wagon Trail	1856	X	
	3362	Historic Wells	1856		X
	3363	Historic Wagon Trail	1856		X
	3397	Unavailable		X	
	3398	Historic Wagon Trail	5/31/1978	X	
	3399	Historic Wagon Trail	1856		X
	4189	Lithic and Ceramic Scatter	9/9/2003	X	
	4190	Lithic Scatter	10/10/1979	X	
	4193	Historic Trash Dump	10/10/1979		X
	4390	Historic Debris	1/5/1981		X
	4391	Historic Debris	1/5/1981		X
	4469	Temporary Camp	6/4/1981		X

<b>Primary Number (P-13-)</b>	<b>Permanent Trinomial (CA-IMP-)</b>	<b>Description</b>	<b>Date(s) Recorded</b>	<b>Within Project</b>	<b>Within one-mile Radius of Project</b>
	4470	Lithic and Ceramic Scatter	6/4/1981		X
	4471	Ceramic Scatter	6/4/1981		X
	4588	Ceramic Scatter	6/7/1981	X	
	4589	Ceramic Scatter	6/7/1981	X	
	4590	Temporary Camp	6/7/1981	X	
	4592	Temporary Camp	6/7/1981	X	
	4602	Ceramic Scatter	6/7/1981		X
	4953	Temporary Camp	4/22/1983		X
	4954	Lithic Scatter	4/27/1983		X
	4958	Temporary Camp	5/21/1983	X	
	5129	Rock Ringed Circle	4/12/1983	X	
	5189	Temporary Camp	11/6/1976		X
	5581	Lithic and Ceramic Scatter	4/25/1983	X	
	6933	Lithic and Ceramic Scatter	4/8/1993		X
008139	7739	Historic Railroad Segments	7/1/2002	X	
008323	7816	Historic Debris	12/1/1999		X
008554	7985	Lithic and Ceramic Scatter	8/1/2001		X
008555	7986	Lithic and Ceramic Scatter	8/1/2001		X
008556	7987	Lithic and Ceramic Scatter	8/1/2001		X
008557	7988	Lithic and Ceramic Scatter	8/1/2001		X
008558	7989	Lithic and Ceramic Scatter	8/1/2001		X
008559	7990	Lithic and Ceramic Scatter	8/1/2001		X
008560	7991	Lithic, Ceramic, and Groundstone Scatter	8/1/2001		X
	8418	Unavailable			X
009203	8427	Temporary Camp	6/5/2007		X
009204	8428	Lithic Scatter	6/6/2007	X	
009205	8429	Lithic Scatter	6/29/2007		X
009206	8430	Lithic and Ceramic Scatter	6/29/2007		X
009302	8489	Historic Railroad Segments	3/22/2007		X
009588	8653	Ceramic Scatter	3/19/2007		X
009728	8729	Lithic and Ceramic Scatter	11/14/2007		X
009729	8730	Lithic and Ceramic Scatter	11/14/2007		X
010052	8955	Lithic Scatter	2/8/2008		X
010053	8956	Lithic Scatter	2/9/2008		X
010054	8957	Lithic Scatter	2/9/2009		X
010060	8963	Lithic Scatter	3/10/2008		X
010066	8969	Historic Debris	3/14/2008		X
010067	8970	Lithic and Ceramic Scatter	3/31/2008		X

<b>Primary Number (P-13-)</b>	<b>Permanent Trinomial (CA-IMP-)</b>	<b>Description</b>	<b>Date(s) Recorded</b>	<b>Within Project</b>	<b>Within one-mile Radius of Project</b>
010068	8971	Lithic and Ceramic Scatter	3/14/2008		X
010071	8974	Temporary Camp	1/11/2008		X
009303		Historic Buildings	2/29/2007		X
	9208	Unavailable		X	
<b><i>Isolates</i></b>					
	1247	Core	1/20/1977		X
	1415	Sherd	9/17/1976		X
	1416	Sherd	9/17/1976		X
	1420	Sherd	9/17/1976		X
	1425	Sherd	9/17/1976		X
	2871	Tool	4/29/1978		X
	2873	Tool	4/22/1978		X
	4191	Lithic Scatter	10/10/1979	X	
	4192	Flake	10/10/1979	X	
	4389	Sherd	1/5/1981		X
	4468	Metate	6/4/1981		X
	4534	Sherd	6/6/1981	X	
	4560	Core	6/4/1981		X
	4587	Flake	6/7/1981	X	
	4591	Flake	6/7/1981	X	
	4593	Flake	6/7/1981	X	
	4594	Flakes	6/7/1981	X	
	4595	Flake	6/6/1981	X	
	4596	Sherd	6/6/1981	X	
	4597	Sherd	6/6/1981	X	
	4598	Flake	6/6/1981	X	
	4599	Sherd	6/6/1981	X	
	4600	Unavailable		X	
	4601	Flake	6/6/1981	X	
	4603	Flake	6/7/1981		X
	5578	Sherd	4/25/1983		X
	5579	Sherd	4/25/1983	X	
	5580	Ceramic Scatter	4/1/1983	X	
	5583	Mano	5/21/1983	X	
	5584	Chopper	5/21/1983	X	
	6390	Metate Fragment	12/20/1989		X
	6391	Lithic Tool	12/20/1989		X
	6392	Mano	12/20/1989		X

Primary Number (P-13-)	Permanent Trinomial (CA-IMP-)	Description	Date(s) Recorded	Within Project	Within one-mile Radius of Project
	6396	Mano	12/20/1989		X
	6397	Sherd	12/20/1989		X
009179		Core	6/5/2007		X
009221		Flakes	7/2/2007		X
009222		Historic Debris	7/2/2007		X
009539		Lithics	3/19/2007		X
009540		Lithic	3/19/2007		X
009549		Core	8/11/2006		X
009589		Sherds	3/22/2007		X
009727		Lithic flake	11/14/2007		X

Note: Site numbers 10085-10088, 10090, 10099-100103 are plotted on the CHRIS base maps within the El Centro Alternative records search area but they were never assigned to archaeological resources and no DPR forms exist for those numbers.

### NAHC Results

The December 28, 2009 letter received from the NAHC indicated that no sacred lands are known to exist within the El Centro Alternative. The NAHC provided a list of Native American contacts specific to the area for follow up consultation. Informational letters have been sent to all contacts noted in the NAHC letter.

### Summary

Survey coverage at the El Centro Alternative is less than that at the BSPP. However, even with less survey coverage a substantial number of prehistoric cultural resources are known to exist in the El Centro Alternative records search area. Some of those recorded sites, such as sites CA-IMP-269 and CA-IMP-1426, are extensive habitation sites with deep subsurface deposits and human interments. The presence of the ancient Lake Cahuilla shoreline and the sensitive 40 to 50 foot contour interval within the proposed alternative location significantly increase the likelihood that more complex prehistoric resources will be identified with additional pedestrian survey. Existing data suggest that impacts to cultural resources at the El Centro Alternative would be far greater than that at BSPP.

## **BLYTHE DISTURBED LANDS ALTERNATIVE**

The Blythe Disturbed Lands Alternative includes three large, discontinuous blocks located east and northeast of the BSPP on the Palo Verde Mesa. Based on satellite imagery, the northern most block is roughly 75 percent disturbed. The middle block is also roughly 75 percent disturbed and the southern block is entirely disturbed. Disturbance features include graded and cultivated fields, wells, dirt roads, railroads, and buildings.

As with the other alternative comparisons, it is important to note that the results discussed here do not include the record search for the transmission line interconnect. This corridor remains the same as the original layout and is not discussed further.

The results of two record searches were used in this analysis. The first records search was conducted by the staff of the Eastern Information Center (EIC) on February 11, 2009. A second records search was conducted by AECOM in December 2009 to cover additional area included in the Blythe Disturbed Lands Alternative. The first search included a review of archaeological, historical, and environmental literature as well as the archaeological site records and survey maps on file at the EIC. In addition, AECOM staff conducted a background literature review of the following resources:

- National Register of Historic Places, California Register of Historical Resources, as well as any local listings maintained by the EIC
- BLM site files
- Historic General Land Office (GLO) maps
- Documents on file with the General Patton Memorial Museum
- Documents on file with the Palo Verde Historical Museum and Society.

In response to a request from CEC staff, AECOM contacted several other agencies to collect more information about cultural resources in the project vicinity that might appear on local, city, or state listings, such as lists of historical landmarks, points of interest, historic properties and districts. The results of these investigations are presented in the Class III survey report for the BSPP (Keller 2009).

### **Previous Investigations**

The records and literature searches identified 18 previous investigations conducted within the Blythe Disturbed Lands Alternative records search area (Table 6). These consist entirely of survey-level investigations, and all but three are greater than five years in age. The Class III survey conducted in support of the BSPP (Keller 2009) has not been submitted to the EIC but its results are included in this Alternative analysis. Less than 20 percent of the Blythe Disturbed Lands Alternative including the one-mile buffer has been surveyed.

**Table 6. Previous Surveys within the Blythe Disturbed Lands Records Search Limits**

<b>Report Number (RI-)</b>	<b>Year</b>	<b>Author</b>	<b>Title</b>
N/A	2009	Keller, Angela	<i>Cultural Resources Class III Survey Draft Report for the Proposed Blythe Solar Power Project Riverside County, California</i>
0220	1977	Cowan, Richard and Kurt Wallof	<i>Interim Report – Fieldwork and Data Analysis: Cultural Resources Survey of the Proposed Southern California Edison Palo Verde-Devers 500 kV Power Transmission Line.</i>
0221	1982?	WESTEC Services, Inc	<i>Cultural Resource Inventory and National Register Assessment</i>
0222	1977	Wallof, Kurt, Richard A. Cowan	<i>Cultural Resource Survey of the proposed Southern California Edison Palo Verde-Devers 500 Kv Power Transmission Line</i>
2005	1986	McCarthy, Daniel F.	<i>An Archaeological Assessment of 404.94 Acres of Land Located Near Blythe in Riverside County, California</i>
2078	1984	Wilson, Ruth	<i>Biological and Archaeological Survey of Two Proposed State Prison Sites, Blythe, California (Sec. 2 Cultural Resources – Archaeological Survey Only).</i>
2910	1989	New Mexico State University	<i>Cultural Resources Report for the All American Pipeline Project: Santa Barbara, California to McCamey, Texas and Additional Areas to the East Along the Central Pipeline Route in Texas</i>
3334	1989	von Werlhof, Jay	<i>Archaeological Investigations of the Soil Conservation Service McCoy Wash Project near Blythe, California</i>
3401	1981	Mitchell, Mike	<i>Archaeological Reconnaissance Report</i>
4026	1996	Mitchell, Michael H.	<i>Archaeological Reconnaissance Report</i>
4063	1997	Love, Bruce	<i>Cultural Resources Report: Palo Verde Community College New Mesa Campus, City of Blythe, Riverside County, California</i>
4415	1999	Pigniolo, Andrew, Michael Baksh and John Dietler	<i>Cultural Resource Survey Report for the Blythe Energy Project, Riverside County, California</i>
4784	2004	von Werlhof, Jay	<i>Archaeological Examinations of Mesa Verde Pipeline Improvement</i>
5787	2004	Compass Rose Archaeological, Inc	<i>2004 Automated Switch Project, San Bernardino and Riverside Counties</i>
6070	2001	SWCA, Inc	<i>Final Report 4 of 4, The El Paso to Los Angeles Fiber Optic Cable Project: A Cultural resource Survey of the California Segment, Riverside, San Bernardino, and Los Angeles Counties</i>
7350	2002	Pigniolo, Andrew R., John Dietler, Stephanie Murray	<i>Cultural Resources Survey Report for Line 1903, All American Pipeline Replacement Project, Daggett to Blythe Segment, San Bernardino and Riverside Counties, California</i>
7753	1998	ASM Affiliates, Inc	<i>A Cultural Resource Evaluation of the Parker-Blythe 161 kV Transmission Line No. 2, Riverside and San Bernardino Counties, California</i>



Report Number (RI-)	Year	Author	Title
8232	2003	Pigniolo, Andrew R.	<i>Assessment of Effects to CA-RIV-6370H, From Proposed Riverside Avenue Drainage Improvements Blythe, California</i>

### Previously Recorded Cultural Resources

The records search and the BSPP 2009 survey identified 60 archaeological sites and 11 isolates (does not include isolates from the 2009 survey) within the Blythe Disturbed Lands Alternative records search area (Table 7). These include 35 prehistoric and 36 historical-period resources.

**Table 7. Previously Recorded Cultural Resources at Blythe Disturbed Lands Alternative**

Primary Number (P-33-)	Permanent Trinomial (CA-RIV-)	Description	Date(s) Recorded	Within Project	Within one-mile Radius of Project
<i>Archaeological Sites</i>					
885	885	Cleared areas; lithic scatter; trail segment	1973		X
	1134	Pot drop	1976		X
2844	2844	Lithic scatter	1984		X
2845	2845	Lithic scatter	1984		X
2846	2846	Lithic quarry	2003; 2000; 1988; 1984		X
3418	3418	Lithic quarry	2001; 2000; 1997; 1988		X
3419	3419	Lithic quarry	2008; 1988; 1984		X
3673	3673	Trail segment with associated lithics	2000; 1989		X
	3869	Rockshelter	1990		X
7914	5866	Lithic scatter	1997		X
7915	5867	Historic refuse deposit	1997		X
7916	5868	Pot drop	1997		X
9182	6366	Historic refuse deposit	1999		X
9183	6367	Historic refuse scatter	1999		X
9184	6368	Historic refuse deposit	1999		X
9185	6369	Historic refuse deposit	1999		X
9186	6370	Historic refuse deposit	1999		X
9669	7174H	Historic tent platforms, can scatters, and animal enclosures	2000		X
9672	7176	Ceramic scatter	2000		X
9673	7177H	Historic can scatter	2000		X
9674	7178	Pot drop	2000		X
9675	7179	Ceramic scatter; historical	2000		X

Primary Number (P-33-)	Permanent Trinomial (CA-RIV-)	Description	Date(s) Recorded	Within Project	Within one-mile Radius of Project
9676	7180H	tent platforms Historic foundations and debris scatter	2000		X
12410	7045	Two segments of the Atchison, Topeka & Santa Fe Railroad spur A segment of the Parker-Blythe No. 2 161 KV Transmission Line	2000; 2001; 2002	X	
14082		A segment of the Parker-Headgate Rock-Blythe 161 KV Transmission Line	2000		X
14083		Historic refuse deposit	2001	X	X
SMB-H-415	6725	Historical refuse scatter	2009		X
SMB-H-418		Historical refuse scatter and hearth	2009		X
SMB-H-426		Historical refuse scatter	2009		X
SMB-H-427		Historical refuse dump	2009		X
SMB-P-434		Thermal cobble features	2009		X
SMB-P-435		Thermal cobble features	2009		X
SMB-P-436		Thermal cobble features	2009		X
SMB-P-437		Thermal cobble feature	2009		X
SMB-P-438		Thermal cobble feature	2009		X
SMB-P-440		Thermal cobble feature	2009		X
SMB-P-441		Thermal cobble features	2009		X
SMB-H-442		Historical refuse scatter	2009		X
SMB-H-444		Historical refuse scatter	2009		X
SMB-P-445		Lithic scatter and thermal cobble feature	2009		X
SMB-H-447		Historical refuse scatter	2009		X
SMB-P-448		Thermal cobble feature	2009		X
SMB-H-450		Historical refuse scatter	2009		X
SMB-H-452		Historical refuse scatter and hearth	2009		X
SMB-P-453		Lithic scatter	2009		X
SMB-P-454		Thermal cobble feature and ceramic scatter	2009		X
SMB-H-505		Historical refuse scatter	2009		X
SMB-H-509		Historical refuse scatter	2009		X
SMB-M-511		Lithic scatter with historical refuse scatter	2009		X
SMB-M-512		Lithic scatter with historical refuse scatter	2009		X
SMB-H-513		Historical refuse scatter	2009		X
SMB-H-514		Historical refuse scatter and features	2009		X
SMB-H-515		Historical refuse scatter	2009		X
SMB-H-516		Historical refuse scatter	2009		X

Primary Number (P-33-)	Permanent Trinomial (CA-RIV-)	Description	Date(s) Recorded	Within Project	Within one-mile Radius of Project
SMB-H-517		Historical refuse scatter	2009		X
SMB-H-518		Historical refuse scatter	2009		X
SMB-H-519		Historical refuse scatter	2009		X
SMB-H-520		Historical refuse scatter	2009		X
SMB-H-601		Historical road	2009		X
<b><i>Isolates</i></b>					
9187		isolate - flake	1999		X
9188		isolate - flaked stone tool	1999		X
9189		isolate - core	1999		X
12341		isolate - Debitage	1997		X
12342		isolate - Debitage	1997		X
12343		isolate - Pottery sherd	1997		X
12902	N/A	Isolate – historical shell casings	1990		X
12903	N/A	Isolate – historical glass bottle	1990		X
12905	N/A	Isolate – historical glass bottle	2000		X
12906	N/A	Isolate – two ceramic sherds	1990		X
12907	N/A	Isolate – test cobble	1990		X

Note: All sites beginning with SMB- were recorded during the 2009 BSPP survey and do not have primary numbers or permanent trinomials.

### **Other Archival Research**

In addition to the EIC records search, BLM site files, historical maps, historical society and museum collections, and local archives containing historic documents were consulted to identify any potential cultural resources and to compile information pertinent to the significance of any identified resources. This research is documented in the BSPP Class III survey report (Keller 2009). No additional research was conducted in support of this alternative because the nature of the research was comprehensive enough to capture the Blythe Disturbed Lands Alternative area.

### **NAHC Results**

The December 28, 2009 letter received from the NAHC indicated that no sacred lands are known to exist within the Blythe Disturbed Lands Alternative. The NAHC provided a list of Native American contacts specific to the area for follow up consultation. Informational letters have been sent to all contacts noted in the NAHC letter.

### **Summary**

The record search for the Blythe Disturbed Lands Alternative does not differ substantially from the original BSPP. Until the 2009 BSPP survey, archaeological survey coverage on this portion of the Palo Verde Mesa was restricted to linear corridors associated with roads and transmission lines and a few small block surveys associated with developments. The major difference between

this alternative and the original BSPP location is the disturbance that has taken place in this alternative site. Less than 20 percent of the ground surface remains undisturbed, reducing the potential for preserved, intact archaeological resources. From an archaeological perspective, the Blythe Disturbed Lands Alternative is preferred over the original BSPP site because fewer cultural resources are likely to be impacted.

## EAST OF LANCASTER ALTERNATIVE

AECOM conducted a records search at the South Central Coastal Information Center (SCCIC) on January 6, 2010 for the East of Lancaster Alternative to the Blythe Solar Power Project (BSPP). The search included a review of archaeological site records and survey maps on file at the SCCIC. In addition, the NAHC was contacted on January 20, 2010, to conduct a search of their sacred lands files. No response has been received as of the filing of this document.

### Previous Investigations

The records search identified 21 previous investigations within the East of Lancaster Alternative and one mile buffer. Of these, 17 are intensive pedestrian surveys, two are rock art studies, one is an overview for the City of Lancaster General Plan, and one is an evaluation of a historical-period farmstead (Table 8). It is estimated that these investigations cover slightly less than 10 percent of the East of Lancaster Alternative records search area. Only six of the surveys are less than five years old, and most of the remainder are greater than 15 years old.

Reports by Pettus and colleagues (2002) and Albert Knight (1993) contain excellent descriptions of the fragile rock art and other prehistoric resources in the area. The historical period resources have not been adequately addressed in past studies, but two reports suggest the past importance of mining (Pettus et al. 2002) and homesteading (Lloyd et al. 2008) in the region.

**Table 8. Previous Surveys within East of Lancaster Records Search Limits**

<b>Report Number (LA-)</b>	<b>Year</b>	<b>Author</b>	<b>Title</b>
703	1980	Dosh, Steven G. and Donald E. Weaver, Jr.	<i>Archaeological Survey of the Proposed Palmdale International Airport, Los Angeles County, California</i>
786	1980	Robinson, R. W.	<i>Cultural Resources Investigation Re: Tentative Parcel Map # 12282</i>
1811	1989	Robinson, R.W.	<i>A Cultural Resources Investigation of 1652 Acres Located in East Lancaster, North Los Angeles County, California</i>
2045	1990	Norwood, Richard H.	<i>Cultural Resources Survey for Tentative Map for Tract No. 48746, Lake Los Angeles, Los Angeles County, California</i>
2055	1990	Love, Bruce and William H. De Witt	<i>Cultural Resource Evaluation for Lancaster EIR Group 9, Lancaster, Los Angeles County</i>
2344	1990	Robinson, R. W. and Kerrie L. Kirkbride	<i>A Cultural Resource Investigation of Three Hundred Twenty Acres in the City of Palmdale, Los Angeles County, California</i>
2506	n.d.	reproduced by Gordon Redtfeldt	<i>Prehistoric Indian Rock Art of California</i>
2546	1992	Norwood, Richard H.	<i>Phase I Cultural Resource Investigation for Tentative Parcel Map No. 23211, Lancaster, Los Angeles County, California</i>
2613	1992	Robinson, R. W.	<i>A Cultural Resource Investigation of Tract Map 51086, Approximately Forty Acres Located in the East Lancaster Area of Los Angeles County, California</i>
2846	1993	Knight, Albert	<i>Rock Art of the Western Mojave Desert: A Reevaluation</i>

<b>Report Number (LA-)</b>	<b>Year</b>	<b>Author</b>	<b>Title</b>
3447	1996	Love, Bruce and Bai Tang	<i>Identification and Evaluation of Historic Properties, North Los Angeles County Well Site, Near Wilsona, California</i>
3988	1994	Singer, Clay A., John E Atwood, and Tarquin Preziosi	<i>Cultural Resources Survey and Impact Assessment of Parcels 3334-025-041, 3350-014-036, and 3368-021-015 Located in the Northeast Portion of Los Angeles County, California</i>
5108	2002	Pettus, R., M. Buxton, and Alexander Bevil	<i>Cultural Resources Inventory Report: BLM Land Transfer at Piute Butte Near Antelope Valley Indian Museum</i>
6706	1980	Weaver, Donald E. Jr.	<i>Archaeological Survey of the Proposed Palmdale International Airport, Los Angeles County, California</i>
6803	2001	Duke, Curt	<i>Cultural Resources Assessment, Cingular Wireless Facility No. VY 064-01, Los Angeles County, California</i>
7991	2006	Tang, Bai and Michael Hogan	<i>Cultural Resources Technical Report, City of Lancaster General Plan Update</i>
8427	2007	Cooley, Theodore G.	<i>Archaeological Survey Report for Southern California Edison Company's 66 kV Antelope Bus Split Project, Los Angeles County, California</i>
8957	2007	Lloyd, Jay B. and David Price	<i>Cultural Resources Survey for the Palmdale Water Reclamation Plant Project, Los Angeles County, California</i>
9078	2006	Schmidt, June A.	<i>Letter Report Re: Tejon 12 kV and Petan 12 kV Distribution Lines 2005 SAM Project, Antelope Valley Distribution, Kern and Los Angeles Counties</i>
9393	2008	Parr, Robert E.	<i>Archaeological Assessment of 21 Deteriorated Power Poles on Southern California Edison's Godde, Lariat, Zappa, Stealth, Museum, Force, Petan, Yoda, and Highes Lake 12 kV Circuits, Los Angeles County, California</i>
9783	2008	Lloyd, Jay B. David D. Earle, and Barry A. Price	<i>National Register of Historic Places Eligibility Evaluation of CA-LAN-3760H, Palmdale Water Reclamation Plant Project, Los Angeles County, California</i>

### **Previously Recorded Cultural Resources**

The records search identified 19 previously recorded cultural resources within the East of Lancaster Alternatives records search area: 10 prehistoric cultural resources and 9 historical-period cultural resources (Table 9). The prehistoric cultural resources located within the records search area, include three isolates and seven sites. Isolates consist entirely of single metates and metate fragments. Prehistoric archaeological sites include petroglyphs and pictographs, milling slicks, a temporary camp, roasting pits, lithic scatters, and a shell scatter. The historical-period cultural resources are a ranch site, a barn and associated corrals, a mine, refuse scatters, one isolated well head, and the Piute Butte Natural Amphitheater. The outdoor amphitheater was the site of the Antelope Valley Indian Museum Pageant during the 1930s and is adjacent to the still-

active Antelope Valley Indian Museum. The museum site and amphitheater are listed as a California Point of Historical Interest (SPHI-LAN-033).

Most of the cultural resources in the records search area are clustered in the southeastern quadrant, near the Alpine and Piute Buttes. The types of prehistoric resources present – rock art sites (petroglyphs and pictographs), milling slicks, metates, and camp site – suggest that larger, more complex prehistoric habitation sites would likely be encountered in a complete survey of the area. In particular, the area around the Antelope Valley Indian Museum contains a collection of features that led Pettus and colleagues (2002:2) to suggest that the area might “have been used as a Native American ceremonial or sacred site area.”

Much of the East of Lancaster Alternative records search area was developed for agriculture and ranching from the turn of the 20th century to the 1950s. Numerous dirt roads, well heads, fences, and other features are evident on topographic maps of the region. Most of these historical-period features have not been evaluated by archaeologists. In addition, gold and borax mining was a significant activity in the area from the 1890s through the early 1900s. Site CA-LAN-3760H is one historical-period site that has been evaluated (Lloyd et al. 2008). The site is a farmstead occupied from the 1920s to 1950s, which was found to be eligible for inclusion on the National Register of Historic Places. Other similarly significant historical-period sites likely exist within the records search area.

**Table 9. Previously Recorded Cultural Resources at the East of Lancaster Alternative**

Primary Number (P-19-)	Permanent Trinomial (CA-LAN-)	Description	Date(s) Recorded	Within Project	Within one-mile Radius of Project
<i>Archaeological Sites</i>					
	498	roasting pits and lithic scatter	1972		X
	873	chalcedony flake scatter	1967; 1972; 2003	X	
001731	1731	pictographs	1987; 2003	X	
001732	1732	five milling slicks	1988; 1990	X	
	1739	temporary camp site	1990		X
	2096	petroglyphs	1992		X
003760	3760	historical ranch, dump, and features	2007		X
003761	3761	historical trash scatter	2007		X
002935		Piute Butte Natural Amphitheater	2001		X
003036		barn and corrals	2002		X
003695		historical refuse scatter	2007		X
003696		historical refuse scatter	2007	X	
003805		historical mine	2002		X
120054		historical trash scatter	1992	X	
120056		shell fragment scatter and obsidian flake	1999		X

Primary Number (P-19-)	Permanent Trinomial (CA-LAN-)	Description	Date(s) Recorded	Within Project	Within one-mile Radius of Project
<i>Isolates</i>					
100295		metate fragment	1990		X
100296		metate fragment	1990		X
100297		metate	1990		X
100581		historical well head	2007		X

### Summary

Survey coverage at the East of Lancaster Alternative is substantially less than that at the BSPP. However, even with less survey coverage a number of significant prehistoric and historical-period cultural resources have been identified in the East of Lancaster Alternative records search area. These include a California Historical Point of Interest, rock art panels, and a prehistoric camp site. Several prehistoric sites and historical mining sites have been identified around the Antelope and Piute Buttes in the southeastern quadrant of the Records Search Area. With more intensive survey, researchers are likely to find additional sites similar to those already identified. Existing data suggest that impacts to cultural resources at the East of Lancaster Alternative is likely to be greater than that at BSPP.



## JOHNSON VALLEY ALTERNATIVE

AECOM conducted a records search at the San Bernardino Archaeological Information Center (SBAIC) on January 5, 2010 for the Johnson Valley Alternative to the BSPP. The search included a review of archaeological site records and survey maps on file at the SBAIC. In addition, the NAHC was contacted on January 20, 2010, to conduct a search of their sacred lands files. No response has been received as of the filing of this document.

### Previous Investigations

The record search at the SBAIC identified 10 previous investigations within the Johnson Valley Alternative, only one of which is less than five years old (Table 10). These consist of seven intensive pedestrian survey reports, one report of a judgmental survey along the course of a proposed motorcycle race, one list of sites compiled by the BLM, and one survey and construction monitoring report. Less than five percent of the records search area has been surveyed.

Most of the reports are greater than 15 years old and provide limited data for comparison. Of the reports, those by Mortland (1974) and Lerch (1992, 1993) contain the most detailed information concerning the prehistory and history of the region. In particular, Mortland's report includes extensive ethnographic and paleo-climatic data for the Mojave Desert. Many of the surveys report some level of disturbance related to construction and agriculture. These disturbances may have removed or otherwise impacted some archaeological sites.

**Table 10. Previous Surveys within the Johnson Valley Records Search Limits**

Report Number (NADB-)	Year	Author	Title
1060701	1978	Stumpf, Gary	<i>Archaeological Reconnaissance Report, Checkers Motorcycle Race</i>
1060956	1980	Bureau of Land Management (Sutton)	<i>Cultural Assessment of USGS Seismic Test Locations</i>
1061203	1981	Bureau of Land Management (Sutton)	<i>Cultural Assessment for #CA-10591</i>
1062158	1974	Mortland, Carol A.	<i>Archaeological Impact Evaluation Southern California Edison Proposed Generating Station in Upper Johnson Valley and Associated Transmission, Gas and Fuel Routes Site List (includes sites in other areas)</i>
1062257	n.d.	Bureau of Land Management	
1062515	1992	Lerch, Michael K.	<i>Class III Cultural Resources Inventory of the Morongo Basin Pipeline Project, Hesperia to Landers, San Bernardino County, California</i>
1062800	1993	Brock, James	<i>Cultural Resources Assessment of a Proposed Filling Station and Well for Old Woman Springs Road, San Bernardino County, California</i>
1063094	1993	Lerch, Michael K.	<i>Addendum to Class III Cultural Resources Inventory of the Morongo Basin Pipeline Project, Hesperia to Landers, San Bernardino County, California</i>
1063525	1999	Swope, Karen K.	<i>Archaeological Survey and Historical Study Report for</i>

Report Number (NADB-)	Year	Author	Title
1064489	2006	Hatheway, Roger	<i>Realignment and Shoulder Widening on Highway 247 East of Lucerne Valley, San Bernardino County, California A Phase I Historical and Archaeological Survey and Monitoring Summary Report for the Henke Property (1420 Shay Road), Big Bear City, California</i>

### Previously Recorded Cultural Resources

The records search identified only five previously recorded cultural resources within the Johnson Valley Alternative and one-mile buffer, all of them prehistoric in age (Table 11). These are a village site, a temporary camp, a lithic scatter, isolated lithic flakes, and an isolated flaked stone tool. Of the five previously recorded cultural resources, two occur within the proposed footprint of the Johnson Valley Alternative: CA-SBR-118 and CA-SBR-1880. Both were recorded as extensive prehistoric habitation sites with flaked and ground stone tools, ceramics, hearths and other features.

Site CA-SBR-118 is also known as the Old Woman Springs site, and the spring is listed as a California Point of Historical Interest (CPHI-SBR-025, or P290). Old Woman Springs is associated with a Morongo Indian folk tale about old women who were “banished” to the verdant spring-fed site. The existence of a reliable spring and sheltering canyons likely made this area a focus of activity in prehistory.

**Table 11. Previously Recorded Cultural Resources at the Johnson Valley Alternative**

Primary Number (P-36-)	Permanent Trinomial (CA-SBR-)	Description	Date(s) Recorded	Within Project	Within one-mile Radius of Project
<i>Archaeological Sites</i>					
0118	118	village site	1939; 1955	X	
001880	1880	prehistoric temporary camp	1965; 2009	X	
14428	12937	lithic debitage	2008		X
<i>Isolates</i>					
060733		two basalt flakes	1973		X
060739		oval scraper	1973		X

### Summary

Adequate survey coverage of the Johnson Valley Alternative does not exist to provide a complete comparison to the BSPP. Less than one percent of the records search area has been surveyed within the last five years and only five cultural resources have been recorded within the

entire Johnson Valley Alternative records search area. Nevertheless, previous archaeological work suggests that more undocumented sites exist in the project area. Specifically, the area is likely to contain additional large and complex prehistoric sites similar to the documented sites CA-SBR-118 and CA-SBR-1880 located near Old Woman Springs. The Johnson Valley Alternative is likely to have a greater impact to cultural resources, particularly prehistoric resources, than the BSPP.



Figure 1. Map of the BSPP Alternatives Locations.

## **NAHC Correspondence**