

Appendix E

Cultural Resources Technical Studies

Supplemental Project Statistics Report

1. Project Name.	RE Cinco Gen-Tie Line Project	
2. BLM State Permit Number.	CA-12-22	
3. Field Authorization Number.	Issued on May 14, 2014	
4. Dates of Field Survey.	May 19-25, 2014	
5. Total acreage of lands surveyed at BLM Class II level.	0	
Of Item 5 above:		
A) Acreage of BLM lands surveyed	0	
B) Acreage of other lands surveyed (Private, State, Other Federal) List separately	0	
6. Total acreage of lands surveyed at BLM Class III level.	200	
Of Item 6 above:		
A) Acreage of BLM lands surveyed	150	
B) Acreage of other lands surveyed (Private, State, Other Federal) List separately	50	
7. Total number of cultural properties in project Area (of Potential Effect).	8	
Of Item 7 above:		
A) Total number of cultural properties for which site records were completed (newly recorded cultural properties).	8	
B) Number of new cultural properties on BLM lands	6	
C) Number of new cultural properties on other lands (Private, State, Other Federal)	1	
8. Of the cultural properties located within the Area (of Potential Effect): [If properties are not located on BLM, place this number in parentheses () after the number of BLM properties.]		
A) Number of cultural properties that you are recommending as eligible for the National Register.	0	
B) Number of cultural properties you are a recommending as not eligible for the National Register.	7, (1)	

Of Item 8A above:		
	a) Number of cultural properties that can/will be avoided.	0
	b) Number of cultural properties that will be affected.	0
	c) Number of cultural properties that you are recommending data recovery/mitigation.	0
	d) Number of cultural properties that were data recovered/mitigated.	0
Of Item 8B above:		
	a) Number of cultural properties that can be avoided.	7, (1)
	b) Number of cultural properties that will be affected.	TBD

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EXECUTIVE SUMMARY

RE Barren Ridge Solar 1, LLC, a subsidiary of Recurrent Energy (RE), LLC (Applicant), is proposing to construct and operate an electrical generator intertie (gen-tie) line (Project) on land approximately 6.5 miles northwest of California City in an unincorporated area of Kern County, California. The Project would connect a planned 60-megawatt solar photovoltaic power-generating facility (solar facility), located entirely on private lands, to the Barren Ridge Switching Station and the regional electrical grid. Three gen-tie alternative alignments are being considered. Alternative 1 crosses public lands administered by the Bureau of Land Management (BLM) and is the shortest access to the point of grid interconnection. Alternative 2 would also cross federal land, and would parallel an existing transmission line. Alternative 3 would be located entirely on private and LADWP-owned lands.

Since the preferred gen-tie alignment (Alternative 2) would construct portions of the Project across federal land, the Applicant is seeking a right-of-way grant from BLM. Therefore, BLM is the federal lead agency under the National Environmental Policy Act (NEPA), and for compliance with Section 106 of the National Historic Preservation Act (NHPA) for the ROW Grant which includes only the gen-tie line alternatives that cross federal land. The U.S. Fish and Wildlife Service is the federal lead agency for NEPA and Section 106 compliance for the Section 10 Take Permit which includes the entire proposed project (solar facility and the gen-tie). Since BLM will be conducting Section 106 consultation for the gen-tie line alternatives that cross federal land, the USFWS will relinquish its Section 106 responsibilities for that portion of the Project to BLM. However, the USFWS will still be responsible for Section 106 compliance for the solar facility and gen-tie line alternative that crosses entirely private lands. Kern County is the lead agency under the California Environmental Quality Act (CEQA) for the solar facility and gen-tie line.

This report presents the inventory and preliminary assessment of the cultural resources identified within the portions of the Project under BLM's jurisdiction for the purpose of identifying any historic properties which may be affected by the proposed Project. To meet applicable regulatory requirements, AECOM completed a Class III cultural resources survey and a historic architecture resources assessment. Fieldwork was conducted under BLM Cultural Use Permit CA-12-22, and a BLM Fieldwork Authorization was issued on May 14, 2014.

Prior to field investigations, on December 16, 2013, a comprehensive records search for the Project was performed by staff at the California Historical Resources Information System's Southern San Joaquin Valley Information Center, housed at California State University, Bakersfield. The records and literature search indicated that 16 previous investigations had been conducted within the records search area, which encompasses the three gen-tie alternative corridors, and a 1-mile buffer from the center line of each route. These consist of 14 survey-level investigations, one Class I/Class II investigation, and one site assessment. Of these, 12 overlap with portions of the Project area.

The records and literature search results found 48 previously recorded cultural resources within a 1-mile radius of the Project area. Of these, only one isolate is located within the boundaries of the gen-tie alternatives. The remaining identified sites are located within the 1-mile buffer zone. The majority of the sites are prehistoric lithic scatters and historic refuse scatters.

In addition, the Native American Heritage Commission and local Native American tribal representatives were contacted to solicit information on resources in the vicinity and comments on the Project. A summary of the results of the ongoing contact program is presented in Chapter 3, and a detailed contact communication log and copies of correspondence are provided in Appendix C.

To meet state and federal requirements, Project cultural resources specialists, accompanied by Native American participants, conducted a Class III cultural resources survey of the Project area. As defined in Section 8110 of the BLM's Foundations for Managing Cultural Resources (BLM Manual), a Class III survey is a "professionally conducted, thorough pedestrian survey of an entire target area" intended to "provide managers and cultural resource specialists with a complete record of cultural properties locatable from surface and exposed profile indications" (BLM 2004:19). The Project APE consists of approximately 2,400 total acres, 200 of which were assessed for direct effects to archaeological resources; all 2,400 acres were assessed for indirect effects to historic architectural resources. As currently designed, the preferred alternative (Alternative 2) would occupy approximately 60 of the 200 acres surveyed when constructed.

An intensive pedestrian survey of the direct effects APE identified eight archaeological resources, of which four are historic and four are prehistoric. One of the resources, P-15-007706, was previously recorded as an isolate located just outside of the current direct effects APE. However, field staff identified material associated with P-15-007706 within the direct effects APE and recorded the resource as a site (CA-KER-9772H). The survey also identified 16 isolated finds (14 of which are prehistoric and two historic). No historic architectural resources were identified in either the direct effects or indirect effects APE.

Archaeological sites and isolated finds identified during the present survey effort consist of prehistoric and historical artifacts and features. The majority of resources are prehistoric and consist predominately of flaked stone debitage, with smaller amounts of flaked stone tools. Historic cultural material includes mostly metal cans, with smaller quantities of glass bottles and jars, broken ceramics, and sundry metal items. Historical features include debris scatters from the early to mid-20th century.

Preliminary assessments of the archaeological sites based on surface materials and conditions indicate that none of the sites located within the Project area meets the eligibility criteria for inclusion in the National Register of Historic Places (NRHP). As such, no historic properties will be affected by the Project. Table ES-1 summarizes the identified archaeological resources and their NRHP status.

Table ES-1. Summary of Archaeological Resources in the Project Area

	Total	Recommended Eligible	Recommended Not Eligible	Unevaluated for NRHP
Prehistoric Sites	4	0	4	0
Historic Sites	4	0	4	0
Isolated Finds	16	0	16	0

CHAPTER 1

INTRODUCTION

PROJECT DESCRIPTION

RE Barren Ridge Solar 1 LLC (Applicant), a subsidiary of Recurrent Energy LLC (RE), proposes to construct and operate the RE Cinco Gen-tie Line Project (Project), an electrical generator intertie (gen-tie) line that would be located on public lands managed by the Bureau of Land Management (BLM), in Fremont Valley, an unincorporated area of Kern County (Figure 1). The proposed gen-tie line would connect a planned 60-megawatt solar photovoltaic power-generating facility (solar facility) located on private lands in an unincorporated area of Kern County, California, to the Barren Ridge Switching Station and the regional electrical grid. Together, the planned solar facility and the proposed gen-tie line are known as the RE Cinco Project (formerly the RE Barren Ridge Solar Project) (Figure 2).

The Project would convey the power generated at the planned solar facility to the electrical grid. The proposed gen-tie would be a 230-kilovolt (kV) line between the solar facility and the existing Los Angeles Department of Water and Power's (LADWP) Barren Ridge Switching Station. The switching station is located approximately 2 miles north of the planned solar facility site. The Applicant proposes to construct portions of the RE Cinco Gen-tie across public lands administered by the BLM, and seeks a right-of-way (ROW) Grant from the BLM for this purpose.

Three alternative alignments are being considered. Alternative 1 crosses public lands administered by BLM and is the shortest access to the point of grid interconnection. Alternative 2 would also cross federal land, and would parallel an existing transmission line. Alternative 2 is the preferred alternative. Alternative 3 would be located entirely on private and LADWP-owned lands. The BLM is the federal lead agency under the National Environmental Policy Act (NEPA), and for compliance with Section 106 of the National Historic Preservation Act (NHPA) for the ROW Grant which includes only the gen-tie line alternatives that cross federal land. The U.S. Fish and Wildlife Service is the federal lead agency for NEPA and Section 106 compliance for the Section 10 Take Permit which includes the entire proposed project (solar facility and the gen-tie). Since BLM will be conducting Section 106 consultation for the gen-tie line alternatives that cross federal land, the USFWS will relinquish its Section 106 responsibilities for that portion of the Project to BLM. However, the USFWS will still be responsible for Section 106 compliance for the solar facility and gen-tie line alternative that crosses entirely private lands. Kern County is the lead agency under the California Environmental Quality Act (CEQA) for the solar facility and gen-tie line.

This Class III report focuses on the portions of the Project under BLM's jurisdiction.



Source: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013

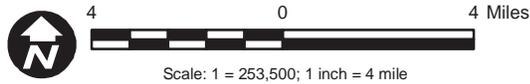
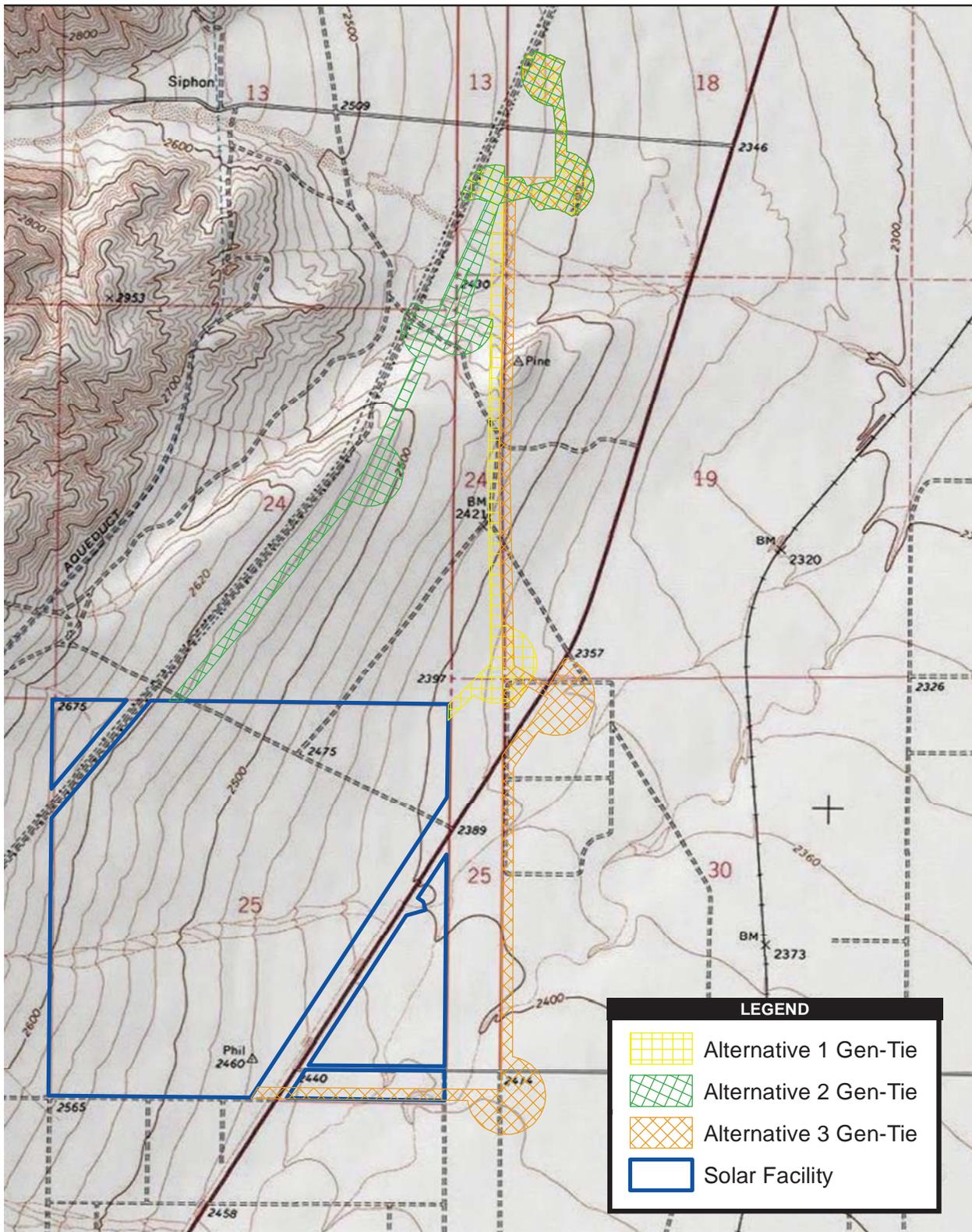


Figure 1
Regional Setting of Project Area



Source: Copyright:© 2013 National Geographic Society, i-cubed

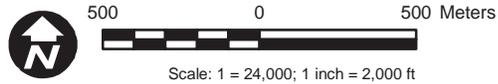


Figure 2
RE Cinco Project Overview

REGULATORY SETTING

The proposed Project requires authorization and issuance of a ROW grant from BLM. Because the Project is a federal “undertaking” as defined at 36 Code of Federal Regulations (CFR) 800.16, compliance with Section 106 of the NHPA and its implementing regulations (36 CFR 800) is required. Section 106 of the NHPA and its implementing regulations (36 CFR 800, as amended in 1999) require federal agencies to consider the effects of their undertakings on historic properties that are or may be eligible for listing in the National Register of Historic Places (NRHP), and provide the Advisory Council on Historic Preservation (ACHP) an opportunity to comment. Historic properties are defined as any buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, and/or scientific importance that are eligible for listing in the NRHP. To qualify as a historic property, a resource must be significant at the local, state, or national level under one or more of the following four criteria:

- A. are associated with events that have made a significant contribution to the broad patterns of our history;
- B. are associated with the lives of persons significant in our past;
- 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; and/or
- D. have yielded or may be likely to yield, information important in prehistory or history.

In addition, resources must retain integrity to qualify for the NRHP. As defined by the ACHP, integrity is the ability of a property to convey its significance through physical features and context, including location, design, setting, materials, workmanship, feeling, and association (ACHP 2009:2). As part of the Section 106 compliance process, an undertaking’s effects on historic properties is assessed by applying the Criteria of Adverse Effect (36 CFR 800.5[1]). An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualifies the property for inclusion in the NRHP in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.

Other federal laws, ordinances, regulations, and standards that guide the management of cultural resources are summarized in Table 1.

Table 1. Regulatory Setting Applicable to Cultural Resources

Laws	Applicability
Antiquities Act of 1906, Title 16, United States Code (USC), Sections 431, 432, and 433	Federal legislation for protection of cultural resources.
National Historic Preservation Act, Title 16, USC Section 470a(a)–(j)	Protects cultural resources on federal lands; provides for inventory and assessment of resources.
National Historic Preservations Act, Title 16, USC Section 470f (Section 106)	Requires federal agencies to take into account the effects of their undertaking on historic properties.
Archaeological Resources Protection Act of 1979, Title 16 USC Section 470aa–470mm	Provides protection for archaeological resources on public lands and Native American lands.
Executive Order 11593 of May 13, 1971, 36 Federal Register, 8921	Provides for protection and enhancement of the cultural environment.
Executive Order 13007 of May 24, 1996, 61 Federal Register, 26771	Provides protection for Native American religious practices.
Executive Order 13175 of November 9, 2000, 65 Federal Register, 67249	Requires federal agencies to conduct regular and meaningful consultation with Native American tribal governments in the development of policies that have tribal implications.
Native American Graves Protection and Repatriation Act, Title 25, USC Sections 3001–3013	Establishes mechanism for Native Americans to claim ownership of human remains and certain cultural items.
American Indian Religious Freedom Act, Public Law 95-341; Title 42 USC Section 1996	Provides protection of Native American religious practices.

AREA OF POTENTIAL EFFECTS (APE)

Pursuant to 36 CFR 800.4(a)(1), an area of potential effects (APE) is the geographic area within which an undertaking may directly or indirectly alter the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking, and may be different for different kinds of effects caused by the undertaking. Typically, the APE for archaeological resources is defined by the proposed ground disturbance area(s), or areas of potential direct effects. For historical resources, including existing standing structures, the APE is often defined more broadly to include areas of potential indirect visual, auditory, or atmospheric effects.

The direct effects APE for the proposed Project encompasses approximately 200 acres and includes the following areas (Figure 3):

- Alternative 1 is 2 miles long and is located primarily in T31S, R36 ½E, Sections 24, 25, and 13 of the Mojave NE United States Geological Society (USGS) 7.5-minute quadrangle. Alternative 1 would cross approximately 1.4 miles of federal land. The archaeological APE along these lengths is a 300-foot-wide corridor (150 feet on either side of the centerline of the proposed alternative), with additional 525-foot radial fan areas at each turn in the alignment.

- Alternative 2 is the preferred alternative. It would be 2.5 miles long and be located mainly within T31S, R36 ½ E, Section 24 of the Mojave NE USGS 7.5-minute quadrangle. Almost 2 miles of this alternative also crosses federal lands. The archaeological APE for Alternative 2 is a 300-foot-wide corridor (150 feet on either side of the centerline of the proposed alternative), with additional 525-foot radial fan areas at each turn in the alignment, as well as the area between the existing LADWP maintenance road and the western edge of the archaeological APE corridor to provide options for pole locations and spur roads.
- Please note that, in addition to federal lands (150 acres), the direct effects APE also encompasses roughly 50 acres of private lands and lands owned by LADWP.

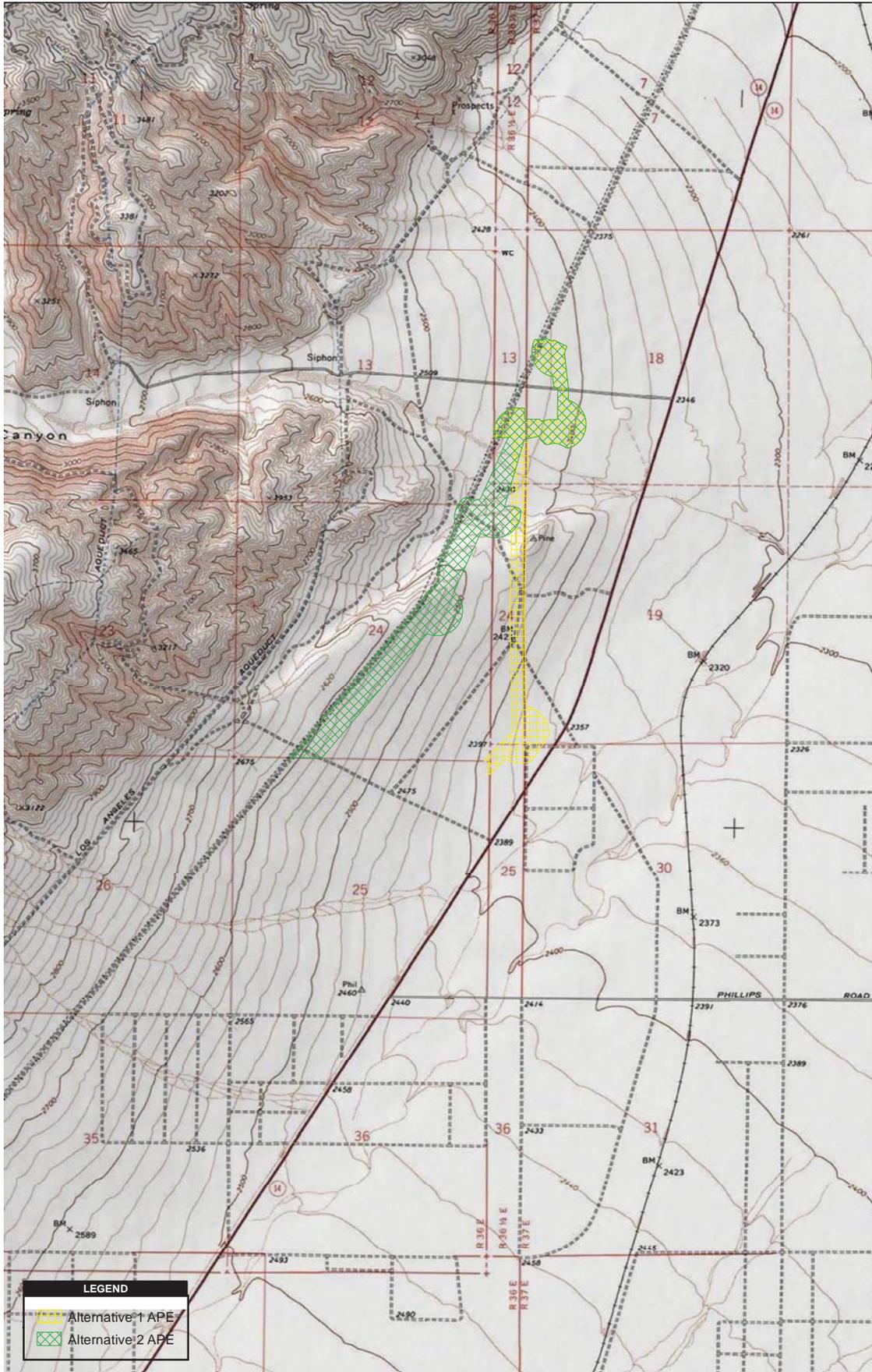
The indirect effects APE consists of approximately 2,400 acres, encompassing 0.5 mile in each direction from the centerline of Alternatives 1 and 2 (Figure 4). The combined direct and indirect effects APEs, therefore, total approximately 2,400 total acres, 200 of which were assessed for direct impacts to cultural resources; all 2,400 acres were assessed for indirect effects to cultural resources.

The direct effects and indirect effects APEs were established by the BLM in consultation with the State Historic Preservation Office (SHPO) and received SHPO concurrence on April 30, 2014.

Although the APE includes only gen-tie Alternatives 1 and 2, the records search area and summary presented in this report covers all three transmission line alternatives in order to provide context for those parts of the project under BLM's jurisdiction. Alternative 3 is a 3.6-mile-long alternative that would be located on private and LADWP-owned land, and would not traverse any federal land. The three gen-tie alternatives are shown in Figure 5.

PROJECT PERSONNEL

Stephanie Jow, M.A., served as the Project cultural lead and report co-author. Theodore Cooley, M.A., RPA, was Project field director and co-author of this report. Stacey Jordan-Connor, Ph.D., RPA, provided Project oversight and senior-level review of this report. Stacie Wilson, Spencer Beitz, and Brian Spelts provided technical geographic information system (GIS) support and created all Project maps.



Source: USGS 7.5' Topographic Quadrangle Mojave NE and Cinco CA 1994

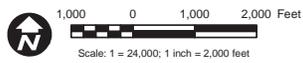


Figure 3
Direct Effects APE

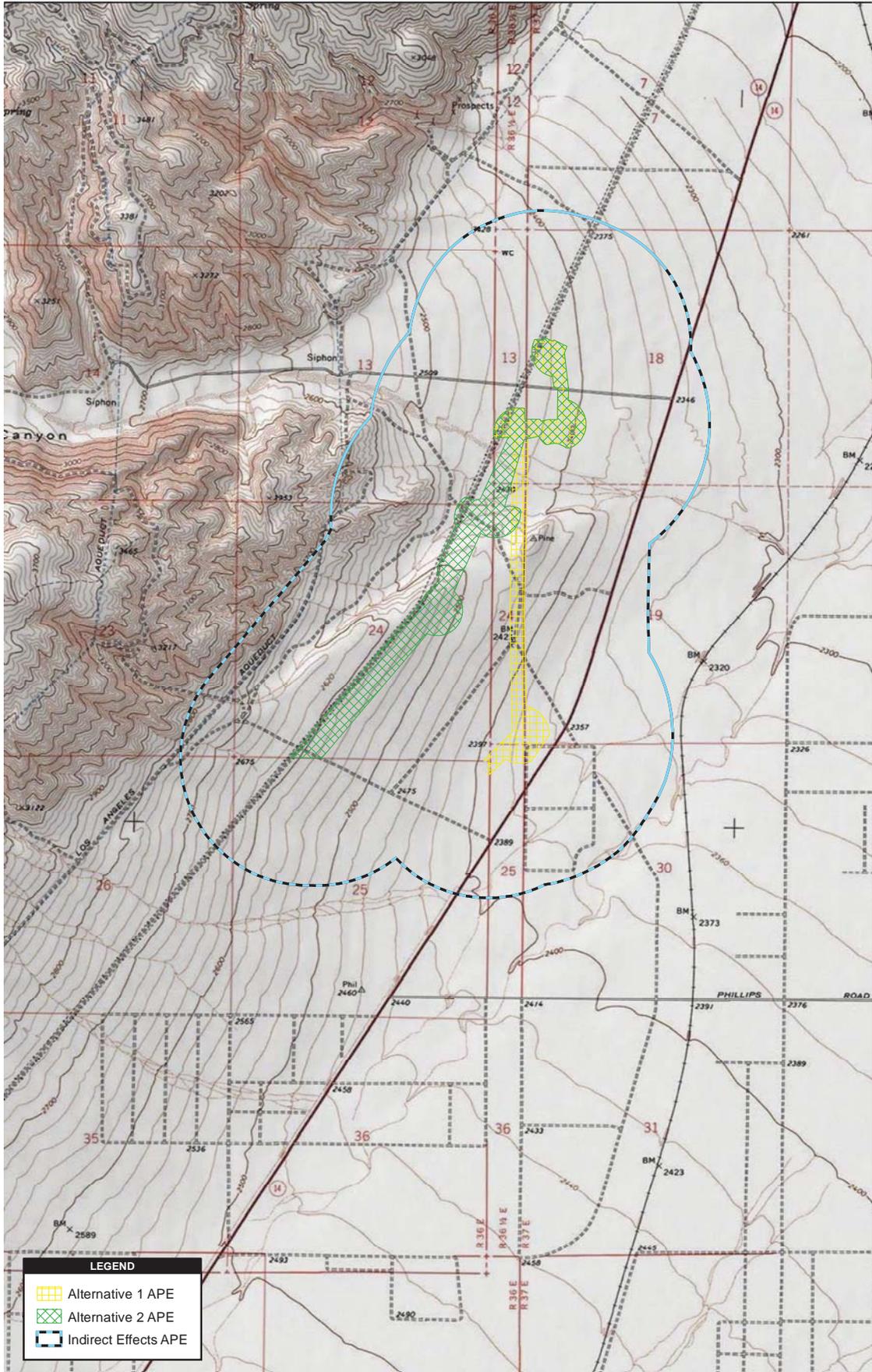
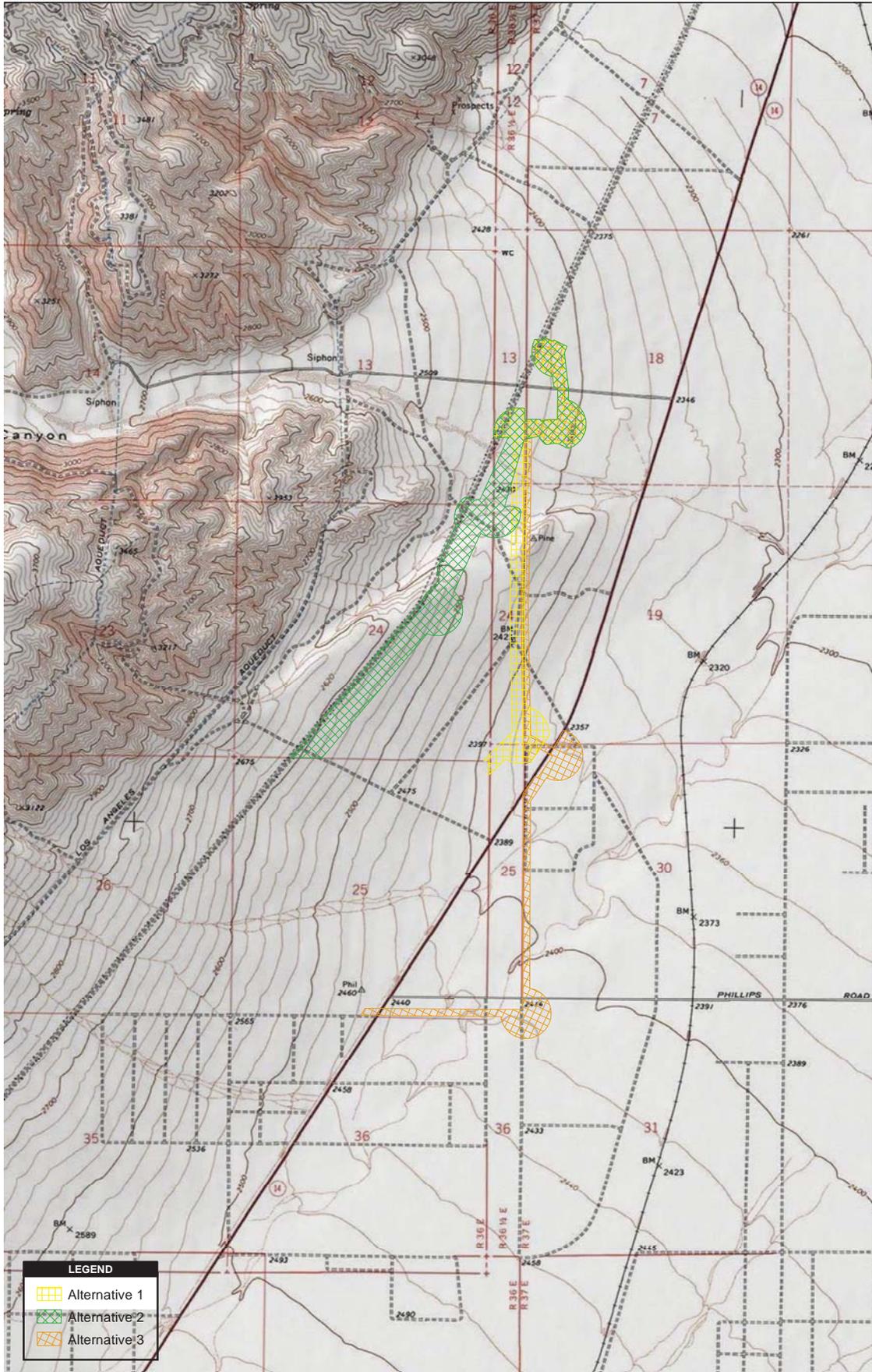


Figure 4
Indirect Effects APE



Source: USGS 7.5' Topographic Quadrangle Mojave NE and Cinco CA 1994

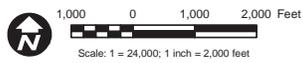


Figure 5
Gen-Tie Alternatives

REPORT ORGANIZATION

Chapter 1 of this report provides a description of the proposed Project, including the regulatory setting and a definition of the Project APE. Chapter 2 is a discussion of the physical and cultural setting of the Project. The physical setting section includes a brief discussion of Project climate, hydrology, geology, flora, and fauna. The cultural setting section includes a discussion of the prehistoric and historic contexts relevant to the immediate Project area and surrounding Mojave Desert.

Chapter 3 reviews the archival research and contact program initiated by Project cultural resources personnel. Archival research included a complete records search of the files held at the California Historical Resources Information System's Southern San Joaquin Valley Information Center (SSJVIC) at the University of California, Bakersfield, and consultation of historic aerial photographs and maps.

Chapter 4 presents Project methodology, including descriptions of field methods, reporting methods, defined site types, and research issues and themes. Chapter 5 provides the results of the field survey and background research program, including a discussion of Project archaeological sites and isolates by theme, context, and type, and also provides summary tables that show significance recommendations and impact assessments for Project sites. Chapter 6 provides a summary and management recommendations for archaeological resources within the Project area.

Appendix A includes resumes of key personnel. Appendix B includes the results of the records search undertaken at the SSJVIC. Appendix C includes documentation of the Native American Contact Program. Appendix D contains the BLM Fieldwork Authorization to conduct the field survey. Appendix E includes Project maps containing the specific locations of archaeological sites and isolated finds. Appendix F contains the California Department of Parks and Recreation (DPR) site forms for archaeological sites identified during the Class III survey.

Once this report is finalized, a copy will be sent to the SSJVIC as a permanent record.

CHAPTER 2 PROJECT SETTING

NATURAL CONTEXT

Physiography and Geology

Fremont Valley is situated in the westernmost area of the Mojave Desert at the base of the Sierra Nevada Mountains. It is bounded by the Rosamond Hills and Antelope Valley to the south, the southern Sierra Nevada and the Tehachapi Mountains to the south and west, the El Paso Mountains to the north, and the Rand Mountains to the northeast (Sutton 1991). Fremont Valley itself is associated with the Garlock fault system and is deeply filled with alluvium that originates in the El Paso and Rand Mountains to the north and the Sierra Nevada Mountains to the west (Sutton 1991). Cajon loamy sand and Rosamond clay are the most widespread soils in Antelope Valley. These soil types are most prevalent in areas that have been impacted by agriculture (Sutton 1991).

The oldest identified rock formations in the western Mojave Desert consist of metamorphosed sedimentary rocks, including gneiss, marble, quartzite, mica schist, gabbro, and conglomerates of pre-Cambrian age. Rock types of the Paleozoic era (230 to 620 million years ago [mya]) include scattered sedimentary and carbonate rock, chert, limestone, sandstone gypsum, and dolomite. Materials of this nature typically formed at the bottom of an ocean and yield fossils ranging from Cambrian to Permian in age. These rock materials are not abundant in the western Mojave, but substantial sections of Paleozoic rock do occur within the El Paso Mountains (Hewett 1954). To the west, the Sierra Nevada Mountains consist principally of Mesozoic-age granitic rocks, but also contain lesser amounts of metamorphic rocks (Harden 2004).

In the El Paso Mountains and Barstow area, north and east of the Project area, deposits of sandstone and limestone dating to the Mesozoic era (70 to 230 mya) occur. During the Oligocene and Miocene epochs (23 to 5 mya), volcanism dominated the landscape, with volcanic activity occurring near Ridgecrest and Red Rock Canyon (Monastero 1996). Basalt and rhyolite flows also formed north of Indian Wells Valley and into the Coso Mountains approximately 3 mya (Monastero 1996). During the late Middle Pliocene, the Mojave region was subjected to great erosion (Hewett 1954), and this continued into the Pleistocene. The erosion occurring during this glacial period (beginning approximately 1.64 mya) formed the long southward-trending Owens, Searles, Panamint, and Death Valleys (Hewett 1954). During the Pleistocene, glacial melt-water likely flowed south across the Mojave block, filling Owens Lake, China Lake, Searles Lake, and Death Valley. During the Mid and Late Pleistocene, in the Fremont Valley and the Antelope Valley to the south, lakes likely also associated with the Late Pleistocene glacial melt were formed, including Koehn Lake in the Fremont Valley, and Rosamond and Rogers lakes in Antelope Valley. During the subsequent Holocene and continuing to the present day, erosion from the Sierra Nevada and surrounding mountains has actively filled in all of these valleys with sediments (Monastero 1996; Sutton 1988, 1991).

Climate and Hydrology

The Mojave is a warm-temperature desert situated between the subtropical Sonoran Desert to the south and the cold-temperature Great Basin to the north. The Mojave Desert is characterized by extreme variations in daily temperatures and more arid conditions than other American desert regions. Freezing temperatures occur during the winter, particularly in higher elevations. Summers tend to be hot, dry, and windy. Precipitation in the region is highly variable from one year to the next (ranging from 3 to 5 inches per year). Almost all precipitation arrives in the winter, but the region also experiences rare, intense summer thunderstorms. It is during these rare flood events that some of the most dramatic changes take place on the desert landscape.

Fremont Valley is within the rain shadow of the Sierra Nevada. The climate is semi-arid with low humidity. Temperatures have an extremely wide range, with diurnal summer temperatures from 120 degrees Fahrenheit (°F) to diurnal winter temperatures of 0°F (Sutton 1991). Rainfall is similar to that of Antelope Valley, averaging approximately 3 inches per year on the valley floor (Stones 1964).

There are several main hydrologic features in the western Mojave Desert. The most notable drainage systems occur on Edwards Air Force Base and in Antelope Valley and Fremont Valley (Sutton 1991). The system on Edwards Air Force Base consists of two sizeable dry lake beds, Rosamond and Rogers, and one minor dry lake bed, Buckthorn. Antelope Valley, situated southwest of Fremont Valley, is a closed basin, with all runoff water flowing to the lake bed complex (Sutton 1991). Six major drainages feed into this complex: Amargosa Creek, Big Rock Creek, Little Rock Creek, the wash complex from Edwards Air Force Base, the wash complex from the Tehachapi foothills, and the drainage originating near the town of Mojave. These drainages are capable of carrying substantial quantities of water.

Fremont Valley is a closed basin that contains one playa, Koehn Lake (Sutton 1991). Three major drainages flow into the lake: from the west, Cottonwood and Cache Creeks, and from the east, a wash entering the lake, draining the eastern Rand and El Paso Mountains (Sutton 1991). Although the importance of these drainages to prehistoric population groups is uncertain, known prehistoric habitation sites in the area are located near fairly large drainages or next to the shoreline of Koehn Lake (Sutton 1991). This seems to indicate that water availability would have had a significant influence in determining the location of prehistoric habitation sites.

Flora and Fauna

The Mojave Desert has a typical mountain-and-basin topography with sparse vegetation. Although a large portion of the Project area is marked by creosote bush (*Larrea tridentate*), which is the dominant plant species of the Mojave Desert (Warren 1984), extant vegetative resources are characterized by moderate species diversity. Lower elevations are dominated by creosote bush, and higher elevations contain yuccas and agaves, and then pinion-juniper habitats (Warren 1984). Plant communities within proximity of springs, marshes, and streambeds produce tules, cattails, and various grass species (Warren 1984). Currently, the majority of the Project area is deflated and abandoned agricultural fields with little vegetation.

Large fauna species are rare in the Mojave Desert. Rodents, reptiles, and birds are more common and are found along the desert floor. Rodent species include various pocket mice (*Perognathus* spp.), whitetail antelope squirrel (*Ammospermophilus leucurus*), and kangaroo rat (*Dipodomys* spp.). Reptile species present include desert tortoise (*Xerobates agassizii*), desert iguana (*Dipsosaurus dorsalis*), common king snake (*Lampropeltis getulus*), and Mojave rattlesnake (*Crotalus scutulatus*). More than 300 species of birds are found in the Mojave Desert. A few species more common to the open desert are prairie falcon (*Falco mexicanus*), burrowing owl (*Athene cunicularia*), roadrunner (*Geococcyx californianus*), and horned lark (*Eremophila alpestris*). Other species found in the Mojave Desert are blacktail jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), and coyote (*Canis latrans*).

Geomorphology and Subsurface Deposits

This Class III inventory of the Project area identified cultural material on the surface ranging from prehistoric lithic reduction sites to modern refuse.

As described below, the predominant landforms in the Project area consist mainly of large and small alluvial fan surfaces and wash channels. The following section is largely based on a geoarchaeological report for an area immediately adjacent to the north of the Project area (Young 2009).

Geomorphological Setting

Physical Setting

The Project area is located within Fremont Valley in the southwestern portion of the Mojave Desert geomorphic province. The western edge of the valley is bordered by the southwest-to-northeast-trending section of the southern Sierra Nevada Mountains, between the El Paso Mountains to the north and the Rand Mountains to the south. Also extending along this western edge of the valley is the Garlock Fault zone. To the north of the Project, in the northern end of Fremont Valley, is the basin sump of Koehn Lake. Numerous coalesced fan systems (i.e., bajadas) extend east from the complexly faulted hillslopes along the base of the Sierra Nevada Mountains into the valley and across the Project area. Frequently occurring minor drainages on individual small fans join to form axial washes that extend toward the valley bottom. Larger drainages, such as one emanating from Pine Tree Canyon within a portion of the Project area, have formed expansive fans over time that overlap and join the range-front bajada. These larger drainages have contributed large amounts of run-off and sediment to the axial washes and to the valley basin (Young 2009:1). Much of the southern two-thirds of the Project area, including the gen-tie corridor and solar facility site, is situated atop the gently sloping bajada along the base of Sierra Nevada Mountains.

The gen-tie corridor extends north along the bajada until it encounters a small foothill ridge or finger that extends northeast across the corridor. This finger is a narrow landform, split off from the larger Sierran-granitic Barren Ridge landform to the west, by faulting movement, apparently associated along the Cantil Valley Fault (Smith 1964; Young 2009). As such, it consists partially of granitic bedrock. Between this ridge and Barren Ridge, a small drainage or wash flows out and into the larger Pine Tree Wash. Of interest for the Project is that this small wash was seen

during the Class III survey to contain significant quantities of natural angular cobbles of chert and jasper. Beyond this ridge, the northernmost area of the gen-tie corridor extends across the large Pine Tree Wash and alluvial fan. The surface deposits in this area of the Project area are composed of recent sediments, most of which have been deposited in the last 1,000 years (Young 2009:1).

In general within the Project area, the ground surface atop both the bajada and Pine Tree Wash and fan areas consists of sandy soils with varying quantities of angular cobbles and small to medium-sized granitic boulders. The number of cobbles increases within the stream beds of some of the larger of the small axial washes, with substantial cobble accumulations in the largest washes and, in particular, within the Pine Tree Canyon Wash.

Holocene Climate Change

Climatic shifts over the course of the Holocene (Table 2) resulted in a number of biotic and hydrologic changes that affected the distribution of resources important to human groups living in and using the Western Mojave Desert.

Table 2. Major Climatic Intervals

Climatic Interval	Years Before Present (B.P.)	Climate and Hydrology
Late Pleistocene/Early Holocene	11,300 –7000	Cooler summer temperatures; upslope retreat of woodland species; precipitation greater than present
Middle Holocene	7000–5500	Warmer temperatures; arrival of modern Creosote dominate vegetation; precipitation generally lower than present
Neoglacial	5500–2000	Cooler temperatures; precipitation greater than present
Medieval Climatic Anomaly	1150–550	Warmer temperatures; two extreme droughts between 1060 and 850 B.P., and 740 and 600 B.P.
Little Ice Age	450–150	Cooler temperatures; precipitation greater than present

The climatic history of the Western Mojave region has had a significant effect on the geomorphology of the Project area, beginning with a relatively abrupt environmental change occurring during the end of Pleistocene and the beginning of the Holocene (i.e., after approximately 11,300 years ago). This change was marked by a retreat of the Sierran glaciers, a significant decline in rainfall moisture, and a rise in temperature, and it represents a transition from the temperate and seasonal conditions of the Late Pleistocene to the arid desert environment that became dominate during the early Middle Holocene (Young 2009:1). During this period, alluvial fans in the area were possibly very active in this increasingly dry regime as vegetation density declined and floods had an increasingly erosive effect. Deposition would occur across broad portions of a fan, with especially large floods resulting in massive deposits in distal fan locations. These warmer and arid conditions continued in the area into the Middle Holocene or until approximately 5,500 years ago when moisture levels began, again, to approach Early Holocene levels. This change to cooler and wetter climate conditions during the early Late

Holocene is characterized by a return of glacial climate conditions in portions of the adjacent Sierra Nevadas and consequent increases, once again, in run-off into the Fremont Valley below. As during the Early Holocene, alluvial fans generally began to stabilize, with water more consistently reaching the distal fan in washes resulting in seasonal (i.e., periodic) deposition and distal fan aggradation (Young 2009:1). Beginning sometime before 2,000 years ago, the area, again, began to dry, with generally arid conditions identified as a Late Holocene interval (Wigand and Rhode 2002). This interval, while remaining generally dry, contained several climatic (i.e., precipitation, evaporation, and/or temperature) reversals or fluctuations (Stine 1994; Young 2009:1-2).

Included among these was climatic fluctuations during the Late Holocene was a phenomena termed the Medieval Climatic Anomaly, which extended from approximately 1,200 to 700 years ago, and was marked by generally warm temperatures punctuated by extreme, extended droughts from A.D. 890 to 1100, and from A.D. 1210 to 1350 (Stine 1994). In the Mojave Desert, packrat middens provide evidence of effectively drier conditions associated with increased temperatures. Although there are no published records of increased spring activity or desert lake high stands in the Mojave Desert during this period (Jones et al. 1999), in the Colorado Desert to the south, Waters (1983) reported evidence for high stands of Lake Cahuilla during much of this interval.

The generally arid conditions of the Medieval Climatic Anomaly reversed sharply approximately 600 years ago, marking the beginning of the Little Ice Age (Grove 1988). A variety of data from the Mojave Desert indicate both lower temperatures and increased winter precipitation during this period. Cooler temperatures are suggested by the expansion of cold-loving blackbrush scrub into lower elevations at this time. Evidence for extended lakestands in the Mojave Sink (Enzel et al. 1989, 1992) indicates enhanced precipitation in the Transverse Ranges. Essentially modern climatic conditions only became established in the region approximately 150 years ago.

Young (2009:1) notes that climatic changes had a significant effect on the vegetation communities that were present in the Project area during the Holocene:

Elevational and latitudinal shifts in the regional woodland community, along with the arrival of creosote bush (*Larrea tridentata*), marked the transition from temperate and seasonal conditions of the Late Pleistocene to arid desert that dominates the Holocene. Because individual species responded differently to climate variation, changes in plant communities did not necessarily occur in direct association with global climatic events. Creosote bush spread slowly northward across the Mojave in the early Holocene, and did not arrive as far north as Fremont Valley until about 7,000 years ago (Koehler et al. 2005). This cloning species became the dominate vegetation in the lower and middle elevations of the Mojave, and contained an understory of Mojave sage (*Salvia mohavensis*), shadscale (*Atriplex confertifolia*), desert rue (*Thamnosma montana*), and wolfberry (*Lycium cooperi*). By 4,500 years ago, this vegetation had coalesced to become the valley-bottom community (Koehler et al. 2005; Spaulding 1990).

Geological Units

The geology of the Project area was mapped by Smith (1964) at a scale of 1:250,000. No larger-scale maps (e.g., 1:24,000) were available for this study. A review of this published map indicates that the proposed Project area is mostly underlain by Quaternary-period (2.6 million years ago [Ma] to present) alluvial and fluvial deposits, including deposits dating to the Holocene epoch (less than 10,000 years before present [B.P.]) and Pleistocene epoch (2.6 Ma to 10,000 years B.P.) (Table 3). In addition, the small aforementioned finger-ridge present in the northern part of the gen-tie corridor contains granitic bedrock dating from the Cretaceous period (145.5 to 99.6 Ma) to Jurassic period (201.6 to 145.5 Ma). These units and their potential for intact and significant cultural resources are described and discussed below. Only the Quaternary Late Pleistocene and Holocene age units are discussed in detail in the following sections, because the older units are not culturally sensitive at the subsurface.

Table 3. Summary of Geologic Units in the Gen-Tie Corridor

Age	Geologic Unit	Map Abbreviation	Unit Description
Holocene and Pleistocene	Recent alluvial fan and alluvial valley deposits	Qal	Unconsolidated valley and stream/wash deposits; locally dissected fans; coarse fanglomerate
Pleistocene	Non-marine sedimentary deposits	Qc	Unconsolidated stream terrace deposits of sand, clay, and gravel
Cretaceous/Jurassic	Sierran granitic batholith	gr ^a	Holocrystalline, medium-grained quartz monzonite (adamellite), locally ranging from granodiorite to granite

Data Source: Smith 1964

Quaternary Recent Alluvium (Qal)

Quaternary alluvium consists of unconsolidated valley and stream sediments, locally dissected fans, and coarse fanglomerate along the eastern base of the Sierra Nevada Mountains (Smith 1964). Within the Project corridor, modern wash sediments, dated as Recent in age, consist of unconsolidated, angular to subangular gravelly sands derived from the higher Sierra Nevada elevations. These sediments are coarser grained along the base of the mountains and become more fine-grained, grading toward distal alluvial sand and gravel. These sediments, which date from the mid to late Pleistocene through the Holocene, contain the potential for buried cultural deposits. The various types of these sediments are present in the gen-tie corridor everywhere except where the corridor crosses the Cantil-Fault-created finger ridge.

Quaternary Terrace Deposits (Qc)

Quaternary terrace deposits consist of unconsolidated stream terrace deposits of sand, clay, and gravel (Smith 1964). These deposits are likely a mixture of colluvial and alluvial sediments dating to the early Pleistocene. They are elevated and exposed along the base of the Sierra Nevada foothills, but may extend beneath the more recently deposited fan deposits. These

deposits are present in the gen-tie corridor only where the corridor crosses the Cantil-Fault-created finger ridge.

Mesozoic Granitic Bedrock (gra)

Mesozoic granitic bedrock consists of granitic rocks, including granite, adamellite, and granodiorite (Smith 1964). This bedrock is only present in the gen-tie corridor where the corridor crosses the Cantil-Fault-created finger ridge.

Project Geomorphology and the Potential for Buried Deposits

Sedimentary formations deposited in the Fremont Valley during the Holocene have the potential to contain site deposits and/or features created by human occupation and that were subsequently buried during episodes of flooding and/or aeolian deposition. This potential is demonstrated by the results of several subsurface geoarchaeological (Young 2009) and archaeological field investigations (Apple et al. 2008; Cooley 2011; Gardner et al. 2006) previously conducted in areas immediately adjacent to the current Project. One of these studies occurred in an area adjacent to the north of the gen-tie corridor. This study consisted of geoarchaeological trenching, all within the wash and alluvial fan area, at the mouth of Pine Tree Canyon. In the study, a number of buried paleosols were identified that indicated periods of stability on the fan. These strata could represent possible past living surfaces for human populations. These and other results in the study indicated the presence of Holocene strata with the potential to contain buried prehistoric cultural deposits or features (Young 2009). Radiocarbon dating of various levels within these sedimentary strata indicated time frames during which prehistoric human habitation/activity could have occurred (Table 4). As can be seen in Table 4, strata from various depths produced eight radiocarbon dates ranging from circa 150 to 15,260 B.P., with the intervening dates being well distributed between these dates. One of the Holocene strata contained a prehistoric hearth feature at a depth of 0.80 meters, on which a calibrated radiocarbon date of 1620 ± 60 was obtained (Young 2009:12). During archaeological studies, other buried prehistoric hearth features located in the same area and in similar stratigraphic context dated to almost a millennium later (Apple et al. 2008; Cooley 2011). Adjacent to the Project area to the south, buried prehistoric hearth features were encountered along the Garlock Fault zone at depths from 1.35 meters to 4.5 meters below the surface (Gardner et al. 2006). These features dated from 6390 to 7980 calibrated years B.P. (2006:49). Because of the proximity of these subsurface occurrences, the geomorphological circumstances are closely related to those present in the Project area. Consequently, it is possible that such subsurface archeological resources could also be present in the Project area.

Table 4. Radiocarbon Results from Area Adjacent to Gen-Tie Corridor

Trench Location	Stratum	Depth	Material	Lab No.	Convention	13C/12C	Calibrated Years B.P.
TL3	3	2.2 mbs	Organic Sediment	Beta-255187	9550 ± 50 BP	-21.3 o/oo	10910 ± 140
TL4a	1	0.2 mbs	Wood	Beta-255913	10 ± 40 BP	-24.6 o/oo	150 ± 90
TL4b	5	2.4 mbs	Organic Sediment	Beta-255910	2920 ± 40 BP	-22.4 o/oo	3080 ± 70
TL5b	2	0.8 mbs	Charred Material	Beta-255909	1690 ± 40 BP	-22.6 o/oo	1620 ± 60
TL5a	6	1.8 mbs	Charred Material	Beta-255911	3500 ± 40 BP	-22.0 o/oo	3780 ± 50
TL5a	8	2.8 mbs	Charred Material	Beta-255186	4250 ± 40 BP	-24.2 o/oo	4800 ± 60
TL5a	12	4.1 mbs	Organic Sediment	Beta-255912	7330 ± 50 BP	-21.0 o/oo	8130 ± 70
Pine Tree Wash	2	1.5 mbs	Organic Sediment	Beta-254726	12730 ± 70 BP	-22.1 o/oo	15260 ± 120

Notes: Radiocarbon data were collected from detailed trench profiles and may be correlated to other trenches in each study locality. Radiocarbon calibration using CalPal (Weninger and Jöris 2004).

mbs = meters below surface

Source: Young 2009:8

CULTURAL CONTEXT

Prehistory

Prehistoric human settlement patterns in the Mojave Desert have been influenced by environmental change. Major climatic periods influenced prehistoric spatial settlement patterns and resource exploitation. Archaeological investigations have indicated that although the area had limited prehistoric resources and surface water, the region supported a long and occasionally dense human population (Moseley and Smith 1962). Archaeological remains tend to be widely scattered and sparse and are usually located along the margins of pluvial lakes (Warren 1990; Willig 1988). Although research in the Mojave has produced a wide array of cultural sequences, for the purpose of this report, a broad terminology is used to provide temporal context to the region. The sequence consists of the Paleoindian period, Pinto period, Gypsum period, Rose Spring period, and Protohistoric period.

Paleoindian Period (12,000 to 7000 B.P.)

This period is the earliest documented evidence of human occupation in the Mojave Desert, and has been referred to as the Western Pluvial Lakes Tradition (WPLT) (Sutton 1991). The WPLT encompasses a broad geographic region from the western Great Basin to Southern California and north to Oregon. Evidence suggests that Paleoindian-period population groups were highly mobile, with settlement patterns that reflect a dependency on lacustrine resources (Sutton 1991; Sutton et al. 2007; Warren 1990). This cultural adaptation to pluvial conditions (e.g., lakes,

marshes, and grasslands) flourished for several millennia circa 10,500 B.P., but then disappeared during the warmer and more arid conditions of the Middle Holocene (Moratto 1984).

The Lake Mojave complex is one of the most recognized lithic complexes of the WPLT. These assemblages are typically characterized by foliated points and knives, Lake Mojave points, Silver Lake points, and flaked stone crescents. Materials dating to the Paleoindian period in the western Mojave Desert are few and confined to the dry lake beds in Antelope Valley. To date, none have been identified in Fremont Valley (Sutton 1991).

Pinto Period (7000 to 4000 B.P.)

A period of dramatic environmental change has been posited for the Pinto period. The environment changed from pluvial to arid conditions; rivers and lakes dried up and animal and plant life changed. This period is seen by Warren (1984) as marking the beginnings of cultural adaptations to the desert. Desert inhabitants either adapted to this change or relocated to areas with more favorable environmental conditions. This depopulation of the area seems evident in the small size of Pinto-period sites, which are often limited to surface deposits. These ephemeral sites suggest temporary or seasonal occupations by small groups of people (Moratto 1984), focusing on a forager-like strategy (Sutton et al. 2007).

The most important distinction of Pinto-period assemblages relates to an increase in the abundance of groundstone implements (Sutton et al. 2007). The appearance of significant numbers of milling stones in Pinto assemblages is attributed to the exploitation of hard seeds, which is seen by Warren (1984) as part of the process of subsistence diversification brought on by increased aridity and decreasing game populations. No confirmed Pinto-period sites are known in Fremont Valley, although a few Pinto-style projectile points have been identified in the Tehachapi area and other parts of the western Mojave (Sutton 1988).

Gypsum Period (4000 to 1500 B.P.)

The Gypsum period is marked by an increase in the number of archaeological components and increased diversity in assemblage and site setting (York 1995). Occupations in the Antelope Valley during this period are indicative of large, permanent or seasonally occupied villages with smaller, seasonally based special-purpose sites, including rock rings, lithic scatters, and milling stations (Sutton 1980; Warren 1986). The appearance of large village and special-purpose sites in the Antelope Valley has been attributed by Warren (1986) to refined hunting methods and seed processing technologies that raised the regional carrying capacity and facilitated population growth.

Gypsum-period assemblage sites are characterized by diagnostic projectile points, leaf-shaped points, rectangular-based knives, flake scrapers, T-shaped drills, large scraper-planes, choppers, and hammerstones. There is an increase in the presence of milling stones, and the mortar and pestle were introduced during this period.

Rose Spring Period (ca. 1500 to 1000 B.P.)

Archaeological evidence for the Rose Spring period indicates a major population increase, changes in artifact assemblages, and well-developed middens (Sutton 1988). The introduction of small projectile points into assemblages in the Mojave Desert and the Great Basin appear to

mark the introduction of the bow and arrow and the decline of the atlatl and spear weaponry (Sutton 1996).

Subsistence strategies seem to shift toward the exploitation of small to medium-sized game, including lagomorphs and rodents. The milling of plant foods was an important activity, with numerous bedrock milling features at Rose Spring, including mortars and slicks (Sutton 1988).

Protohistoric Period (1000 B.P. to European contact)

There is an increase in the ethnic and linguistic complexity within the Mojave Desert during this period. Desert Side-notched points and Brownware ceramics become more widely distributed throughout the Mojave Desert and the Great Basin. This development, combined with linguistic evidence, is associated with the Numic-speaking Paiute and Shoshone expansion throughout most of the area (Bettinger and Baumhoff 1982).

Characteristic artifacts of this period include Desert series projectile points (Desert Side-notched and Cottonwood Triangular), Brownware ceramics, Lower Colorado Buff Ware, unshaped hand stones and milling stones, incised stones, mortars, pestles, and shell beads (Warren and Crabtree 1986).

Archaeological Patterns

Prehistoric sites dating to the Late Holocene era in the Western Mojave Desert are more frequently represented during the Late Prehistoric than any other time period. This period is marked by significant changes in the archaeological record, including shifts in subsistence practices and settlement patterns. The bow and arrow is introduced during this time, and is evidenced by Cottonwood and Desert Side-notched type points. Burial practices change from the former practice of inhumation to cremation. Flaked stone tools during this era are more perfunctory—being quickly fashioned and discarded after casual use—a radical shift from the former tradition of crafting more formalized and finely finished bifacial tools. A population increase is also seen during the Late Prehistoric, although there are indications in some areas that the increase was possibly interrupted due to a dramatic climatic change between, roughly, 1,200 and 650 years ago, known as the Medieval Climatic Anomaly (Sutton 1988, 1996; Whitley et al. 1988). The effect of this event on human populations, however, is still a subject of some debate (Byrd et al. 1994; Gardner 2009:208; Sutton 1993:155–156, 1996:238–239). There is also an increase in the ethnic and linguistic complexity within the Mojave Desert during this time, with distinct language groups (Numic [Paiute] and Takic) possibly moving into new areas (Sutton et al. 2007:243–244). Possibly associated with these population movements are a wider distribution of Cottonwood Triangular and Desert Side-notched points and Brownware ceramics in the Mojave Desert and the Great Basin during this period. A number of Late Prehistoric period sites, or site components, have been documented in the southern portion of the western Mojave in the Fremont and Antelope Valleys and vicinity (Byrd et al. 1994; Everson et al. 1993; Gardner 2009; Sutton 1984, 1988, 1991; Sutton and Everson 1992).

Ethnographic Background

The Kawaiisu occupied the southern Sierra Nevada south of the Kern River and into the northern Tehachapi Mountains. They also claimed a major portion of the western Mojave Desert,

including Fremont Valley, during the ethnographic period (Garfinkel and Williams 2011; Sutton 1991). Neighboring groups included the Tubatalubal to the north, the Southern Yokuts to the west, and the Kitanemuk and Serrano groups to the south. The notion of distinct cultural boundaries was foreign to the Kawaiisu, and the overlapping of groups was customary (Zigmond 1986). Interaction and intertribal relations were peaceful and cooperative, with combined annual hunting expeditions for game drives commonplace (Voegelin 1938).

The Kawaiisu language belongs to the Southern Numic branch of Northern Uto-Aztecan (Sutton 1991). The linguistic data suggest that the Kawaiisu occupied the general area of the southern Sierra Nevada/western Mojave Desert for some time (Sutton 1991). Kawaiisu subsistence practices focused on hunting and gathering of local plant and animal resources (Zigmond 1986). The principal food source was acorns, which were supplemented with meat from large and small game, rodents, birds, and insects (Zigmond 1986). Acorns were further used to trade for exotic obsidian and salt. Although no agriculture was practiced, there is evidence of the pruning of tobacco plants and the burning of wild seed fields to improve plant yields for the following year (Zigmond 1986). The Kawaiisu exploited many other plants, and Zigmond (1986) identified more than 250 taxa that were used.

The Kawaiisu exploited resources outside of their core area in the southern Sierra Nevada, with seasonal trips into the western Mojave Desert (Zigmond 1986). Koehn Lake in Fremont Valley was identified as one destination of these seasonal trips (Zigmond 1986).

Social organization was rooted in the family group, with several male leaders being accepted at any given time (Zigmond 1986). Although families did, at times, live near each other and cooperate in some activities (Zigmond 1986), no apparent larger formal political grouping was apparent (Sutton 1991).

The material culture of the Kawaiisu was varied and complex (Sutton 1991). Material cultures included the wood bow and arrow and elaborate basketry (Zigmond 1986). Zigmond (1986) believes that pottery evident at some sites was obtained through trade with neighboring Great Basin groups rather than manufactured by the Kawaiisu.

History

European exploration of the Colorado Desert began in the 16th century, but sustained Euro-American settlement of the region did not occur until the mid-19th century. This extended period of exploration without expansion creates a long Proto-historic period in the region, during which Europeans and local Native American groups knew of one another but interacted very little. This time period is discussed above from the point of view of Native American history. Below, the Euro-American expansion into the region and subsequent historical developments are described.

Early Exploration

The European period in the Mojave Desert began when Spanish missionaries and explorers entered the area in the 18th century. Among the first Europeans in the area was Pedro Fages, who led an expedition into the western Mojave in 1772 in pursuit of Spanish soldiers who had deserted (Pourade 1960). Later forays into the Mojave were undertaken in 1776 by Franciscan

missionary Francisco Garcés. Garcés was tasked with exploring overland routes between Santa Fe, New Mexico, and Southern California. During his expedition, he stayed in what is today the town of Mojave (Coues 1900; Sutton 1991). The establishment of trade routes between Santa Fe and Los Angeles and the establishment of missions in the Mojave Desert were difficult in the 18th century because the native Mohave people hindered Spanish expansion beyond the coastal areas of California (Bean and Bourgeault 1989). The Old Spanish Trail, which passes through the Mojave Desert, was not firmly established as a travel route until the 1830s (Norris and Carrico 1978).

American exploration into the Mojave Desert began in the 19th century. Jedediah Smith was the first American to enter the Mojave in 1826 and 1827. Little is known about Smith's time in the Mojave since his notes were lost in a fire (Pourade 1961). Smith followed the Old Spanish Trail, which runs south and east of the current Project area, and ultimately reached the Pacific Ocean where Spanish authorities prevented him from continuing farther and temporarily imprisoned him (Beck and Haase 1974; Norris and Carrico 1978). In 1844, John C. Fremont traveled through the Mojave from the north and eventually met up with the Old Spanish Trail (Beck and Haase 1974; Fremont 1845). Fremont was named "The Great Pathfinder" because his explorations helped open the West for Americans to move into California in the middle and late 19th century (Barnard 1977).

By the 1850s, the Old Spanish Trail was established as a reliable overland route to California, and it became easier for people to move into the area. Once California was ceded to the United States, the land was open for settlement and development. With the discovery of gold in the Sierra Nevada Mountains, California's population boomed. Mining led to the creation of roads throughout the state. Later, these mining roads would be used to establish railroads that operated in the region.

Fremont Valley was a prominent thoroughfare for travelers coming to California and as a trade route. State Historic Landmark 476 ("Desert Spring") located near Cantil commemorates the historic trails and early uses for the area:

This spring was on an old Indian horse thief trail and later (1834) Joe Walker Trail. The famished Manly-Jayhawk Death Valley parties (1849–50) were revived here after coming from Indian Wells through Last Chance Canyon. This was also a station on the Nadeau Borax Freight Road. (California Resource Agency 1996)

The majority of early mining in California took place in the north, near Sacramento and San Francisco. In the Mojave, scientific exploration was being undertaken in conjunction with investigations into proposed railroads from the east (Sherer 1994). An expedition led by Lt. Amiel Weeks Whipple in 1854 sought to survey a railroad route leading from Arkansas to Los Angeles along the 35th parallel, passing near Fremont Valley. The proposed railroad was meant to tie into lines that originated in both the north and the south (Barnard 1977). Whipple's expedition included scientists who recorded information about the geology, climatology, and biology of the region (Sherer 1994). A later expedition undertaken by Edward Beale in 1857 tested the feasibility of using camels for transport across the desert, and established an early wagon road through the area (Norris and Carrico 1978; Sherer 1994).

Mining

American exploration into the Mojave Desert allowed settlers to begin to move to the region. The earliest Americans to move into the Mojave were typically suppliers for miners headed north in the 1850s. A few prospectors established mines in the Mojave region as well, but it was not until the 1860s that mining expanded in the area (Norris and Carrico 1978). As mining increased, so did the number of permanent settlements. From the 1860s to the 1880s, mining became the primary economy in the area. Mining camps grew into mining towns that were connected through a series of stage coach roads. The Owens River Road, which runs through Fremont Valley, was one such road. Another road at Nadeau Springs was located west of the town of Mojave. This stop was originally a wagon stop along the road between Los Angeles and the mines located at Inyo. Later, the Southern Pacific Railroad established a stop north of Mojave called Nadeau Station (Warren and Roske 1981).

Major mining districts were established in the Rand and El Paso Mountains, east of Fremont Valley (see Hall and Barker 1975). Other large mines included Cerro Gordo in the Owens Valley north of the Project area and Darwin northeast of the Project area, where silver was discovered (Norris and Carrico 1978). Various materials were mined in the western Mojave Desert, including gold, silver, and iron (Coombs et al. 1979).

An important commercial mining endeavor that took place in the Mojave Desert involved the extraction of borax. Although the activity could never be described as a dominant activity in the area, it is celebrated because of its association with the 20-mule teams that carried the raw material from Death Valley into other parts of the western Mojave (Norris and Carrico 1978). The 20-mule teams crossed Fremont Valley on their way to the town of Mojave (Wynn 1963). Borax mining operations were undertaken by several companies during the late 19th century. Among these were the Eagle Borax Works (founded by Francis C. “Borax” Smith), the Harmony Borax Works, Amargosa Borax, and Pacific Coast Borax Company (Coombs et al. 1979; Norris and Carrico 1978).

Mining operations continued well into the 20th century. Mining took place near Oro Grande (near San Bernardino), Calico (near Barstow), Copper City (near China Lake), and Dale District (near Twentynine Palms). In Fremont Valley, major mining operations took place at Goler Gulch (northwest of the Project area) and Red Rock Canyon (east of the Project area). However, the majority of mining operations at the end of the 19th century and into the early 20th century were at the Yellow Aster lode, where the Rand Camp and later town of Randsburg were established (Norris and Carrico 1978).

Another result of mining involved the use of roads through the Mojave Desert. Wagon and stage coach roads were established between the mines, camps, mining towns, and Los Angeles (Beck and Haase 1974; Coombs et al. 1979). Bullion Road ran through the current Project area and connected the Inyo mines with the roads that led to Los Angeles (Di Pol 2007).

Into the 20th century, mining operations became more corporate, but a few prospecting claims still proved fruitful on a small scale. Resources shifted away from precious metal mining and focused more on nonprecious metals, borax, and salt (Norris and Carrico 1978).

Railroad

Railroads developed in the Mojave Desert in response to the mining boom and the desire to move goods between the eastern states and California. Routes had been scouted by earlier expeditions, but the railroad did not arrive in the valley until 1876. This rail line ran from Tehachapi to Mojave and then to Los Angeles via the Antelope Valley as part of the Southern Pacific Railroad (Norris and Carrico 1978). Mojave was incorporated as a town in 1886, the same year the railroad moved through, and many of the stops on the line corresponded with previous stops on the wagon and stage coach roads (Wynn 1963).

The Southern Pacific Railroad established stops in Fremont Valley, including one in the town of Cinco and another at Cantil, north of the Project area. A major engineering feature associated with the Southern Pacific Railroad is the Tehachapi Loop. This is a section of track, roughly 20 miles west of the Project area, where the rail line passes over itself. This allowed trains to get through the Tehachapi Pass and into Mojave and ultimately Los Angeles.

The Southern Pacific Railroad had a significant impact on the region, as it allowed more people to move into the area for mining, business, and agricultural pursuits. The railroad continues to be used today, running from the town of Mojave southeast of the Project area, east of State Route 14 and along the western edge of California City, and through the western portion of the Project area.

Agriculture

Early homesteaders moved into the western Mojave Desert at the same time mining became the major economic pursuit in the area. The establishment of the railroad enabled homesteaders to move into the area, particularly near Lucerne Valley and Apple Valley (Coombs et al. 1979).

Water sources were always an issue affecting the rate at which agriculture could grow in the arid environment of the high desert. Farmers had to stay near rivers for dependable sources of water. Some farmers, however, found moderate success by using wells and pumps to irrigate or by building near dry lake beds that periodically flooded during the rainy winter season. The need for water in association with farming made growth difficult, but several communities were able to survive on a subsistence farming lifestyle (Norris and Carrico 1978). One dry farming area in Fremont Valley was located at Muroc next to Rogers Dry Lake. This area is situated to the south of the Project area and is currently the site of Edwards Air Force Base.

Evidence of farming is visible in the Project area as well. Much of Fremont Valley was used for alfalfa farming in the 20th century (Di Pol 2007; Swope 1988). However, the lack of reliable water resources ensured that agriculture did not become a dominant industry in the region. Water resources did become a significant part of the history of the western Mojave Desert and Fremont Valley with the construction of the Los Angeles Aqueduct in the early part of the 20th century.

Los Angeles Aqueduct

The construction of the Los Angeles Aqueduct stands as one of the greatest architectural and engineering achievements in Southern California. The aqueduct runs past the western edge of the Project area, and remains an important water source for Los Angeles and the surrounding areas. The demand for water in the growing community of Los Angeles required a solution beyond the

locally available water resources in the city. The aqueduct runs 226 miles from the Owens Valley to Los Angeles. The aqueduct was considered a major engineering feat for its day, and its importance to regional history cannot be overstated.

The Owens Valley had been visited by Fred Eaton in 1904. He realized that the water in the valley could be diverted to Los Angeles, and began planning with William Mulholland about how best to divert water from the Owens Valley to Los Angeles. Eaton speculated that the course of the aqueduct could follow the natural flow of an ancient river that ran to the mountains north of Los Angeles. The river had been blocked by a lava flow that formed the Owens Basin (LADWP n.d.).

Construction on the aqueduct began in 1908 and was completed in 1913. The result was a gravity flow aqueduct that was able to provide a reliable source of water for Los Angeles. To obtain the land and water rights, the City of Los Angeles had to purchase tracts of land along the proposed route, leaving many in Owens Valley with the impression that Los Angeles was stealing their water (LADWP n.d.). Over the 5 years the aqueduct took to complete, thousands of workers moved through Fremont Valley. The railroad was used to move goods and equipment from Mojave to the Lone Pine area, and pumping stations and construction camps popped up along the aqueduct alignment (Norris and Carrico 1978).

Aqueduct construction camps and rail line spurs in Fremont Valley include those at Cinco and Cantil. The camp at Cinco was used as a supply depot to support aqueduct construction. The section of track near Cinco, called the “Jawbone Division,” was constructed by the Southern Pacific Railroad in 1909 to carry supplies needed to run the camp and build the aqueduct (Di Pol 2007).

At the Cantil construction camp, a railroad spur was built to send supplies and building materials 8 miles up Red Rock Canyon to the Dove Springs area. This rail line was built in 1909 and was in operation for 22 months and then dismantled (Di Pol 2007).

The completion of the aqueduct stands as one of the major contributing factors to the expansion of Los Angeles in the early 20th century. In the years following construction of the aqueduct, Los Angeles grew at unprecedented rates. Expansion of the First Los Angeles Aqueduct began in 1940, and extended the system 105 miles north to Mono Basin, culminating in the Second Los Angeles Aqueduct in 1970 (LADWP n.d.).

The Military

The military had a significant role in the development of the Mojave Desert in the 20th century. Prior to World War II, the western Mojave was one of the major training grounds in preparation for war. East of the Project, the Mojave Army Antiaircraft Range (later renamed Camp Irwin) was built near Barstow, and south of the Project area, Muroc Bombing and Gunnery Range (later renamed Edwards Air Force Base) was established. Edwards Air Force Base is important in aviation history, as many experimental aircraft were designed and tested on the base, and it was one of the landing sites for the Space Shuttle. Edwards Air Force Base continues to operate today. To the northeast of the Project, in Ridgecrest, the Naval Air Weapons Station (NAWS) China Lake has been in use since 1943 and has been the driver for economic and demographic growth

in the area. Over the decades following the establishment of NAWS China Lake, the town of Ridgecrest grew by providing housing and services in support of Federal employees and contractors. Development outside of the towns of Ridgecrest and nearby Inyokern has still remained sparse (Coombs et al. 1979; Norris and Carrico 1978).

California City

Perhaps the most important development in relation to the area around the Project is California City itself. California City was incorporated in 1965. Nat Mendelsohn purchased what would become California City in 1958, with plans of creating a metropolis to rival Los Angeles. Construction began in the late 1950s and early 1960s on housing tracts along what is today Neuralia Road and California City Boulevard (Gagnon 2001). Construction of the community included a Central Park with a 24-acre lake and golf course. Over the next several decades, California City grew to include several subdivisions, a sports arena, and businesses that are still in active use today, but it never grew to the metropolis Mendelsohn had originally envisioned.

CHAPTER 3

ARCHIVAL RESEARCH AND CONTACT PROGRAM

This chapter outlines the results of research conducted to obtain existing information on cultural resources within and/or adjacent to the APE. A records search was conducted by the SSJVIC at California State University, Bakersfield. In addition, historic topographic maps were consulted and a Native American contact program was initiated with a letter to the Native American Heritage Commission (NAHC) requesting a search of its Sacred Lands File and a list of Native American individuals and groups to approach for input. The records search was originally conducted for the entire RE Cinco Project area, including the three gen-tie line alternatives and the solar facility site; however, this summary and discussion only addresses the results pertaining to the three gen-tie line alternatives. Records search results maps are included as Confidential Appendix B. A summary of findings is provided below, following the results of the background research.

RECORDS SEARCH

Previous Studies

A records search for the proposed Project, plus the planned solar facility site, including a 1-mile buffer, was conducted on December 16, 2013, by SSJVIC personnel. The literature search results indicated that 15 previous investigations have been conducted within a 1-mile radius of the three gen-tie alternatives (Table 5). These consist of 14 survey-level investigations and one site assessment. Eleven of those surveys overlap with portions of the alternatives' direct effects APE. Approximately 20% of the Alternative 1 direct effects APE (17 of 100 acres), 11% of the Alternative 2 direct effects APE (17 of 150 acres), and 40% of the Alternative 3 direct effects APE (43 of 105 acres) have been previously surveyed.

In addition, Power Engineers prepared a Class I and Class II Inventory Report for the Barren Ridge Renewable Transmission Project (BRRTP) in 2011, which is not on file at the information center. The northern-most portion of BRRTP's proposed new 230-kV transmission line and 230-kV circuit overlaps with portions of Alternative 1 and Alternative 2 (Power Engineers 2011). However, the BRRTP study did not include a pedestrian survey (Class III) of this area, so no new information was obtained from the BRRTP report, and all previously recorded resources were captured by the original SSJVIC records search.

Previously Recorded Cultural Resources

The records search results indicated that 48 previously recorded cultural resources are within a 1-mile radius of the three gen-tie alternatives (Table 6), only one of which overlaps with an alternative's direct effects APE. One prehistoric isolate (P-15-015956) is located within the direct effects APE for Alternatives 1 and 2. The other 47 identified resources are located within the solar facility site or the 1-mile records search buffer zone. These include 28 prehistoric

resources (20 lithic scatters, one trail, one buried hearth, six isolates), five multicomponent sites (three refuse/lithic scatters, one historic refuse scatter and prehistoric isolate [flake], and one refuse scatter/historic feature/lithic scatter), and 14 historic resources (12 refuse scatters, the Los Angeles Aqueduct, and the Southern Pacific Railroad).

Table 5. Cultural Resources Investigations within 1 Mile of the Gen-tie Line Alternatives

Report Number	Date	Author	Title	Alt 1 Overlap	Alt 2 Overlap	Alt 3 Overlap	Buffer Overlap
KE-00051	1995	Laylander, Don	Negative Archaeological Survey Report. Highway Project Description: District 09, Kern County, Route 14, post miles 28.3, 30.2, Expenditure Authorization 952137.			X	
KE-00634	1985	Macko, Michael E., and Jill Wiesbord	Sylmar Expansion Project: Cultural Resources Inventory and Significant Evaluation, Final Report Vol. 1 & 2, and Addendum.		X		
KE-00649	1987	McManus, James	Archaeological Survey Report for 9-KER-14, PM 25.5-35.7, 09-209300.			X	
KE-01967	1985	Speer, Michael	Historical Resource Evaluation Report for a Widening Project on 9-KER-14 near Cinco, Kern County PL 26.0/35.4.			X	
KE-01763	1977	Young, Daniel	Archaeological Reconnaissance Survey for Minor Construction Projects Near Mojave 0.6 mi South of Pine Tree Canyon to Pine Tree Canyon Road.				X
KE-01968	1987	Proctor, Martha	Historic Property Survey Report, Jawbone Canyon Expressway Project.			X	
KE-01969	1987	O'Connor, Denise	Historical Architectural Survey Report for a Proposed Highway Project on Route 14 in Kern County, CA.			X	
KE-02135	1985	McManus, James	Negative Archaeological Survey Report: 09-KER-14, PM 26.0/35.7.	X		X	
KE-02680	2001	Bevill et al.	Cultural Resources Investigation of Selected Portions of the First and Second Los Angeles Aqueducts, Inyo and Kern Counties, CA and Addendum.				X
KE-03276	2006	Jordan, Stacey, and Michael Wise	Archaeological Survey Report for the Southern CA Edison Company LADWP Rule 15 line Extension, Private Inholding, Kern County, CA.	X	X	X	

Report Number	Date	Author	Title	Alt 1 Overlap	Alt 2 Overlap	Alt 3 Overlap	Buffer Overlap
KE-03534	2006	Nilsson et al.	Archaeological Inventory of the First and Second Los Angeles Aqueducts and Selected Access Roads, Kern, Inyo, and Los Angeles Counties, CA.	X	X	X	
KE-03758	2010	Hudlow, Scott M.	A Phase I Cultural Resource Survey Global Real Estate Investment Partners, Proposed Solar Farm, Kern County, California.	X	X	X	
KE-04206	2010	Pruett, Catherine Lewis	A Cultural Resources Assessment for the South Interconnection Between North Kern Water Storage District and Shafter-Wasco Irrigation District, Kern County, California.				X
KE-04260	2011	Hudlow, Scott	A Phase I Cultural Resource Survey for Seven Kern Desert Solar Farm Sites, Kern County, California.	X	X	X	
KE-04421	2013	Peterson, Cher	Cultural Resources Records Search and Site Visit Result for AT&T Mobility, LLC, Candidate CLV0626 (Sower's Lot), Southwest Corner of Intersection of 14 Fwy and Phillips Road, Mojave, Kern County, California.				X
N/A	2011	Power Engineers	Barren Ridge Renewable Transmission Project Cultural Resources Technical Report and Class I and Class II Inventory Report.	X	X		

Table 6. Previously Recorded Cultural Resources within 1 Mile of the Gen-tie Line Alternatives

Primary Number	Permanent Trinomial	Site Type	Site Constituents	Time Period	Date Recorded (or most recent update)	Location
P-15-002142	CA-KER-2142/H	Site	Historic Features, Refuse and Lithic Scatter	Multicomponent	11/12/2007	Buffer
P-15-003366	CA-KER-3366H	Railroad	Southern Pacific Railroad Lake Minerals Railway	Historic	3/1/2010	Buffer
P-15-003549	CA-KER-3549H	Structure	Los Angeles Aqueduct	Historic	11/28/2000	Buffer
P-15-003939	CA-KER-3939	Site	Buried Hearths	Prehistoric	5/27/1994	Buffer
P-15-007702	-	Isolate	Lithic Isolate	Prehistoric	9/24/1984	Buffer
P-15-007703	-	Isolate	Lithic Isolate	Prehistoric	10/4/1985	Buffer
P-15-007704	-	Isolate	Lithic Isolate	Prehistoric	10/4/1985	Buffer
P-15-007706	-	Isolate	Refuse Scatter and Lithic Isolate	Multicomponent	5/17/1985	Buffer
P-15-007707	-	Isolate	Lithic Isolate	Prehistoric	5/17/1985	Buffer
P-15-012737	CA-KER-7194	Site	Lithic Scatter	Prehistoric	7/2/2002	Buffer
P-15-014086	CA-KER-7850H	Site	Refuse Scatter	Historic	11/1/2007	Buffer
P-15-014087	CA-KER-7851	Site	Lithic Scatter	Prehistoric	10/29/2007	Buffer
P-15-014097	CA-KER-7861	Site	Lithic Scatter	Prehistoric	11/7/2007	Buffer
P-15-014099	CA-KER-7863	Site	Lithic Scatter	Prehistoric	11/7/2007	Buffer
P-15-014102	CA-KER-7866	Site	Lithic Scatter	Prehistoric	11/8/2007	Buffer
P-15-014103	CA-KER-7867	Site	Lithic Scatter	Prehistoric	11/8/2007	Buffer
P-15-014104	CA-KER-7868H	Site	Refuse Scatter	Historic	11/12/2007	Buffer
P-15-014105	CA-KER-7869H	Site	Refuse Scatter	Historic	11/8/2007	Buffer
P-15-014106	CA-KER-7870/H	Site	Refuse Scatter and Lithic Scatter	Multicomponent	11/12/2007	Buffer
P-15-014107	CA-KER-7871	Site	Lithic Scatter	Prehistoric	11/12/2007	Buffer

Primary Number	Permanent Trinomial	Site Type	Site Constituents	Time Period	Date Recorded (or most recent update)	Location
P-15-014108	CA-KER-7872	Site	Lithic Scatter	Prehistoric	11/12/2007	Buffer
P-15-014109	CA-KER-7873H	Site	Refuse Scatter	Historic	11/12/2007	Buffer
P-15-014111	CA-KER-7875/H	Site	Refuse Scatter and Lithic Scatter	Multicomponent	11/13/2007	Buffer
P-15-014112	CA-KER-7876	Site	Lithic Scatter	Prehistoric	11/13/2007	Buffer
P-15-014114	CA-KER-7878	Site	Lithic Scatter	Prehistoric	11/13/2007	Buffer
P-15-014115	CA-KER-7879	Site	Refuse Scatter	Historic	11/13/2007	Buffer
P-15-014166	CA-KER-7880	Site	Lithic Scatter	Prehistoric	11/13/2007	Buffer
P-15-014117	CA-KER-7881	Site	Lithic Scatter	Prehistoric	11/13/2007	Buffer
P-15-014170	CA-KER-7916	Site	Lithic Scatter	Prehistoric	5/26/2010	Buffer
P-15-014571	CA-KER-8155/H	Site	Historic Refuse and Lithic Scatter	Multicomponent	8/14/2008	Buffer
P-15-014575	CA-KER-8159H	Site	Refuse Scatter	Historic	11/8/2007	Buffer
P-15-014576	CA-KER-8160H	Site	Refuse Scatter	Historic	11/8/2007	Buffer
P-15-014577	CA-KER-8161H	Site	Refuse Scatter	Historic	11/8/2007	Buffer
P-15-014578	CA-KER-8162H	Site	Refuse Scatter	Historic	11/8/2007	Buffer
P-15-014579	CA-KER-8163H	Site	Refuse Scatter	Historic	11/8/2007	Buffer
P-15-014580	CA-KER-8164	Site	Lithic Scatter	Prehistoric	11/12/2007	Buffer
P-15-014581	CA-KER-8165	Site	Lithic Scatter	Prehistoric	11/12/2007	Buffer
P-15-014582	CA-KER-8166	Site	Lithic Scatter	Prehistoric	11/12/2007	Buffer
P-15-014583	CA-KER-8167	Site	Lithic Scatter	Prehistoric	11/13/2007	Buffer
P-15-014584	CA-KER-8168	Site	Lithic Scatter	Prehistoric	11/13/2007	Buffer
P-15-014585	CA-KER-8169	Site	Lithic Scatter	Prehistoric	11/14/2007	Buffer
P-15-014586	CA-KER-8170	Site	Lithic Scatter	Prehistoric	11/13/2007	Buffer

Primary Number	Permanent Trinomial	Site Type	Site Constituents	Time Period	Date Recorded (or most recent update)	Location
P-15-014731	CA-KER-8283	Trail	Prehistoric Trail	Prehistoric	11/12/2007	Buffer
P-15-015829	CA-KER-8702H	Site	Refuse Scatter	Historic	3/5/2010	Buffer
P-15-015956	-	Isolate	Lithic Isolate	Prehistoric	9/24/1984	Alt 1, Alt 2
P-15-016273	-	Isolate	Lithic Isolate	Prehistoric	10/3/2010	Solar Facility Site
P-15-016274	-	Isolate	Lithic Isolate	Prehistoric	10/3/2010	Solar Facility Site
P-15-016275	-	Site	Refuse Scatter	Historic	11/21/2010	Solar Facility Site

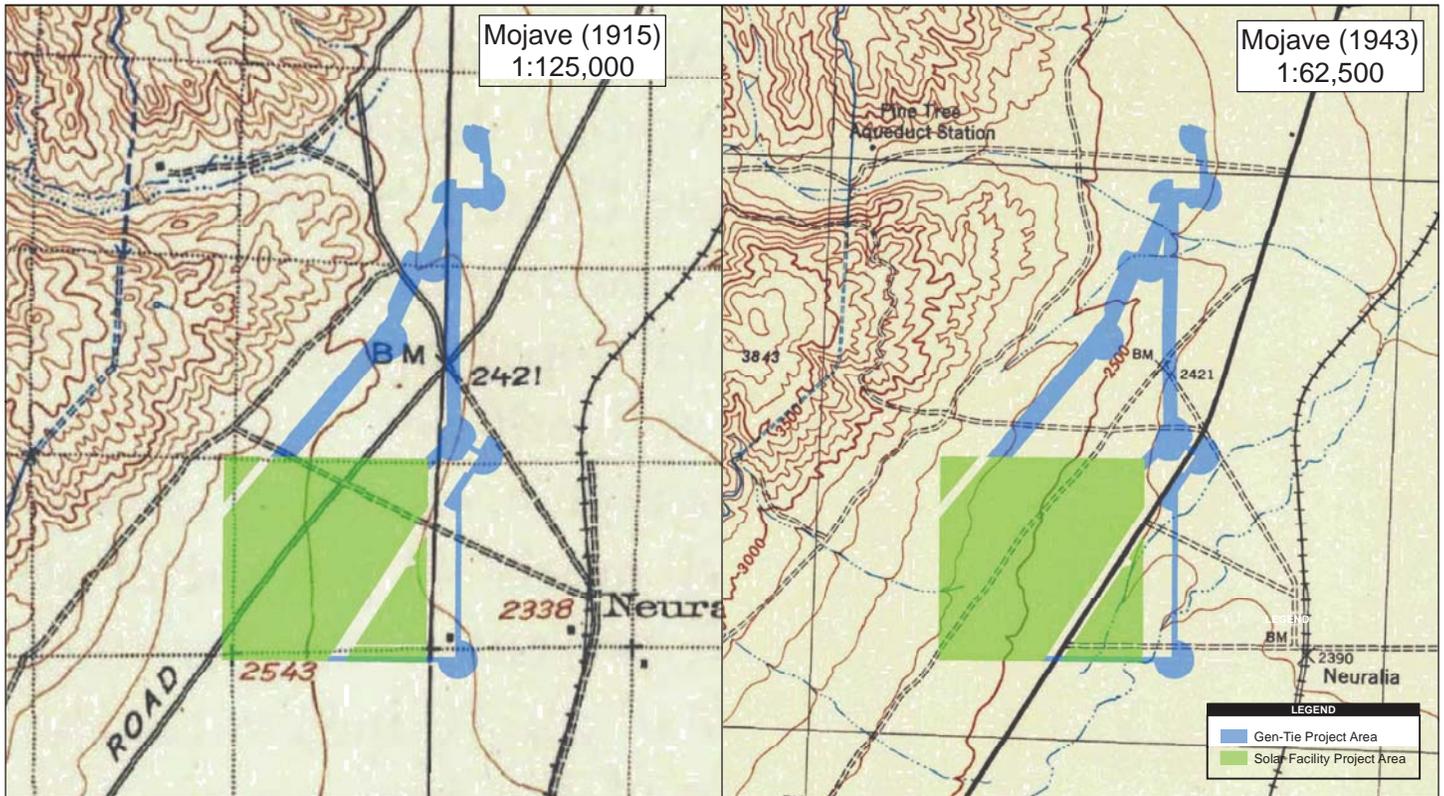
Other Archival Research

Historic Maps

Several historic USGS topographic maps were consulted to identify historic architectural resources (Table 7). One structure is present on Township 31S, Range 36 ½ E, Section 25 of Mojave, CA 1915, adjacent to Alternative 3. However, no structures were observed within the Project on any of the historic maps (Figures 6 and 7).

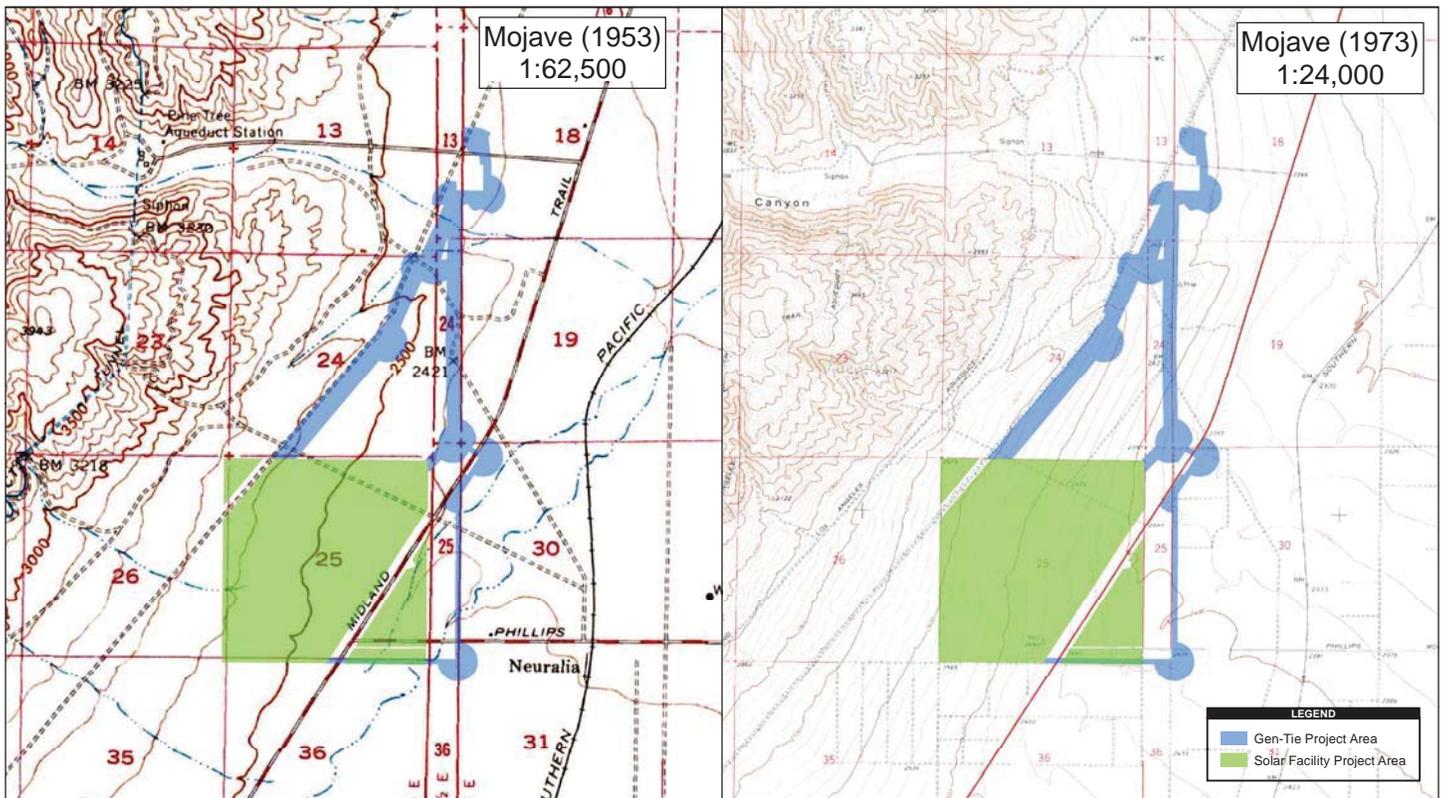
Table 7. Historical Maps

Map Name	Scale	Year
Mojave, CA	1:25,000	1915
Mojave, CA	1:62,500	1943
Mojave NE, CA	1:62,500	1956
Mojave NE, CA	1:24,000	1973



Source: RE Astoria, LLC; NETRonline
 2,500 1,250 0 2,500 Feet
 Scale: 1:30,000; 1 inch = 2,500 feet

Figure 6
 Historic USGS Topographic Maps (1915, 1943)



Source: RE Astoria, LLC; NETRonline
 2,500 1,250 0 2,500 Feet
 Scale: 1:30,000; 1 inch = 2,500 feet

Figure 7
 Historic USGS Topographic Maps (1956, 1973)

CONTACT PROGRAM

Native American Contact Program

Native American tribes in the Mojave Desert maintain strong traditional ties to the land and to the cultural resources that were left by their ancestors. Government-to-government consultation with Native Americans is the responsibility of BLM under Section 106 of NEPA, and is ongoing for the proposed Project. In addition to BLM's consultation efforts, AECOM sent to a letter to the NAHC on January 7, 2014, requesting a search of its Sacred Lands File and a list of Native American individuals and organizations that might have knowledge of or concerns about cultural resources within the study area. A response from the NAHC was received January 9, 2014, indicating that no sacred sites are on file, but the area is known to be culturally sensitive. Eleven Native American representatives were identified by the NAHC, and letters were sent to these representatives on January 14, 2014. Follow-up phone calls were made to these individuals on January 20, 2014. Four responses have been received to date.

John Valenzuela of the San Fernando Band of Mission Indians confirmed receipt of the letter but indicated he had nothing to share at that time. He did, however, express interest in participating in monitoring efforts when construction begins. A representative from the Tubatulabals of Kern Valley indicated that the Project is not within the recognized boundary of her group and deferred comment to closer tribes. Ann Brierty from the San Manuel Band of Mission Indians indicated that the general area contains known prehistoric resources, and will provide AECOM with specific information at a later date. Ms. Brierty also stated that San Manuel encourages Native American participation in the early stages of projects. Robert Robinson of the Kern Valley Indian Council indicated that prehistoric resources are present in the vicinity of the Project, especially near the base of the mountain. He said historic resources, including sites, roads, and structures associated with the railroad and the development of California City in the 1950s, are also present near the Project. Mr. Robinson encouraged Native American participation at the survey level, because a native perspective is helpful in identifying cultural resources.

In addition, BLM suggested that Native American participation be included as part of the pedestrian survey, and provided AECOM with a list of 20 individuals to contact. On April 28, 2014, AECOM sent emails and/or made phone calls to each of the 20 Native American contacts, inviting them to participate in the survey. Follow-up phone calls were conducted the following week. Six responses were received. Three tribes expressed interest in participating in the survey: the San Manuel Band of Mission Indians, Kern Valley Indians, and the Kern River Paiute Council. AECOM was able to coordinate with San Manuel and Kern Valley to provide a Native American representative to participate in the survey. The Kern River Paiute never provided AECOM with contact information for potential participants, and, therefore, did not participate in the survey. The Native American Contact Program in its entirety is included as Appendix C.

REQUIRED PERMITS

Of the approximately 200-acre direct effects APE, 150 acres are located on public lands managed by BLM. To conduct any archaeological field investigations on BLM land, qualified

cultural resources personnel must file a Fieldwork Authorization Request with BLM. Prior to the survey, Project cultural resources specialists filed a Fieldwork Authorization Request under BLM Cultural Use Permit CA-12-22. The request indicated areas to be surveyed, supervisory personnel, and survey dates. An approved Fieldwork Authorization was issued by the Ridgecrest BLM field office on May 14, 2014 (Appendix D).

The remaining 50 acres of the direct effects APE is located on private lands and lands owned by LADWP. Prior to the survey, Recurrent Energy obtained permission to access LADWP lands during the week of May 19 through May 23, 2014.

CHAPTER 4 METHODOLOGY

SURVEY METHODS

Between May 19 and May 25, 2014, Project archaeologists conducted a Class III survey of the approximately 200-acre direct effects APE, including gen-tie Alternative 1 and Alternative 2. Following the guidelines in Section 8110 of the BLM's Foundations for Managing Cultural Resources (BLM Manual), the Class III survey was an intensive pedestrian survey designed to identify all archaeological resources "locatable from surface and exposed profile indications" within the "target area" defined by the Project disturbance areas (BLM 2004:19). The survey was conducted by qualified four- to six-person survey teams, each led by a qualified crew chief. A maximum survey interval of 15 meters was employed, although crew members frequently walked between transect lines to record isolated artifacts and archaeological sites.

When archaeological sites were encountered, the survey crews determined the location of the site using sub-meter global positioning system (GPS) units, and then flagged, mapped, and recorded the site. Site recording included intensive survey of the area, along with photographic documentation (site overviews and detail shots with diagnostic artifacts), site sketch maps, artifact and feature descriptions, and descriptions of the environmental context. Sub-meter GPS units were used to document the location of all artifacts and features within each site. Collection of artifacts was not authorized by BLM and archaeological teams did not collect any materials observed during the survey. Artifacts were documented and identified in the field by experienced crew members.

Isolated single artifacts and collections of two or fewer artifacts that were separated from other cultural materials by more than 30 meters were recorded as isolated finds, or isolates. The location of each isolated find was recorded with a sub-meter GPS unit and the artifacts were documented by the survey crews immediately. Where necessary, drawings and photographs were made of distinctive artifacts, maker's marks, and other culturally or chronologically sensitive indicators.

The survey crews also attempted to relocate previously reported site locations as documented at the SSJVIC. To guide field studies, field crews used 7.5-minute USGS topographic maps and large-scale aerial photographic maps. Previously recorded sites were only re-mapped or otherwise re-recorded if the existing records required updating due to a change in the site condition or configuration.

Documentation

Sites identified during the surveys were documented in detail to allow for the completion of all appropriate Department of Parks and Recreation (DPR) 523 forms. Minimally, these include primary forms (Form 523A), Archaeological Site Records (Form 523C), location maps overlaid on a USGS topographic map (Form 523J), and a sketch map (Form 523K). Sketch maps included a site datum, features, artifacts concentrations, and other cultural elements. Other resources

potentially required a Linear Feature Form (Form 523E) if a linear feature (such as road or trail) was present within a site. Apparent clusters of artifacts were recorded as concentrations. Elements of sites that could not be removed (i.e., hearths, mining claims, bedrock features) were recorded as features. In addition to the information required for DPR site forms, detailed field notes were produced for each site. Field notes contained information about site impacts, geology, and vegetation, and diagnostic information about cultural materials.

All isolates identified in the Project area were recorded on a primary form and USGS location map. Resource locations were determined using a sub-meter GPS unit. All completed DPR site forms will be sent to the SSJVIC for the assignment of primary number designations in the state inventory system.

SITE TYPES

The Class III intensive pedestrian surveys were designed to identify and evaluate archaeological sites to the extent possible on the basis of surface observations (BLM 2004). Before the commencement of fieldwork, senior Project archaeologists outlined the types of archaeological resources that were likely to be encountered, and the relevance of such resources for the investigation of regional research issues. Sites types and research issues common to the Mojave Desert were compiled in the Project Work Plan (AECOM 2014) to facilitate the consistent identification of archaeological sites during survey. Sites were identified as prehistoric, historic, or multi-component (containing both prehistoric and historic) archaeological resources. Site types expected and encountered on the desert are listed below, followed by a discussion of the relevant research issues and themes within which they might be profitably addressed.

Prehistoric Site Types

Lithic Scatters

This resource category, which can range from a single-episode flaking station to larger scatters, is the most frequently occurring previously recorded prehistoric archaeological site in the area. Most of these sites in the area consist of cryptocrystalline (CCS) materials such as cherts and chalcedony. These materials may be locally derived from cobbles, or they may have been procured from bedrock sources in the nearby El Paso Mountains to the north (Davis and Panlaqui 1978:32). Consequently, these lithic scatters may contain either initial stages of cobble reduction or later-stage reduction of quarried materials. Materials such as obsidian also occur, but are not locally available, and would have been obtained by travel to, or trade from, the Coso Mountains farther to the north of the Project area. Although lithic scatters are generally interpreted by archaeologists as places where toolstone acquisition and tool manufacture and maintenance occurred, Native American representatives have pointed out that certain ritual activities also result in the production of scatters of flaked stone materials (e.g., Cachora 1994). Based on the archival research, records search, and Native American Contact Program, this site type is the most likely prehistoric site to be encountered in the survey area.

Habitation Sites

This prehistoric resource category can encompass a number of other individual archaeological site types when they occur together. Habitation sites typically show evidence of a variety of occupation debris, including multiple artifact classes, subsistence remains, fire-affected rock, and/or domestic architecture. Habitation sites can also include milling features; rock shelters; lithic scatters; ceramic scatters; living areas; cooking hearths; subsistence remains (fish or mammal bone); middens; artifact scatters; and, often, discrete activity areas such as lithic reduction, milling, or other subsistence-related locales. The presence of some or all of these features and a varied artifact assemblage, along with midden deposits and faunal food remains, serves to define a site as a habitation site. This type of site, although possibly present in the vicinity, is unlikely to be encountered in the survey area.

Ceramic Scatters

Prehistoric ceramics are known to occur in the western Mojave Desert in general (Zigmond 1986), and in the Fremont Valley area specifically (Lyneis 1991). Zigmond (1986:401) indicates that although the Kawaiisu may have first procured pottery from the Owens Valley Paiute, they later also began to make their own. He does not, however, believe that they ever made pottery in significant quantities, and, instead, retained their affinity for the manufacture and use of baskets. Although isolated scatters or sherds could occur locally, it is expected that pottery would most frequently occur in proximity to habitation sites.

Human Remains

Human remains are highly sensitive culturally and are subject to special protection under the Native American Graves Protection and Repatriation Act (NAGPRA). Although relatively rarely encountered, archaeological sites with prehistoric human remains have been recorded in the Western Mojave region (Gardener and Sutton 2010; Robinson 1982).

Historic Site Types

Refuse Scatters and Dumps

This resource category is the most frequently occurring previously recorded historic archaeological site type in the area. Sites of this type can range from small, discrete deposits to large, sparse scatters of domestic, commercial, or industrial debris (cans, bottles, machinery, and appliances). Often these are found along trails or dirt roads, making associations difficult to establish. Such scatters and dumps can also be associated with discards from ranching and farming activities for which the original association is no longer evident (e.g., no structures currently nearby).

Refuse disposal scatters and dumps can be broken down into three types:

1. Dump sites – areas where active dumping of accumulated refuse has occurred over time. Dump sites may grow into larger sites, such as town dumps, as they are known and used by a nearby community.
2. Refuse scatters – areas where historic debris is common, but not necessarily associated with active, organized, repetitive dumping of accumulated refuse. Although refuse

scatters may be characterized by more than one dumping episode, they often represent a single episode where dumping occurred.

3. Roadside litter – isolated debris from vehicles rapidly moving through an area. This type is usually associated with automotive travel from the mid-20th century to the present. It typically results in isolated artifacts or small debris scatters from window or roadside disposal.

Early Farms and Ranches

Archaeological and historic architectural remnants of 19th and early to mid-20th century farms and ranches include scattered residential, ranching, and agricultural structures, and features such as foundations and domestic trash dumps. These structures and features reflect the early settlement of the area.

Transportation Routes

Transportation routes consist of historic trails, roads, and railroad lines. The condition of the roads may vary from faint two-tracks to graded or paved alignments, where the route, not the road material, is significant. Historic rail lines can include existing railroads, abandoned railroad lines, railroad beds, and mining transport rail lines.

Historic Camps and Temporary Settlements

Types of camps include construction camps for linear facilities (e.g., railroads, transmission lines, water conveyance, hydroelectric) and mining camps and settlements. Evidence of camps and temporary settlements may include campfire/hearths and/or debris and refuse scatters.

Historic Cairns

Rock piles can be associated with historic mining claims or early survey markers. These can vary in size and composition. Sometimes a can in the cairn will contain information regarding a claim.

Utility and Water Conveyance Features

Utility facilities can include electric or telephone pole lines, flumes or aqueducts for water transport, culverts, channels, and dams.

Isolated Finds

Isolated finds can be either historic or prehistoric and consist of single, occasionally multiple, artifacts. As a rule, less than three artifacts in an area 30 meters or less in diameter with a distance of 30 meters or more to any other artifact constitutes an isolate. Isolates have been found on a variety of surfaces, including alluvial plains, gravel beds, and washes.

RESEARCH ISSUES AND THEMES

The intent of this research design is to provide a framework for analysis of the archaeological resources within the survey area and to analyze them in relation to established cultural chronologies and their ability to address research issues within the cultural and natural contextual settings for the western Mojave Desert study region.

Research Issues – Prehistoric Archaeological Sites

Fremont Valley is a closed basin on the eastern side of the Sierra Nevada. Prehistorically, it could have provided food resources such as grass seeds and other plants, as well as some game. Available surface water, however, would appear to have been a limiting factor, at least seasonally and through much of later prehistory and the historic periods. Consequently, it might be expected that evidence of habitation will mostly reflect temporary activities of small numbers of people. Because bedrock outcrops are unlikely to be present in the Project area, small reduction sites focused on cobbles from the nearby mountains are likely to be the most common site type encountered. Although substantial cultural midden deposits may not be anticipated, subsurface prehistoric archaeological deposits have been found in the region where they were not expected (Apple et al. 2008; Cooley 2011; Gardner 2002; Gardner et al. 2006; Young 2009).

Although researchers are constrained with regard to the range of research questions that can be answered based on survey-level data, pertinent research issues concerning site distribution, general function, complexity, and temporal placement can be addressed. In the previously presented cultural setting for the region, questions and issues were noted relating to prehistoric research topics such as chronology; subsistence, settlement, and mobility; lithic technology, procurement, and utilization; trade and travel; and cultural affiliation and linguistic prehistory.

Chronology

The ability to place a prehistoric site within a temporal framework is often of critical importance in assessing significance. Establishing the date a site was occupied is necessary in describing the site's cultural context and in assessing its research potential.

Within the survey area, the following data sets are considered relevant to establishing temporal affiliation:

- Presence of organic materials suitable for radiocarbon dating – Radiocarbon dating remains the most reliable chronometric tool available for the Project region. Presence of suitable organic material substantially increases a site's research value.
- Presence of stratified deposits – Stratified cultural deposits, which are quite useful in developing regional chronological sequences, are relatively rare in the region. Many habitation sites are found on relatively stable surfaces, resulting in a lack of clear stratigraphic separation between occupation periods.
- Presence of prehistoric ceramics – Prehistoric Brownware ceramics have been found within Fremont Valley (Lyneis 1991). However, they are relatively rare, and additional studies are necessary to better assess their cultural affiliation.
- Presence of typable projectile points and other formal tools – Despite challenges to the basic assumptions of projectile point seriation in the Great Basin (Flenniken and Wilke 1989), cross-dating of point types through associated radiocarbon dates and, in the western Great Basin, directly through obsidian hydration dating, continues to support the temporal utility of point types (Bettinger et al. 1991). However, several types, including some Pinto/Gatecliff and Elko series points, appear to vary in their temporal placement

across the broad expanse of the Great Basin (see Beck 1994). Notwithstanding this problem, the point sequence used by Warren and Crabtree (1986) remains generally valid for the Mojave Desert.

- Presence of obsidian suitable for hydration dating – The Project area is relatively close to the Coso obsidian source, and it is expected that flaked tools and debitage from this source could be recovered. This source of volcanic glass has been intensively studied for hydration dating purposes (Basgall 1990; Cleland 2006; Gilreath and Hildebrandt 1997; Rogers 2006). Despite numerous problems, hydration analysis of Coso obsidian has been generally successful producing results accurate enough for chronological ordering (seriation) and placement of assemblages within a reliable range of dates.

Research Questions

Based on the presence of one or more of these data sets, the following research questions could be asked:

1. What is the best available information relevant to the temporal placement of each site?
2. Is there evidence that the site is single component? If not, can the components be segregated (horizontally and/or vertically) for analytical purposes?
3. Is there evidence relevant to the length of occupation of the site or site components?
4. Can the site yield information relating to established regional lithic and ceramic typologies?

Site Structure

Assessing the horizontal and vertical organization of archaeological materials at a site is necessary for determining whether there are multiple periods of occupation at the site or distinct activity loci. Although vertical (subsurface) understanding of site structure most often requires excavation to assess, some surface indications of possible subsurface content can be observed during field survey. Consideration of the geomorphic context of the sites (e.g., Young 2009) prior to survey, especially with regard to the processes affecting deposition and erosion, may suggest potential circumstances for the presence of certain types of prehistoric sites. Some prehistoric sites in the Project area may lie on the surface of an ancient dry lake bed, such as the Koehn Lake playa, which was a pluvial lake in the Fremont Valley during the latest Pleistocene, circa 12,000 B.P. (Grayson 1993; Lemmer and Escandon 2008), fed by runoff from the Tehachapi, Sierra Nevada, and El Paso Mountains. The lake had dried by 8700 B.P. (Lemmer and Escandon 2008), and probably earlier due to its small size (see Grayson 1993), but continued to hold intermittent water in response to precipitation cycles through the historic period. Down-warping along the Garlock Fault creates a generally accretionary depositional environment (Lemmer and Escandon 2008). This process of basin in-filling, however, could be counter-balanced to some degree by aeolian erosion of the finer sediments, such as those on a lake bed itself. An additional consideration for the lake bed is that 20th-century agricultural practices, including plowing, resulted in the disturbance of the upmost sediments to an estimated depth of 50 centimeters or so.

Horizontal Structure

Where distinct occupations or activities can be isolated, the informational value of associated materials is enhanced. For example, discrete artifact accumulations may reflect multiple temporal occupations or synchronic organization of space within a short-term habitation site. Similarly, discrete flaking stations may be more useful in analyzing lithic reduction than generalized lithic scatters. In the survey area, horizontal structure may persist even through repeated modern period plowing so severe as to smear the cultural deposit to the point where horizontal patterning is no longer useful.

Depending on the depth of a site deposit, surface materials may not adequately expose the full informational potential of a site. Sites with a distinctive subsurface deposit are likely to contain useful information in addressing a variety of regional research questions. Moreover, the presence of substantial numbers of surface artifacts may be indicative of the presence of more deeply buried deposits and features that can only be detected with future subsurface methods (Ahlstrom 2006; Schroedl 2006).

Within the survey area, the following data sets are considered relevant to addressing research questions related to site structure:

- Sites with minimal disturbance that retain distinctive and intact surface and subsurface deposits.
- Sites containing discrete artifact accumulations such as flaking stations or hearths.
- Sites situated in identifiable geomorphic circumstances to allow for reconstruction of site deposit formation processes.

Research Questions

The following research questions relating to site structure may have the potential to be addressed by sites in the Project area:

1. Are cultural materials in their primary context or substantially redeposited?
2. Are there distinct artifact concentrations indicative of distinct loci of human activity?
3. Is there evidence for constructed features?
4. Is there evidence of a subsurface component, and if so, what depositional mechanism may account for it? Is there evidence exposed of buried features in the subsurface component such as fire pits or cache pits that may retain integrity after plowing or disturbance by natural agents such as erosion?

Subsistence, Settlement, and Mobility

This research theme addresses the role the Project area served in prehistoric subsistence activities, recognizing that site locations, artifact assemblages, and associated ecofactual evidence reflect, in part, the ways that prehistoric societies organized their subsistence activities.

Land Use at the Desert/Mountain Interface

The archaeological evidence suggests that, by late Gypsum period times, the western Mojave Desert was used by groups whose core territory also included the major mountain ranges to the west—the Transverse ranges and the southern Sierra Nevada (Sutton et al. 2007). The Project area is close to the foot of the Tehachapi Mountains, near the mouth of Pine Tree Canyon, a prominent canyon that yields access to the mountains. As such, the Project area could have been relatively easily exploited from logistical base camps located within the canyon or nearby foothills. Resource gathering and processing sites would be expected under that type of scenario. Alternatively, residentially more mobile groups may have established temporary residences within the Project area. Distinguishing among these site types is difficult, but site composition and structure and the presence of floral and faunal remains are important data sets to allow for consideration of these issues.

The Project location on the valley floor may be suggestive of certain types of subsistence activities. In similar locational circumstances in areas adjacent to the Project, scatters of fragmentary groundstone and fire-affected rocks have been noted, suggestive of subsistence activities that may have focused on the procurement and processing of floral resources (Apple et al. 2008; Cooley 2011). Residues in such hearth features, if present, could provide important information on specifically targeted resources. Additionally, Sutton and colleagues (2007) have drawn attention to climatic variability as important in understanding changing land use in the western Mojave. Paleoenvironmental data suggest that the latest period of prehistory (circa 800 to 200 B.P.) was particularly prone to decadal to century-long variability in precipitation, with two particularly significant drought cycles occurring during the Medieval Climatic Anomaly (Jones et al. 1999; Stine 1994). It might be expected, therefore, that sites in the Project area could show evidence for increased use during relatively mesic environmental conditions and reduced use during more arid periods.

Other Factors Affecting Site Distributions

Most settlement pattern studies in the Mojave Desert start with the premise that prehistoric site distributions primarily reflect the organization of subsistence activities. However, in marginal environments, it is also important to consider nonsubsistence activities (Cleland 2004). For example, the Project area may have been located along a travel corridor connecting the Tehachapi Mountains with the desert to the east. Additionally, it is noteworthy that a rock art complex is found in nearby Jawbone Canyon, suggesting the possibility that ceremonial activities could contribute to the distribution of sites in the Project area.

Within the survey area, the following data sets are considered relevant to addressing research questions related to site settlement, subsistence, and mobility:

- Sites containing groundstone tools and fire-affected rocks that could be suggestive of subsistence activities that may have focused on the procurement and processing of floral resources.
- Sites with assemblages containing tools such as projectile points and scrapers associated with hunting activities indicative of subsistence activities that may have focused on the procurement and processing of faunal resources.

- Sites with specific resource procurement functions such as quarries or flaking stations.
- Sites containing a variety of artifact types indicative of more intensive occupation and possibly longer-term habitation.

Research Questions

The following research questions are relevant to this research theme:

1. What subsistence-related activities, if any, are represented at each site?
2. Are there non-portable artifacts or features present?
3. Is there evidence of domestic habitation debris indicative of residential use? If so, is there any evidence relevant to the length of stay or seasonality?
4. Is there any evidence of caching in the sites?
5. To what degree can the archaeological remains aid in the classification of regional settlement and mobility systems with respect to mobility type, frequency, and range?
6. Does the frequency or intensity of occupation of sites in the Project area correlate with reconstructed patterns of paleoenvironmental change?
7. Is there evidence to suggest that a site is primarily related to nonsubsistence functions?

Lithic Technology and Utilization

Although sites associated with flaked stone artifacts and waste products may be the most common surface sites in the Project survey area, groundstone tools may be relatively rare. Agricultural disturbance may obscure more robust assemblages, but even simple assemblages can be useful in reconstructing resource procurement and mobility strategies.

Flaked Stone Technology

The ways that hunter-gatherers chose to organize the procurement, manufacture, and discard of flaked stone tools vary in relationship to several factors, including the relative availability and quality of toolstone within their territorial range, intended tool functions, the frequency and nature of residential moves, organization of work groups, and division of labor (e.g., Bamforth 1990; Beck et al. 2002; Eerkens et al. 2007; Kelly 1988). Hence, the recording of lithic technology can be useful in addressing more general questions regarding territoriality, mobility, settlement patterns, and down-the-line exchange. For example, highly mobile peoples may “gear up” when they encounter knappable toolstone (Kelly and Todd 1988). In doing so, they discard curated tools, often from distant sources. Changes in toolstone procurement behavior may be reflective of intensified subsistence procurement within more restricted territories and/or changes in the scheduling and directionality of seasonal subsistence-related residential mobility. Since the location of the Project area was not likely a source of usable toolstones, any flaked or groundstone material would have to have been brought to the site and would, thus, be useful in reconstructing mobility and resource procurement strategies.

Desert pavements in the western Mojave often contain sources of knappable toolstones, including CCS silicates (e.g., chert and chalcedony) and basalt. California City, near the Project

area, is known as a source of such lithic materials. Also, as mentioned above, the Coso obsidian source is within a possible range of direct procurement, or may have been relatively obtainable through exchange networks. Excavations near the Project area yielded relatively high frequencies of chalcedony, rhyolite, and obsidian (Sutton 1991; 1993).

Groundstone Technology

Because of high transport costs, groundstone tools are often cached or left in situ in places where mobile groups intend to return. As such, these tool types may be good indications of a location of relatively frequent and/or long-term use. Also, because of transport costs, toolstones from distant sources are particularly noteworthy in terms of the implications for regional mobility and exchange relationships.

Within the survey area, the following data sets are considered relevant to addressing research questions related to lithic technology and utilization:

- Presence of intact flaked lithic reduction sites to allow for analysis and reconstruction of reduction methods and sequences.
- Presence of flaked lithic or groundstone tools that retain patterns of wear indicative of tool function and use.
- Presence of flaked lithic or groundstone tools in undisturbed contexts to allow for possible interpretation of patterns of mobility.
- Presence of intact flaked lithic reduction sites at source locations to allow for analysis of lithic resource procurement patterns.

Research Questions

The following research questions are relevant to this research theme:

1. What types of raw materials were used in the production of flaked and groundstone tools?
2. Can the sources of these materials be identified?
3. Is the use and/or production of bifaces present? If so, what production stages are present?
4. Are expedient core/flake technologies present? If so, what stages of production are present?
5. Is there evidence on-site for procurement of locally available toolstone?
6. What can be inferred about prehistoric settlement and mobility patterns from the toolstone assemblages?

Trade and Travel

Surface materials encountered during the survey may provide some limited information related to these questions for this topic. Most of the previously recorded prehistoric sites consist of lithic reduction locations. The materials in these sites most often consisted of CCS materials such as

chalcedony and/or chert. These materials may be locally derived from cobbles, or they may have been procured from more distant sources by travel or trade. Such CCS materials are known, for example, to all be present in bedrock sources in the nearby El Paso Mountains, approximately 25 miles to the north (Davis and Panlaqui 1978:32). CCS materials could also have been obtained from gravel sources in the western Mojave Desert to the east, within approximately 100 miles of the Project area (Campbell and Campbell 1937; Heiser and Treganza 1944; Nakamura 1991). More distant sources include gravels present along the Colorado River to the east (Singer 1984:42). Materials such as obsidian also occur, but are not locally available, and would have been obtained by travel to, or trade from, the Coso Mountains farther to the north from the Project area. Groundstone tools would have been made from granitic rocks, granite, and granodiorite, all available within a short distance from the Project area in the adjacent Sierra Nevada Mountains, but more likely from the even closer, if not on-site, alluvial fans in the valley derived from these mountains. These toolstone materials would indicate both local and more distant sources, suggesting local procurement as well as possible travel and/or trade to/from more distant locales.

Within the survey area, the following data sets are considered relevant to addressing research questions related to trade and travel:

- Presence of obsidian suitable for sourcing – The Project area is relatively close to the Coso obsidian source, and it is expected that flaked tools and debitage from this source would be the most likely to be recovered. Coso obsidian could have been obtained either by trade or travel. Other sources are possible, including Casa Diablo and Mt. Hicks north of Coso, Obsidian Butte in Southern California, and Napa Valley in the North Coast ranges. Materials from any of these latter sources would be strongly suggestive of trade.
- Presence of beads and ornaments – Shell beads are indicative of trade networks in California (Bennyhoff and Hughes 1987; Davis 1961).
- Presence of pottery materials associated with neighboring groups such as the Tubatulabal.

Research Questions

The following research questions are relevant to this research theme:

1. Is there evidence of exotic materials such as shell artifacts or non-local toolstone that would indicate prehistoric import from, or trade with, distant areas?
2. Is there evidence of reorganization of economic networks? Changes in the frequency of Coso obsidian might be particularly relevant to this issue, since the frequency of this toolstone declines fairly rapidly to the east.

Cultural Affiliation and Linguistic Prehistory

For at least 50 years, archaeologists, linguists, and Native American groups have researched whether the Numic branch of the Uto-Aztecan language family originated in the southwestern Great Basin and adjacent mountain ranges and spread northward and eastward until it reached most of the region during the past 1,000 years (Lamb 1958; Rhode and Madsen 1994). The Project area is within the area generally considered to be the possible homeland of the southern

Numic languages, and archaeological sites within this general area may have data relevant to the debate. Particularly relevant would be evidence for population growth within the purported homeland, evidence for changes in interaction spheres, and evidence for the development of new adaptive strategies (Bettinger and Baumhoff 1982). Sutton and others (2007) have suggested that the expansion of Numic-speaking people out of the southwestern Great Basin may have been correlated with the drought cycles of the Medieval Climatic Anomaly.

Within the survey area, the following data sets are considered relevant to addressing research questions related to cultural affiliation and linguistic prehistory:

- Presence of obsidian suitable for sourcing.
- Presence of artifacts such as shell beads, diagnostic projectile point types, and ceramics that can be associated with particular linguistic groups.
- Presence of several of the data requirements noted for the other research topics, such as those related to trade and travel, and to settlement and land use, which, if present, can serve to contribute information to this topic.

Research Questions

The following research questions are relevant to this research theme:

1. Do sites in the Project area contain evidence reflective of significant changes in population density or settlement patterns?
2. Do sites in the Project area contain evidence of reorganization of economic networks? Changes in the frequency of Coso obsidian might be particularly relevant to this issue, since the frequency of this toolstone declines fairly rapidly to the east.
3. Are there sources of genetic information at any of the sites? In the unlikely event that human remains are present in the Project area, the landowner would need to consult with the state-appointed Most Likely Descendant about respectful treatment for remains found on private land, or follow NAGPRA protocol if remains are uncovered on federal land. In the context of this consultation, it should be determined if DNA-extraction would be permissible. If so, this could be an important data source in the Numic-spread debate.

Research Issues – Historic Sites

Anticipated historic-period archaeological sites include refuse scatters, possibly farming features and equipment, or camps associated with the construction of the railroad or the aqueduct. While the most common historic resources in the Project area are likely to be trash scatters and refuse deposits, historic research for the BLM survey area suggests that sites associated with transportation, ranching/farming, and power and water conveyance could also be encountered during the survey.

Patterns of Refuse Disposal and Consumer Behavior

In rural/desert contexts, household refuse was often simply dumped on the surface in a deserted area accessible by car or pick-up truck. Refuse can also be associated with a dwelling that may no longer be present. Detecting the kinds of items purchased or owned by a population, and the ways in which these items are obtained, has been termed “consumer studies.” Historical archaeologists have noted the development of a consumer-oriented culture within the United States during the late 19th century due to a general wide availability of consumer goods (Spencer-Wood 1987). This trend has continued into the 20th century and is discernible in both rural and urban contexts, although some researchers have noted different emphases on purchasing behavior (Van Wormer 1991). Cultural items from a recognizable historical context have potential for illuminating behavioral patterns and preferences of a residential population.

Within the survey area, the following data sets are considered relevant to addressing research questions related to historic research issues:

- Presence of sites containing foundations or other indications for the presence of early dwellings, water conveyance, or other structures possibly associated with farming activities.
- Presence of intact trash deposits or dumps that can be associated with specific kinds of occupations, functions, or dwellings.
- Presence of trash deposits or dumps containing diagnostic artifacts that can be accurately associated with particular types of activities or time periods, or with particular group affiliations such as farmers or railroad workers.

The following research questions are applicable:

1. What kinds of materials were disposed of in the trash dumps?
2. What does the documentary record indicate about the dates of occupation?
3. Is the site associated with 20th century agricultural use of the dry lake bed?
4. What can be determined about the socioeconomic unit responsible for the disposal?
5. Does the artifact assemblage reflect the range of artifacts expected to be consumed in a rural household?
6. Do the artifacts identified give any indication of the economic status of the household unit?
7. How do the types and numbers of artifacts compare with other known rural sites in Southern California?
8. Is there evidence of food consumption?
9. Is there evidence of products consumed by specific age, gender, or ethnic groups?
10. What can the archaeological deposits tell us about the daily life of the residents and their choices of available consumer goods?

CHAPTER 5

ARCHAEOLOGICAL SURVEY RESULTS

Between May 19 and May 25, 2014, Project archaeologists conducted a survey of the Project direct effects APE, a roughly 200-acre area encompassing the proposed Project disturbance area for gen-tie Alternative 1 and Alternative 2.

Two Native American representatives also participated in the survey efforts. Steven Brierty of the San Manuel Band of Mission Indians surveyed alongside Project archaeologists May 19 through May 24, 2014, and Brandi Kendrick of Kern Valley Indian Council participated in the survey between May 19 and May 23, 2014.

As specified in the BLM Manual and in keeping with the Secretary of the Interior's Standards and Guidelines for Historic Preservation, the survey of the direct effects APE was a Class III archaeological survey, defined as an intensive pedestrian survey designed to identify and evaluate all of the cultural resources in the Project area that are "locatable from surface and exposed profile indications" (BLM 2004:19; see methods discussion in Chapter 4). Owing to the general lack of vegetation in the direct effects APE, ground visibility was extremely good, ranging from 90% to 100%. This allowed for a more complete and reliable identification of cultural resources. Within the direct effects APE, qualified survey crews inventoried 16 isolates and eight archaeological sites. Of these 24 resources, 23 were newly identified and one was previously recorded. Of the eight archaeological sites, four are historic and four are prehistoric.

Overviews of the direct effects APE and survey coverage, with the locations of sites and isolates plotted on 7.5-minute USGS topographic maps, are included in Appendix E. DPR site record forms are provided in Appendix F.

The majority of the archaeological resources (sites and isolates) identified in the Project are prehistoric in age, and consist predominately of flaked stone debitage, with smaller amounts of flaked stone tools. Historic archaeological material includes mostly metal cans, with smaller quantities of glass bottles and jars, broken ceramics, and sundry metal items. Historical features include debris scatters from the early to mid-20th century. A summary of the identified archaeological sites is provided in Table 8.

Table 8. Sites Identified in the Direct Effects APE

Primary Number	Trinomial Number	Temporary Name	Time Period	Site Type	Location
15-007706	CA-KER-9772H	CS-S-H-009	Historic	Historical refuse scatter and prehistoric isolate	Alt 2
-	CA-KER-9773H	CS-S-H-012	Historic	Historical refuse scatter	Alt 2
-	CA-KER-9774H	CS-S-H-016	Historic	Historical refuse scatter	Alt 1
-	CA-KER-9775H	CS-S-H-017	Historic	Historical refuse scatter	Alt 1
-	CA-KER-9776	CS-S-P-010	Historic	Lithic scatter	Alt 2
-	CA-KER-9777	CS-S-P-011	Prehistoric	Lithic scatter	Alt 2
-	CA-KER-9778	CS-S-P-013	Prehistoric	Lithic scatter	Alt 2
-	CA-KER-9779	CS-S-P-015	Prehistoric	Lithic scatter	Alt 1

PREVIOUSLY RECORDED SITES

A single prehistoric isolate (P-15-015956) was previously recorded within the direct effects APE. Field staff could not relocate P-15-015956 during the current survey; however, another resource, P-15-007706, previously recorded as a prehistoric/historic isolate located just outside the direct effects APE of Alternative 2, was relocated, and the historic component was determined to extend into the Project area. This resource is discussed below.

CA-KER-9772H (P-15-007706)

CA-KER-9772H was originally recorded in 1985 as part of the Sylmar Expansion Project (Miller and Johnson 1985). Miller and Johnson described the resource as an isolate that included a single prehistoric flake and a historic can scatter. The recorded location of the resource is just outside the direct effects APE of Alternative 2.

During the current survey, field staff observed a historic refuse scatter in the vicinity of P-15-007706, and determined that the scatter likely represented an extension of this previously recorded resource and it was reclassified as a site (CA-KER-9772H). The site is located on a broad foothill alluvial fan that gradually slopes to the east. The area contains a creosote scrub vegetation community, with brittle bush, rabbitbrush, and creosote bushes. Two dirt roads are present: one is the access road running along the existing transmission line corridor, and the other is likely an access road to the Los Angeles Aqueduct as it appears to be present on the 1915 USGS 15' Mojave quadrangle. The transmission line road bisects the scatter, and the scatter is dispersed along and adjacent to the north side of the second road.

Within Alternative 2, the resource consists of a dispersed modern and historic refuse scatter within a 140- meter by 50-meter area. The scatter includes approximately 55 metal cans, including hole-in-cap cans, sanitary cans, beverage cans, one cone-top can, one paint can, and one spice can. The scatter also includes numerous fragments of aqua and brown bottle glass and a Quikfire charcoal lighter fluid can. Opening methods observed within the can assemblage

include knife opened, rotary opened, internal friction lid, and church key. The site appears to retain poor integrity, as the cans appear to have been dispersed by alluvial slope-wash erosion and possibly also by aeolian action.

Site CA-KER-9772H is recommended not eligible for the NRHP under all Criteria (A–D). This site is not associated with events or persons important to the past and is recommended not eligible for the NRHP under Criteria A and B. The site does not represent a distinct style, type, or design and is recommended not eligible for inclusion to the NRHP under Criterion C. The materials contained within the refuse scatter appear to span from the early to mid-20th century, with some modern materials present. The condition of the deposit, however, is poor, as it appears likely that the materials have been redeposited by erosional processes from an upslope source not within the current Alternative 2 corridor. The resource’s integrity of location and setting is, therefore, poor, and its potential data content is limited. Consequently, this site has little potential to yield information important to history and is recommended not eligible for the NRHP under Criterion D.

NEWLY RECORDED SITES

CA-KER-9773H

Site CA-KER-9773H consists of a sparse and dispersed refuse scatter within a 40-meter by 25-meter area. The resource is located on a broad, alluvial fan bajada that gradually slopes to the east. The site and surrounding area contain a creosote scrub vegetation community, with brittle bush, rabbitbrush, and creosote bushes. The refuse scatter includes six metal cans, including four hole-in-cap cans, one hole-in-top can, and one oil can. Opening method observed within the can assemblage appeared to be knife opened. Two sun-colored amethyst glass fragments and one brown bottle glass fragment were also observed. The site appears to retain poor integrity, as the cans and other materials all appear to have been dispersed by slope wash and/or aeolian erosion actions.

Site CA-KER-9773H is recommended not eligible for the NRHP under all Criteria (A–D). This site is not associated with events or persons important to the past and is recommended not eligible for the NRHP under Criteria A and B. The site does not represent a distinct style, type, or design and is recommended not eligible for inclusion to the NRHP under Criterion C. Although the materials contained within the refuse scatter appear to date mostly to the early 20th century, the condition of the deposit is poor, as it appears likely that the materials have been redeposited by erosional processes from an upslope source not within the current Project corridor. The resource’s integrity of location and setting is, therefore, poor, and its potential data content is limited. Consequently, this site has little potential to yield information important to history and is recommended not eligible for the NRHP under Criterion D.

CA-KER-9774H

Site CA-KER-9774H consists of a dispersed metal can scatter within a 70-meter by 40-meter area. The resource is located on a broad foothill that gradually slopes to the east. The site and surrounding area contain creosote scrub vegetation, with brittle bush, rabbitbrush, and creosote bushes present. The can scatter totals 55 metal cans, including 37 hole-in-cap cans, seven hole-

in-top cans, nine sanitary cans, one external friction lid can, and one sardine tin. Although several opening methods were observed, knife opening predominated. Two barrel hoops, each with a 12-inch diameter, were also present. The artifacts appear to have been dispersed by alluvial and/or aeolian erosion actions, resulting in poor integrity and lack of context for these materials.

Site CA-KER-9774H is recommended not eligible for the NRHP under all Criteria (A–D). This site is not associated with events or persons important to the past and is recommended not eligible for the NRHP under Criteria A and B. The site does not represent a distinct style, type, or design and is recommended not eligible for inclusion to the NRHP under Criterion C. Although the materials contained within the refuse scatter appear to date mostly to the early 20th century, the condition of the deposit is poor, as it appears likely that the materials have been redeposited by erosional processes from an upslope source not within the current Project corridor. The resource’s integrity of location and setting is, therefore, poor and its potential data content is limited. Consequently, this site has little potential to yield information important to history and is recommended not eligible for the NRHP under Criterion D.

CA-KER-9775H

The resource consists of a dispersed historic and modern-era refuse scatter within a 70-meter by 70-meter area. The scatter contains two discrete concentrations (Concentrations 1 and 2) of assorted refuse and one fire pit feature, as well as a medium-density scatter of modern and historic-era artifacts within the site boundary. The resource is located on a broad foothill alluvial fan bajada that gradually slopes to the east. The site and surrounding area contain creosote scrub vegetation, with brittle bush, rabbitbrush, and creosote bushes. Artifacts observed within the concentrations and the localized scatter include tobacco tins, metal cans, window glass, glass bottle fragments, shoe soles, metal piping, and ceramic tableware fragments. The artifacts appear to have been dispersed by alluvial and/or aeolian erosion actions, resulting in poor integrity and lack of context for these materials.

Concentration 1 measures 18 by 7 meters and includes six tobacco tins, 100+ fragments of window glass, five hole-in-top cans, eight ceramic tableware fragments with a scalloped rim, eight sun-colored amethyst glass fragments, three aqua glass insulator fragments, two rubber shoe soles, and 50+ fragments of brown and green bottle glass. Concentration 2 measures 8 meters by 8 meters and includes 20+ fragments of sun-colored amethyst glass, six tobacco tins, two tobacco tin lids, three sanitary cans, one hole-in-top can, one clear milk jar finish, and approximately 50+ fragments of brown and green bottle glass. The site also contains a fire pit feature (Feature 1) consisting of a circle of approximately six stones, with burnt remnants of ceramic tableware vessels, a metal clasp, several pieces of aqua bottle glass, two pieces of burnt CCS, and several machine-cut nails.

The general location appears to likely have been where dumping has reoccurred over time, as the materials and features contained within the refuse scatter appear to span from the early to mid-20th century, but also include some modern materials. The condition of the deposit, however, appears poor, as many of the materials seem to be redistributed from their original deposited locations by same alluvial and/or aeolian erosional actions observed across the Project area. The shallow fire pit feature may be the remains of an incinerator.

Site CA-KER-9775H is recommended not eligible for the NRHP under all Criteria (A–D). This site is not associated with events or persons important to the past and is recommended not eligible for the NRHP under Criteria A and B. The site does not represent a distinct style, type, or design and is recommended not eligible for inclusion to the NRHP under Criterion C. In general, the resource’s integrity of location and context appears to be poor due to factors of natural disturbance, and no evidence was observed for it to contain any new, unique, or other important historical information. Consequently, this site has little potential to yield information important to history and is recommended not eligible for the NRHP under Criterion D.

CA-KER-9776

Site CA-KER-9776 consists of a low-density lithic scatter measuring 7 meters by 2 meters. The observed assemblage includes three pieces of CCS flaked stone debitage consisting of three tertiary flakes. The site is situated on a small, narrow ridge that slopes to the east, and is positioned at the eastern base of a finger-ridge. The surrounding area is part of a creosote scrub vegetation community, with brittle bush and creosote bushes. The area is eroded with evidence of both wind and water slope-wash erosion.

Site CA-KER-9776 is recommended not eligible for the NRHP under all Criteria (A–D). This site is not associated with events or persons important to the past and is recommended not eligible for the NRHP under Criteria A and B. The site does not represent a distinct style, type, or design and is recommended not eligible for inclusion to the NRHP under Criterion C. The site’s integrity of location and setting are poor, and its data content is limited. Consequently, this site has little potential to yield information important to history and is recommended not eligible for the NRHP under Criterion D.

CA-KER-9777

Site CA-KER-9777 consists of a lithic reduction area containing 14 fragments of CCS debitage, one CCS core, one CCS scraper, and one granitic anvil and possible metate. The resource lies within a 25-meter by 15-meter area. The site is situated on a small, relatively narrow ridge that slopes to the east, and is positioned at the eastern base of a finger-ridge. The site and the surrounding area contain a creosote scrub vegetation community, with brittle bush and creosote bushes noted within the site area. The site appears to be in good condition, although erosion is evident in and around the site.

Site CA-KER-9777 is recommended not eligible for the NRHP under all Criteria (A–D). This site is not associated with events or persons important to the past and is recommended not eligible for the NRHP under Criteria A and B. The site does not represent a distinct style, type, or design and is recommended not eligible for inclusion to the NRHP under Criterion C. The site contains a variety of artifacts, including what appear to be flaked stone tools, not just reduction materials, and a granite cobble, centrally situated in the lithic artifact cluster that has some evidence for use as both an anvil and for possibly grinding vegetal materials. The site’s integrity also appears to be relatively intact. Although this content may indicate a limited camp location, no evidence for the presence of a subsurface deposit was observed. Consequently, it appears that the data content of the site is limited. Based on a low potential to contribute to regional research, site CA-KER-9777 is recommended not eligible for the NRHP under Criterion D.

CA-KER-9778

Site CA-KER-9778 consists of a low-density lithic scatter measuring 115 meters by 7 meters. The observed assemblage consists of eight fragments of CCS debitage and one CCS tested cobble. The debitage includes five tertiary flakes, one secondary flake, and two fragments of angular waste. The tested cobble contained approximately 60% cortex, and had several flake removal scars visible. The site is situated on a north/east-trending slope positioned at the eastern base of a finger-ridge. The surrounding area is part of a creosote scrub vegetation community, with brittle bush and creosote bushes present. The area is severely eroded with evidence of both wind and water slope-wash erosion.

This site is recommended not eligible for the NRHP under all Criteria (A–D). This site is not associated with events or persons important to the past and is recommended not eligible for the NRHP under Criteria A and B. The site does not represent a distinct style, type, or design and is recommended not eligible for inclusion to the NRHP under Criterion C. In general, the resource’s integrity of location and setting appears to be poor due to factors of natural disturbance, and the site appears to represent transitory reduction activities with no evidence for habitation, suggesting that its data content is limited. Based on a low potential to contribute to regional research, site CA-KER-9778 is recommended not eligible for the NRHP under Criterion D.

CA-KER-9779

Site CA-KER-9779 consists of a small lithic reduction location (flaking station) measuring 9 meters by 5 meters. The observed assemblage consists of 14 fragments of rhyolite debitage and two rhyolite cores and/or core tools. The site is situated on a north/east-trending slope positioned at the eastern base of a finger-ridge. The surrounding area is part of a creosote scrub vegetation community, with brittle bush and creosote bushes. Although some erosion is evident from alluvial and aeolian erosional actions, the site appears to be in good condition, with minor disturbances noted from these natural agents.

Site CA-KER-9779 is recommended not eligible for the NRHP under all Criteria (A–D). This site is not associated with events or persons important to the past and is recommended not eligible for the NRHP under Criteria A and B. The site does not represent a distinct style, type, or design and is recommended not eligible for inclusion to the NRHP under Criterion C. The site appears to represent transitory reduction activities with no evidence for habitation, suggesting that its data content is limited. Based on a low potential to contribute to regional research, site CA-KER-9779 is recommended not eligible for the NRHP under Criterion D.

Isolated Finds

Table 9 lists the 16 isolated finds identified in the Project area. Isolates were defined as fewer than three artifacts in a 30-square-meter area. None of the isolates identified during the Class III survey are recommended eligible for inclusion in the NRHP.

Table 9. Isolates Recorded in the Direct Effects APE

Isolate Number	Temporary Name	Time Period	Location	Description
P-15-17695	C-ISO-P-020	Prehistoric	Alt 2	1 tertiary CCS flake
P-15-17696	C-ISO-P-021	Prehistoric	Alt 2	1 CCS core fragment
P-15-17697	C-ISO-P-022	Prehistoric	Alt 2	1 CCS core fragment
P-15-17698	C-ISO-P-024	Prehistoric	Alt 1, Alt 2	1 secondary CCS EMF*, 1 jasper shatter
P-15-17699	C-ISO-P-025	Prehistoric	Alt 2	1 primary CCS flake, 1 secondary CCS flake
P-15-17700	C-ISO-H-026	Historic	Alt 2	1 aqua insulator glass scatter, 1 hole-in-cap can
P-15-17701	C-ISO-P-027	Prehistoric	Alt 2	1 CCS core
P-15-17702	C-ISO-P-029	Prehistoric	Alt 2	1 CCS tested cobble, 1 secondary CCS flake
P-15-17703	C-ISO-P-030	Prehistoric	Alt 2	1 tertiary CCS flake, 1 primary CCS flake
P-15-17704	C-ISO-P-031	Prehistoric	Alt 2	1 CCS chopper
P-15-17705	C-ISO-P-032	Prehistoric	Alt 1, Alt 2	1 primary CCS flake, 1 tertiary CCS flake
P-15-17706	C-ISO-P-033	Prehistoric	Alt 1, Alt 2	2 obsidian flakes
P-15-17707	C-ISO-P-034	Prehistoric	Alt 1, Alt 2	1 tertiary CCS flake, 1 secondary CCS flake
P-15-17708	C-ISO-P-035	Prehistoric	Alt 1	1 CCS EMF
P-15-17709	C-ISO-P-039	Prehistoric	Alt 1	1 tertiary CCS flake
P-15-17710	C-ISO-H-041	Historic	Alt 1	1 8-mm film can

CCS = cryptocrystalline
EMF = edge-modified flake
mm = millimeter

Historic Architectural Resources

Prior to fieldwork, available historic maps were reviewed to identify potential historic architecture resources within the indirect effects APE. No historic architecture resources were identified on any historic maps. Based on these results, review of historic topographic maps, and results of the SSJVIC records search, a reconnaissance survey was not conducted for resources within the indirect effects APE.

CHAPTER 6

SUMMARY AND MANAGEMENT RECOMMENDATIONS

SUMMARY

From May 19 to May 25, 2014, AECOM cultural resources specialists conducted a Class III archaeological survey for the Project. Native American representatives participated in survey efforts between May 19 and May 24, 2014. As defined in Section 8110 of the BLM Manual, a Class III survey is a “professionally conducted, thorough pedestrian survey of an entire target area” intended to “provide managers and cultural resource specialists with a complete record of cultural properties locatable from surface and exposed profile indications” (BLM 2004:19). For the Project, the “target area” was defined as the direct effects APE, which consisted of the disturbance area for gen-tie Alternative 1, and Alternative 2 located on approximately 200 acres of BLM land, LADWP land, and privately owned parcels near California City, California.

The intensive pedestrian survey of the direct effects APE inventoried eight archaeological sites, of which four are historic and four are prehistoric. One of the sites was recorded previously as an isolate. The survey also identified 16 isolated finds, 14 of which are prehistoric and two are historic.

In the direct effects APE, archaeological sites and isolated finds include prehistoric and historical artifacts and features. The majority of the archaeological resources (sites and isolates) identified in the Project area are prehistoric and consist predominately of flaked stone debitage, with smaller amounts of flaked stone tools. Historic cultural material includes mostly metal cans, with smaller quantities of glass bottles and jars, broken ceramics, and sundry metal items. Historical features include debris scatters from the early to mid-20th century.

Survey fieldwork in the direct effects APE was guided by a records and archival research program conducted at the SSJVIC. In the course of that archival research, Project specialists collected information pertinent to the environment, history, and prehistory of the region generally, and the Fremont Valley, specifically. The substance of that research informs the interpretations of archaeological resources, and is presented in Chapters 2 and 3.

Based on background research and surface observations, none of the archaeological sites that may be impacted by construction of the Project constitute historic properties eligible for listing on the NRHP (Table 10).

Table 10. NRHP Eligibility Status for Sites in the Direct Effects APE

Trinomial	Primary Numbers	Temporary Name	Site Type	Location	Eligibility Recommendation	Criteria
Previously Recorded Sites						
CA-KER-9772H	15-007766	CS-S-H-009	Historical refuse scatter and prehistoric isolate	Alt 2	Not Eligible	A-D
Newly Recorded Sites						
CA-KER-9773H	-	CS-S-H-012	Historical refuse scatter	Alt 2	Not Eligible	A-D
CA-KER-9774H	-	CS-S-H-016	Historical refuse scatter	Alt 1	Not Eligible	A-D
CA-KER-9775H	-	CS-S-H-017	Historical refuse scatter	Alt 1	Not Eligible	A-D
CA-KER-9776	-	CS-S-P-010	Lithic scatter	Alt 2	Not Eligible	A-D
CA-KER-9777	-	CS-S-P-011	Lithic scatter	Alt 2	Not Eligible	A-D
CA-KER-9778	-	CS-S-P-013	Lithic scatter	Alt 2	Not Eligible	A-D
CA-KER-9779	-	CS-S-P-015	Lithic scatter	Alt 1	Not Eligible	A-D

RECOMMENDATIONS

Several buried prehistoric deposits have been documented in the vicinity of the Project. Because the Project is situated on some of the same geologic structures in which these nearby finds occurred, there is the potential to encounter similar deposits during future Project earth-disturbing activities. However, the results of the field survey and research indicate that the Project does not contain resources eligible for the NRHP and, as such, the Project will not have an effect on any historic properties. No further treatment is recommended.

It is recommended that in the event that any unanticipated buried cultural deposits are encountered during Project construction, all construction work in the vicinity of the deposit should cease and, as a standard procedure, a qualified archaeologist should be consulted. The qualified archaeologist will coordinate with the Project owner’s construction manager and environmental compliance manager to avoid the find, and assess the buried cultural deposits in consultation with the BLM. If the discovery is determined to be not eligible for listing in the NRHP through consultation with BLM staff, work will be allowed to continue.

If, in consultation with the BLM, a discovery is determined to be eligible for listing in the NRHP, a mitigation plan should be prepared and carried out in accordance with federal guidelines. Implementation of the mitigation plan should include Native American participation. If the resources cannot be avoided, a data recovery plan should be developed to ensure collection of sufficient information to address archaeological and historical research questions, with results presented in a technical report describing field methods, materials collected, and conclusions. Any cultural material collected as part of an assessment or data recovery effort should be curated at a qualified facility. Field notes and other pertinent materials should be curated along with the archaeological collection.

If human remains are discovered during any construction activities, all ground-disturbing activity within 50 feet of the remains will be halted immediately, and the county coroner will be notified immediately, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the county coroner to be Native American, the protocol changes depending on whether the discovery is located on federally or non-federally owned/managed lands. If remains are discovered on private land, the NAHC will be notified within 24 hours. The NAHC will identify a Most Likely Descendant, who will be designated to cooperate with the owner of the land on which the remains were discovered to arrange for the proper disposition of the remains, according to the NAHC guidelines for the treatment and disposition of human remains. If remains are discovered on BLM land, the appropriate Field Office must be called. The BLM archaeologist will initiate proper procedures under NAGPRA.

Should the Project change to incorporate new areas of proposed disturbance, intensive pedestrian archaeological survey and reconnaissance architectural survey of these areas will be required.

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APPENDIX A

RESUMES

Theodore Cooley, RPA

Senior Archaeologist

Education

MA, Anthropology, California State University, Los Angeles, 1982
BA, Anthropology, California State College, Long Beach, 1970

Professional Registration

Registered Professional Archaeologist (RPA)

Professional Affiliations

Member, Society for American Archaeology
Member, Society for California Archaeology
Member, Register of Professional Archaeologists

Certifications

County of San Diego, CA, Certified Consultant List for Archaeological Resources
City of San Diego, CA, Certified Principal Investigator for Monitoring Projects
County of Orange, CA, Certified Cultural Resources Consultant Principal Investigator
County of Riverside, CA, Certified Cultural Resources Consultant Principal Investigator
Approved lists in the Counties of San Luis Obispo, Santa Barbara, Ventura, and Los Angeles, California

Training

40-Hour HAZWOPER Training

Professional History

2009–Present: Staff and Senior Archaeologist, AECOM/EDAW, San Diego.
1997–2009: Staff Senior Archaeologist, ICF/Jones Stokes/Mooney and Associates, San Diego, California.
1985–1997: Staff Senior Archaeologist/Department Manager, Ogden Environmental Services Company/ERCI/Westec Services, San Diego and Santa Barbara, California.
1984: Project Archaeologist, Field Director, California State University Fullerton, Archaeological Research Facility, Fullerton, California.
1982–1983: Project Archaeologist, Field Director, Dames Moore, Wirth Environmental Services Division, San Diego.
1978–1982: Staff Project Archaeologist/Operations Manager, Archaeological Resource Management Corporation (ARMC), Anaheim, California.
1977: Project Archaeologist, Field Director, California State University Los Angeles Foundation, Los Angeles, California.
1975–1976: Graduate Teaching Assistant for Archaeological Field Methods class; Graduate Teaching Assistant for Archaeological Laboratory Analysis Methods class, California State University, Los Angeles.
1970–1974: Staff Project Archaeologist, Archaeological Research, Inc. (ARI), Costa Mesa, California.

Ted Cooley has 40 years of experience in archaeological resource management. He has directed test and data recovery investigations, monitoring programs, and archaeological site surveys of large and small tracts, and has prepared reports for various cultural resource management projects. He is well-versed in National Historic Preservation Act, National Environmental Policy Act (NEPA), and California Environmental Quality Act (CEQA) regulations and processes. Mr. Cooley's experience also includes Native American consultation for monitoring of archaeological field projects, including some with human remains and reburial-related compliance issues.

Project Experience

US Department of the Navy, Naval Facilities Engineering Command Southwest, Marine Corps Base Camp Pendleton MCBCP), Section 110, Resource Delineation and Evaluation Study, San Diego County, CA

Participant in the investigations conducted for resource delineation and evaluation of National Register of Historic Places-eligible prehistoric archaeological site CA-SDI-1313/14791. Involved conducting archaeological excavations for the delineation of the site to allow MCBCP to successfully plan, under Section 110, for the protection of this significant resource from potential future adverse affects. Work included lithic artifact analyst and report writing. [09/2011 – 11/2013]

Los Angeles County Department of Public Works, Archaeological Data Recovery for the Topanga Library Project, Los Angeles County, CA

Participant in the data recovery investigations conducted at prehistoric archaeological site CA-LAN-8 in the community of Topanga in the Santa Monica Mountains. Involved conducting archaeological excavations for data recovery within the Area of Potential Effects for pipeline construction associated with construction of a new public library. Included

field work participation, lithic artifact analyst, and report writing. [08/2011 – 08/2013]

US Department of the Navy, Naval Facilities Engineering Command Southwest, Marine Corps Base Camp Pendleton, Geomorphological Investigations San Diego County, CA

Field supervisory archaeologist for the conduct of geomorphological investigations along three drainages within Marine Corps Base Camp Pendleton to assess the potential for the presence of deeply buried prehistoric archaeological deposits. Duties included the design, coordination, and execution of the field geomorphological investigations; participation in the analysis of the results; and co-authorship of the technical report. [09/2009 – 07/2013]

California High-Speed Rail Authority, High Speed Train Project, CA

Field director for a Phase I Cultural Resources Survey and Inventory of three alternative high-speed train alignment corridors, extending from Merced to Fresno in the San Joaquin Valley. Duties included direction of the field crew, participation in the analysis of results, and report preparation. [01/2011 – 03/2013]

US Department of the Navy, Naval Facilities Engineering Command Southwest, San Nicolas Island Archaeological Evaluations, Ventura County, CA

Field director for archaeological test investigations for the delineation and evaluation of prehistoric site CA-SNI-41 on San Nicolas Island in the Channel Islands of the California Bight. Involved testing for depth and horizontal extent, as well as significance evaluation of this Middle and Late Holocene site. Duties included direction of the field crew, participation in the analysis, and report preparation. [05/2010 – 07/2012]

US Department of the Navy, Naval Facilities Engineering Command Southwest, Marine Corps Base Camp Pendleton, Compliance Documentation Support Services for Environmental Security Section, San Diego County, CA

Provided compliance documentation support services to the Camp Pendleton Cultural Resources Branch Head for the preparation of documentation and correspondence for agency submittal for federal NEPA and Section 106 compliance requirements, principally to the State Historic Preservation Office and Advisory Council for Historic Preservation, for several large construction projects. [01/2010 – 07/2012]

Solar Millennium, Ridgecrest Solar Project Cultural Resources Inventory Program, Kern County, CA

Co-field director of field survey for prehistoric and historic archaeological resources within a proposed 1,757-acre solar facility in the Mojave Desert. Participated in the preparation of the Department of Parks and Recreation site forms and contributing author of the technical report of results from the survey program. [05/2009 – 01/2011]

US Department of the Navy, Naval Facilities Engineering Command Southwest, Seal Beach Naval Weapons Station Archaeological Evaluations, Orange County, CA

Field director for archaeological test investigations for the delineation and evaluation of prehistoric site P-30-1503 within the Seal Beach Naval Weapons Station along the margin of the Anaheim Creek drainage wetlands system. Involved testing for the depth and horizontal extent, as well as a significance evaluation of this Late Holocene site. Duties included direction of the field crew, participation in the analysis, and report preparation. [10/2010 – 09/2011]

US Department of the Navy, Naval Facilities Engineering Command Southwest, San Nicolas Island Archaeological Evaluations, Ventura County, CA

Field archaeologist for archaeological evaluation of prehistoric sites CA-SNI-316, CA-SNI-361, and CA-SNI-550 on San Nicolas Island in the Channel Islands of the California Bight. Involved significance testing and evaluation of these Middle and Late Holocene sites, and the analysis and synthesis of results with existing island-wide archaeological data. Duties included field crew member, participation in the analysis, and report preparation. [10/2009 – 04/2011]

Olivenhain Municipal Water District, Raw Water Pipeline Phase I Cultural Resources Survey and Inventory Project, San Diego County, CA

Project archaeologist and principal investigator for a Phase I Cultural Resources Survey and Inventory of two alternative pipeline alignment corridors totalling approximately 9 miles in length. Author of the technical report of results from the survey and inventory program. [10/2009 – 10/2010]

County of San Diego Department of Parks and Recreation, Sage Hill Preserve Cultural Resources Inventory, San Diego County, CA

Supervisory archaeologist for Phase I pedestrian survey and cultural resource inventory of the Sage Hill Open Space Preserve in unincorporated west-central San Diego County.

Directed the field survey for prehistoric and historic archaeological resources within the proposed 234-acre natural park preserve located in coastal foothills. Co-authored the technical report of results from the survey program. [09/2009 – 02/2010]

RRG Weldon, Solar Project Cultural Resources Inventory Program, Kern County, CA

As supervisory archaeologist, directed the field survey and site documentation for prehistoric and historic archaeological resources within a proposed 425-acre solar facility near Lake Isabella in the southern Sierra Nevada Mountains. Co-author of the technical report of results from the survey program. The program was conducted under CEQA and local guidelines of the County of Kern for the implementation of CEQA. [06/2009 – 10/2010]

Abengoa Mojave Solar, Cultural Resources Inventory and Resource Evaluation Program, San Bernardino County, CA

As supervisory archaeologist, supervised the survey of a proposed 1,765-acre solar facility in the Mojave Desert. Also supervised the archaeological documentation and Phase II testing efforts, and co-authored the technical reports of results from the survey and testing programs. [05/2009 – 11/2010]

County of San Diego Department of Parks and Recreation, Boulder Oaks, Lakeside Linkage, Sycamore/Goodan, and Lusardi Open Space Preserves and Regional Parks Cultural Resources Inventories, San Diego County, CA

Supervisory archaeologist for Phase I pedestrian survey and cultural resource inventories of four open space preserves and regional parks in unincorporated central San Diego County. The projects involved identification and documentation of prehistoric and historic resources, built environment features, and existing infrastructure. Separate inventory reports were prepared for each preserve that included extensive archival research and historical narrative, an inventory of identified sites, and management guidelines for potentially significant cultural resources developed in consultation with Native Americans. [Prior to AECOM]

County of Orange Department of Public Works, Laguna Canyon, State Route (SR) 133 Revegetation Project, Orange County, CA

Supervisory archaeologist and field monitor for earth-disturbing activities associated with the revegetation of portions of old Laguna Canyon Road, abandoned with the

construction of new route segments for SR-133, in unincorporated Orange County. Involved monitoring grading and other mechanical earth-moving activities in areas around and adjacent to preserved California Register of Historic Resources and National Register of Historic Places-eligible archaeological site deposits. Because of the presence of these significant resources and the overall archaeological sensitivity of the area, the county required a County-Certified Archaeologist to monitor throughout the revegetation project. [Prior to AECOM]

Parsons Brinkerhoff, State Route 94 Operational Improvements Inventory and Evaluation, San Diego County, CA

Supervisory archaeologist of cultural resources field survey efforts, and documentation and evaluation related to proposed operational improvements along an 18-mile-long stretch of State Route 94 in San Diego County. Development of documentation in the California Department of Transportation (Caltrans) format for archaeological and built environment resources. [Prior to AECOM]

Southern California Edison, As-Needed Archaeological Services, Statewide, CA

Supervisory archaeologist for surveys, resource identification, documentation, testing, and evaluation efforts related to infrastructure replacements and development throughout the state on both private and public lands, including the Bureau of Land Management, US Army Corps of Engineers, and US Forest Service. Project involved completion of California Department of Parks and Recreation forms, assessment of resource significance according to National Register of Historic Places eligibility and CEQA significance criteria, and management recommendations. [Prior to AECOM]

Blackwater USA, West Cultural Resources Phase I and Phase II Studies, Potrero, CA

As supervisory archaeologist, supervised the survey of an approximately 850-acre area in eastern San Diego County and the test excavation of identified prehistoric sites. Supervised the archaeological documentation, extended Phase I testing, and Phase II testing efforts under the County of San Diego guidelines implemented in September 2006. [Prior to AECOM]

Private Development Client, Circle P Ranch Housing Development Project, San Diego County, CA

Principal investigator for a Phase I cultural resources inventory and survey and extended Phase I site testing program involving a prehistoric and historic site, CA-SDI-17,910/H, located within the approximately 15-acre property near Valley Center, California. Project duties consisted of supervision of fieldwork personnel, interaction with Native American monitors, and supervision and participation in the analysis and technical report preparation. The program was conducted under CEQA and local guidelines of the County of San Diego for the implementation of CEQA. [Prior to AECOM]

Private Development Client, Blossom Valley Housing Development Project, San Diego County, CA

Principal investigator for a Phase I cultural resources inventory and survey and extended Phase I site testing program involving prehistoric site CA-SDI-17,968 within the approximately 50-acre property in Blossom Valley, California. Project duties consisted of supervision of fieldwork personnel, interaction with Native American monitors, and supervision and participation in the analysis and technical report preparation. The program was conducted under CEQA and local guidelines of the County of San Diego for the implementation of CEQA. [Prior to AECOM]

County of San Diego Department of Public Works (DPW), Jacumba Community Park Restroom Facility National Register and CEQA Testing Program, San Diego County, CA

Principal investigator for a National Register of Historic Places and CEQA significance testing program conducted at prehistoric archaeological site CA-SDI-17,979 to be impacted by construction. Directed all project archaeological activities, including analysis and report preparation. The project required interaction with DPW personnel and Native American monitors. [Prior to AECOM]

City of Goleta, General Plan EIR Cultural and Paleontological Resources Section, Santa Barbara County, CA

Task manager for and participant in the preparation of the cultural resources section of the environmental impact report (EIR) for the Goleta General Plan. The project required gathering and synthesis of background information, existing conditions, paleontological data, and regulatory requirements, and interaction with local individuals, interest groups, and personnel of the city of Goleta. [Prior to AECOM]

Big Sandy Rancheria of Mono Indians, Big Sandy Rancheria Casino, Fresno County, CA

Supervisory archeologist for a field survey and cultural resources site testing program for a proposed gaming facility near Friant, California. Responsibilities included assisting in the supervision of field survey and site testing, and participation in report preparation. [Prior to AECOM]

Otay Water District, 30-inch Recycled Water Pipeline, Reservoir, and Pump Station, San Diego, CA

Principal investigator for a Historic Properties Inventory and Survey for a 6.1-mile-long 30-inch-diameter recycled water pipeline route, and for a reservoir site pump station. A National Register of Historic Places and CEQA significance testing program was conducted at prehistoric archaeological site CA-SDI-17,668 to be impacted by construction. Directed all project archaeological activities, including analysis and report preparation. Required interaction with the Otay Water District, private contractor personnel, and Native American monitors. [Prior to AECOM]

Private Development Client, Emerald Oaks Housing Development Project, Ramona, CA

Supervising archaeologist and co-principal investigator for a cultural resources survey and extended Phase I site boundary testing and Phase II evaluation program involving five prehistoric sites within a 311-acre property. Duties consisted of supervision of fieldwork personnel, supervision and participation in the analysis, and technical report preparation. The program was conducted under CEQA and local guidelines of the County of San Diego for the implementation of CEQA. [Prior to AECOM]

Starwood Development Company, Crosby Estate Golf Course Development, San Diego County, CA

Supervising archaeologist for a cultural resources evaluation and site-indexing program involving the C.W. Harris Site Complex and other adjacent historic and prehistoric sites within the property and adjacent open space. Duties consisted of direction of fieldwork, monitoring construction activities, and supervision and participation in the analysis and technical report preparation. The program was conducted for US Army Corps of Engineers 404 Permit compliance. [Prior to AECOM]

San Diego County Water Authority (SDCWA), As-Needed Surveys for Geotechnical and Water Facility Construction, San Diego, CA

Project manager and principal investigator for six archaeological survey and/or monitoring projects conducted over a 3-year period. The programs, all situated in western San Diego County, consisted of evaluations through background research and field surveys of proposed drilling/boring sites, pump stations, and other facility locations, and, when required, monitoring of drilling/boring and facility construction operations situated in areas determined as sensitive. Included background research, field surveys, preparation of technical reports, interaction with SDCWA engineers for project redesign, and interaction with construction personnel for successful monitoring. [Prior to AECOM]

Mark S. and Colleen J. McArthur, and Donald C. "Skip" White, Oak Country Estates, Ramona, CA

Supervising archaeologist and co-principal investigator for a cultural resources survey and extended Phase I site boundary testing and Phase II evaluation program involving 30 mostly late-prehistoric sites within the 648-acre property. Duties consisted of supervision of fieldwork personnel, and supervision and participation in the analysis and technical report preparation. The program was conducted under CEQA and local guidelines of the County of San Diego for the implementation of CEQA. [Prior to AECOM]

Tetra Tech EM, San Luis Rey Land Outfall Pipeline Alternatives Constraints Study, Oceanside, CA

Principal investigator and overall field supervisor for this archaeological resource inventory and constraints study program, conducted in compliance with CEQA. The purpose of this project was to assess the relative cultural resources impacts within four alternative route corridors for a proposed additional outfall pipeline from an existing inland water treatment plant. The project consisted of background research, spot check field survey of the alternative alignment corridors, and completion of the project data analysis and technical report preparation. [Prior to AECOM]

Davis-Eagle Property, Archaeological Survey and Constraints Study, Ramona, CA

Supervising archaeologist and co-project manager of an archaeological survey of 1,231 acres for a development constraints analysis. The project required the discovery and recordation of all cultural resources on the property to provide data for an analysis of the constraints that cultural

resources might represent relative to future development. Served as overall supervisor of archaeological field and site recordation activities, co-managed the project, and conducted the cultural resources constraints analysis and report preparation. [Prior to AECOM]

City of San Diego Water Department, San Pasqual Reclaimed Water Project Cultural Resources Inventory Study, San Diego, CA

Principal investigator for a cultural resources study of 8.15 miles of reclaimed water pipeline route and 12 acres of water tank facility construction. Responsibilities included background research, field survey direction, and technical report preparation. The project was conducted under CEQA and local guidelines of the city of San Diego for the implementation of CEQA. [Prior to AECOM]

California State Department of Parks and Recreation, Point Magu State Park Water Pipeline Route Archaeological Survey, Ventura County, CA

Principal investigator for cultural resources survey of an 8-mile-long water pipeline route along Big Sycamore Canyon. Project responsibilities included background research, field survey direction, GPS site location, and technical report preparation. The program was conducted under CEQA. [Prior to AECOM]

California State Department of Parks and Recreation, Malibu Creek State Park Archaeological Survey, Los Angeles County, CA

Principal investigator for cultural resources survey of the 94-acre Tapia Park sub-unit within Malibu Creek State Park. Responsibilities included background research, field survey direction, GPS site location, and technical report preparation. The program was conducted under CEQA. [Prior to AECOM]

US Department of Agriculture Forest Service, Cleveland National Forest Archaeological Overview, Cleveland National Forest, CA

As researcher/document co-author, participated in the preparation of an Archaeological Overview. The project consisted of a review and assessment of existing archaeological resources data on file at the Cleveland National Forest. Responsibilities included participation in background research, data analysis, and technical report preparation. The project was conducted in compliance with Section 110 of the National Historic Preservation Act. [Prior to AECOM]

**County of San Diego Department of Public Works (DPW),
Ramona Soils Source Project, Ramona, CA**

Principal investigator for Phase I survey of a 30-acre property and Phase II testing/evaluation program of prehistoric site CA-SDI-16,386 and historic site CA-SDI-16,399. Supervised all archaeological activities, including data analysis and report preparation. Required interaction with the Native America Heritage Commission and County of San Diego DPW personnel. [Prior to AECOM]

**US Department of the Navy, Naval Facilities Engineering
Command Southwest, Naval Submarine Base Point Loma
Data Recovery Project, San Diego, CA**

Co-author of the technical document, Archaeological Data Recovery Report, for a Portion CA-SDI-48 at Buildings 139 and 158, Naval Submarine Base, San Diego. Project consisted of a data recovery program conducted at National Register of Historic Places prehistoric archaeological site CA-SDI-48. Responsibilities included participation in background research, data analysis, and report preparation. [Prior to AECOM]

**California Public Utilities Commission, Metromedia Fiber-
Optic Line Project, CA**

Archaeologist for cultural resources studies conducted in compliance with CEQA of more than 300 miles of proposed routes for placement of fiber-optic cable lines along existing streets and railroad rights-of-way within San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Marin, Los Angeles, Orange, and San Diego Counties. Included background research, field surveys, site recordation, and technical report preparation. [Prior to AECOM]

**Calvary Lutheran Church, Data Recovery Project,
Solana Beach, CA**

Co-principal investigator for a data recovery program conducted at prehistoric archaeological site CA-SDI-10,238 (SDM-W-36), important under CEQA. Responsibilities consisted of completion of background research, overall supervision of field personnel, data analysis, and technical report preparation. Also required interaction with Calvary Lutheran Church personnel, Native American consultants, the city of Solana Beach, and the State Historic Preservation Office. [Prior to AECOM]

**San Diego County Water Authority, Mexico/United States
Colorado River Conveyance Facility, San Diego and
Imperial Counties, CA**

Principal investigator for archaeological surveys and monitoring of geotechnical drilling/boring sites. Consisted of evaluations, background research, and field survey of 26 proposed drilling/boring site locations and the subsequent monitoring of five of the drilling/boring operations situated in areas determined as sensitive. The locations were distributed along two proposed pipeline routes between San Vicente Lake and the Yuha Basin. Involvement included background research, field surveys, preparation of technical reports, and interaction with the San Diego County Water Authority, Bureau of Land Management, and US Department of Agriculture Forest Service. [Prior to AECOM]

**Private Development Client, Dry Creek Native American
Gaming Facility, Sonoma County, CA**

Archaeologist for cultural resources field survey for a proposed gaming facility in Dry Creek Valley. Responsibilities included field surveys and report preparation. [Prior to AECOM]

**Bennett Consolidated, Otay Travel Center Project,
Otay Mesa, CA**

Principal investigator for a significance testing program of two prehistoric sites: CA-SDI-10,067 and CA-SDI-12,878. Directed all archaeological activities, including data analysis and report preparation. Required interaction with subcontractors and County of San Diego planning personnel. [Prior to AECOM]

**City of American Canyon, Wastewater Facility & Sewer
Line Extension Routes, Napa County, CA**

Archaeologist for cultural resources field surveys of proposed emplacement of sewer pipelines along future and existing city streets within the city of American Canyon. Responsibilities included field surveys, site recordation, and report preparation. [Prior to AECOM]

**US Department of the Navy, Naval Facilities Engineering
Command Southwest, Fallbrook Naval Ordnance Center
Historic Properties Inventory, Seal Beach, CA**

Project manager, principal investigator, and overall field supervisor for an archaeological resource inventory program that consisted of background research, field surveys of 5,800 acres, and completion of the project data analysis and technical report preparation. The program was conducted in compliance with Section 110 of the National Historic Preservation Act. [Prior to AECOM]

Talega Associates, Focused Data Recovery Project, San Juan Capistrano, CA

Co-principal investigator for a focused data recovery program conducted at prehistoric archaeological site CA-ORA-907, Locus A, important under CEQA, located in Orange County, California. Responsibilities consisted of completion of background research, direct supervision of field personnel, data analysis, and technical report preparation. Also required interaction with Native American consultants and County of Orange personnel. [Prior to AECOM]

US Department of the Navy, Naval Facilities Engineering Command Southwest, Naval Air Station Miramar Environmental Impact Statement Cultural Resources Studies for the Base Realignment and Closure Project, San Diego, CA

For more than 2 years, served as task manager and overall field supervisor for cultural resources studies with principal investigator responsibilities on this major cultural resource program. Consisted of background research for, and field surveys of, more than 3,500 acres for numerous proposed facility locations. Duties consisted of overall direction of fieldwork, and supervision of and participation in the project data analysis, technical report preparation, and field construction monitoring for US Army Corps of Engineers 404 Permit compliance. [Prior to AECOM]

US Department of the Navy, Naval Facilities Engineering Command Southwest, Marine Corps Camp Pendleton Helicopter Outlying Landing Field Project, San Diego, CA

Directed cultural resources studies as project manager and principal investigator for this 3-year Environmental Assessment program consisting of a Phase I inventory and Phase II evaluation for the construction of a helicopter outlying landing field. Four alternative locations were inventoried and three prehistoric sites, located within the preferred alternative, were tested for National Register of Historic Places eligibility. Duties included overall direction and supervision of the project fieldwork, data analysis, technical report preparation, and interaction with various base and agency personnel. [Prior to AECOM]

San Diego County Water Authority, Emergency Water Storage Project, San Diego, CA

Principal investigator for archaeological surveys and site evaluations. This large-scale project lasted for more than 2 years and included field surveys of more than 3,500 acres for alternative reservoir sites and appurtenant facilities, and approximately 40 miles of alternative pipeline routes.

Included interaction with local Native American groups. [Prior to AECOM]

US Navy, Point Loma Submarine Base Data Recovery, San Diego, CA

Project manager and co-principal investigator for a data recovery program conducted at National Register of Historic Places prehistoric archaeological site CA-SDI-10,945, located on the Point Loma Naval Submarine Base. Required interaction and coordination with base personnel, and interaction with the State Historic Preservation Office and the Advisory Council on Historic Preservation. [Prior to AECOM]

Metropolitan Transit District Board, Mission Valley West Light Transit Limited Data Recovery, San Diego, CA

Task manager and principal investigator for a Limited Data Recovery Program conducted at National Register of Historic Places prehistoric archaeological site CA-SDI-11,767, located on the Star Dust Golf Course. Required interaction and coordination with Native American monitors and US Army Corps of Engineers personnel for 404 Permit requirements. [Prior to AECOM]

PCL Civil Contractors, East Mission Gorge Interceptor Pump Station and Force Main Cultural Resources Data Recovery, San Diego, CA

Principal investigator and co-project manager for a data recovery program conducted at National Register of Historic Places-eligible prehistoric archaeological site CA-SDI-9,243 to be impacted by construction of a reclaimed water force main pipeline. Directed all archaeological activities, including analysis and report preparation. Required interaction with city of San Diego water utilities personnel and Native American monitors. [Prior to AECOM]

City of Chula Vista and County of San Diego, Otay Ranch Planned Development Archaeological Reconnaissance Survey, Chula Vista, CA

Principal investigator and co-project manager of an archaeological survey of 6,000 acres of proposed development on 23,088 acres. Required evaluation of all cultural resources on the property. Directed archaeological activities, co-managed the project, supervised analysis and report preparation, and interacted with County of San Diego and City of Chula Vista personnel. [Prior to AECOM]

City of San Diego Water Utilities Department, Crown Point and Rose Creek Portion of the Mission Bay Sewage

Interceptor System Phase V Archaeological Testing Program-Department No. 90-0540, San Diego, CA

Principal investigator and project manager for a testing program of two large prehistoric sites, CA-SDI-11,571 and CA-SDI-5,017, during Phase V of the project involving the placement of pipelines along city streets in the Crown Point and Rose Creek areas, adjacent to Mission Bay. Directed all archaeological activities, including analysis and report preparation. Required interaction with construction subcontractors and city of San Diego Water Utilities personnel. [Prior to AECOM]

All American Celeron Pipeline Company, Pipeline Studies, Santa Barbara County, CA

Project manager for more than 3 years on this major cultural resource program that consisted of surveys of alternative pipeline routes, testing of sites to be impacted, final data recovery on 17 prehistoric sites, monitoring of construction activities, and planning and coordination with local Native American groups and Native American monitors. [Prior to AECOM]

US Army Corps of Engineers, US Air Force Housing Archaeological Study, Los Angeles County, CA

Supervising archaeologist of a testing program of three sites on the Palos Verdes Peninsula. Directed field work and participated in analysis and report preparation. [Prior to AECOM]

Texaco Trading and Transportation Company, Marine Terminal Construction, Santa Barbara County, CA

Co-principal investigator and supervising archaeologist for more than 1 year for the project, a cultural resources evaluation and data recovery program involving one historic and four prehistoric sites in Gaviota, Santa Barbara County. Duties consisted of direction of fieldwork and construction monitoring activities, planning and coordination with local Native American groups and Native American monitors, and supervision and participation in analysis and report preparation. [Prior to AECOM]

Chevron USA, Point Arguello Pipeline Studies, Santa Barbara County, CA

Archaeologist with responsibilities as field director and co-principal investigator for more than 3 years on this major cultural resources program that consisted of surveys of alternative pipeline routes, testing of sites to be impacted for National Register of Historic Places (NRHP) assessment, final data recovery on 34 NRHP-quality sites, monitoring of

construction activities, and planning and coordination with local Native American groups and Native American monitors. [Prior to AECOM]

San Diego Gas & Electric, Southwest Powerlink Transmission Line Corridor, Imperial County, CA

Field director for a major 2-year archaeological Data Recovery Program that included monitoring portions of 35 sites along a 27-mile-long transmission line corridor located in the Picacho Basin and East Mesa areas. Responsibilities included coordination and supervision of three crew chiefs and their field crews, a field laboratory director and laboratory crew, Bureau of Land Management agency personnel, and local Native American groups and Native American monitors. [Prior to AECOM]

US Department of the Navy, Pacific Missile Test Facilities, San Nicolas Island Cultural Resources Survey, Point Mugu, Ventura County, CA

Field archaeologist for the cultural resources survey. Involved field survey of the entire island and recordation of more than 350 previously recorded and/or newly discovered sites on the island. Participated in the preparation of Department of Parks and Recreation site forms. [Prior to AECOM]

Mission Viejo Land Development Company, Archaeological Studies, Mission Viejo, CA

Archaeologist/field director of archaeological surveys of 2,700-acre, 3,000-acre, and 7,000-acre development properties, and of a testing and data recovery program of prehistoric archaeological site CA-ORA-947 to be impacted by development. Directed field work and conducted the analysis and report preparation. [Prior to AECOM]

Cayman Development Company, Archaeological Data Recovery Program, Los Angeles County, CA

Archaeologist/field director of the test and salvage excavations of prehistoric archaeological sites CA-LAN-844 and CA-LAN-845, located on Palos Verdes Peninsula. Directed field work and conducted the analysis and report preparation. [Prior to AECOM]

Signal Landmark Properties, Land Development Archaeological Studies, Huntington Beach, CA

Archaeologist/field director of test, and co-field director of data recovery excavations of archaeological site CA-ORA-183. Directed field work, conducted analysis and report

preparation of the testing phase, and co-directed and participated in analysis and report preparation of the data recovery phase. [Prior to AECOM]

Professional Papers and Presentations

Cooley, T. 2013. Investigations at Archaeological Site CA-SDI-316 Relating to the San Dieguito and other Cultural Patterns at the C. W. Harris Site (CA-SDI-149). Paper presented at the Society for California Archaeology Meetings, Berkeley, California, March.

Cooley, T. 2008. Dating at the Spindrift Site Relative to Other La Jolla Sites and the Adjacent San Diego Coastal Area. Paper presented at the Society for California Archaeology Meetings, Burbank, California, March.

Cooley, T. 2006. Continuing Discoveries of the San Dieguito and Other Cultural Patterns In and Around the C.W. Harris Site (SDI-149). Paper presented at the Society for California Archaeology Meetings, Ventura, California, March.

Cooley, T., and L. Barrie. 2003. Archaeological Excavation at the Village of Pámu, Ramona Valley, California. Paper presented by the junior author at the Society for California Archaeology Meetings, Sacramento, California, March.

Cooley, T. 1998. Review of the Biface Reduction Technique Exhibited at a Southern California Quarry Site. Paper presented at the Society for California Archaeology Meetings, San Diego, California, March.

Cooley, T. 1997. Observations on Settlement and Subsistence During the La Jolla Complex-Pre Ceramic Interface as Evidenced at Site CA-SDI-11,767, Lower San Diego River Valley, San Diego County, California. Paper presented at the Society for California Archaeology Meetings, Rohnert Park, California, March.

Cooley, T. 1994. Results of a Data Recovery Program Conducted on a Portion of Stratified Prehistoric Site CA-SDI-9,243, San Diego County, California. Paper presented at the Society for California Archaeology Meetings, Ventura, California, March.

Cooley, T. 1991. Investigations at CA-SBa-2028. Paper presented at the Society for California Archaeology Meetings, Sacramento, California, March.

Cooley, T. 1991. Description and Analysis of Biface Artifacts Recently Excavated from the C. W. Harris Site Complex, San Diego County, California. Paper presented at the Society for California Archaeology Meetings, Sacramento, California, March.

Cooley, T. 1990. Preliminary Analysis and Description of Biface Artifacts Recently Excavated from the C. W. Harris Site Complex, San Diego County, California. Paper Presented at the Society for California Archaeology Southern California Data Sharing Meeting, Riverside, California, October.

Cooley, T. 1984. Diagnostic Artifacts and Temporal Considerations at Rancho San Clemente: A Preliminary Appraisal. Paper Presented at the Society for California Archaeology Southern California Data Sharing Meeting, Fullerton, California, October.

Cooley, T. 1984. Thermal Applications and Lithic Tool Manufacture and Use at LAN-844. Paper presented at the Society for California Archaeology Meetings, Asilomar, California, March.

Cooley, T. 1983. The Biface Reduction Technique Exhibited at a Southern California Quarry Site. Paper presented at the Southwestern Anthropological Society Meetings, San Diego, California, March.

Cooley, T. 1983. Project Results of the Picacho Basin Studies. Paper presented at the Society for California Archaeology Meetings, San Diego, California, March.

Publications

Archaeological Excavation at the Village of Pámu, Ramona Valley, California. (with Laura Barre). *Proceedings of the Society for California Archaeology*, Vol. 17, pp. 43–56 (2004).

Observations on Settlement and Subsistence During the Late La Jolla Complex–Pre Ceramic Interface as Evidenced at Site CA-SDI-11,767, Lower San Diego River Valley, San Diego County, California. *Proceedings of the Society for California Archaeology*, Vol. 11, pp. 1–6 (1998).

Early Period Results from Data Recovery Conducted on a Portion of Stratified Prehistoric Site, CA-SDI-9,243, San Diego County, California. *Proceedings of the Society for California Archaeology*, Vol. 8, pp. 227–238 (1995).

Observations on Hydration Measurements of Obsidian Deriving from Buried Deposits from Site CA-SBA-2028, at Gaviota, Santa Barbara County, California. *Coyote Press Archives of California Prehistory*, No. 37, pp. 27–30 (1992).

Archaeological Investigations at CA-SBA-97: A Multicomponent Coastal Site at Gaviota, California (with Jon M. Erlandson, Roy Dugger, and Richard Carrico). *Coyote Press Archives of California Prehistory*, No. 37, pp. 49–80 (1992).

Contributing Author. Archaeological Investigations on the Rancho San Clemente, Orange County, California. (Principal Author Constance Cameron). *Coyote Press Archives of California Prehistory*, No. 27 (1989).

A Fluted Projectile Point Fragment from the Southern California Coast: Chronology and Context at CA-SBa-1951 (with Jon M. Erlandson and Richard Carrico). *Journal of California and Great Basin Anthropology* Volume 9, Number 1, pp. 120–128 (1987).

Excavations and Investigations at CA-Ora-183, the Newland House Site, Huntington Beach, California (with Marie Cottrell, Constance Cameron, Vada Drummy-Chapel, and Adella Schroth). *Pacific Coast Archaeological Society Quarterly* Volume 21, Number 1, January, pp. 1–77 (1985).

The Biface Reduction Technique Exhibited at a Southern California Quarry Workshop Site: LAn-844. *Pacific Coast Archaeological Society Quarterly* Volume 20, Number 3, July pp. 5–17 (1984).

Investigations of CA-SCal-137 Bulrush Canyon, Catalina Island, California (with Marie G. Cottrell and Joyce M. Clevenger). *Pacific Coast Archaeological Society Quarterly* Volume 16, Numbers 1 and 2, January and April, pp. 5–25 (1980).

Stacey Jordan, PhD, RPA

Practice Leader, Cultural Resources Group

Principal

Education

PhD, Anthropology, Rutgers University, New Brunswick, NJ, 2000
 MPhil, Anthropology, Rutgers University, New Brunswick, NJ, 1995
 MA, Anthropology, Rutgers University, New Brunswick, NJ, 1994
 BA with High Distinction, Anthropology, University of California, Berkeley, 1991

Professional Affiliations

Member, Society for American Archaeology
 Member, Register of Professional Archaeologists

Certifications + Approvals

County of San Diego Approved Consultant List for Archaeological Resources
 County of San Diego Approved Consultant List for Historic Resources
 County of Riverside Approved Cultural Resources Consultant (No. 222)

Awards

2009 – San Diego Archaeological Center Excellence in Archaeology Award, Excellence in Cultural Heritage, Archaeological Data Recovery at CA-SDI-10,920 and Site Stabilization at Sites CA-SDI-586 and CA-SDI-10,920 Along the Southern Shore of Lake Hodges
 2008 – San Diego AEP Outstanding Environmental Resource Document Honorable Mention, Boulder Oaks Open Space Preserve
 2008 – Riverside County Planning Department, Certificate of Appreciation for the Cultural Resources Working Group
 2005 – California Preservation Foundation Preservation Design Award, CCDC Downtown San Diego African-American Heritage Study

Grants + Fellowships

2003, Wenner-Gren Foundation for Anthropological Research Individual Research Grant Team Member: "Analysis and Interpretation of Archaeological Residues from Excavations at the Castle of Good Hope, Cape, South Africa"
 1996–1997, Wenner-Gren Foundation for Anthropological Research, Predoctoral Research Grant #6021
 1994–1995, Wenner-Gren Foundation for Anthropological Research, Predoctoral Research Grant #5739
 1992–1996, Rutgers University Excellence Fellowship

Publications

Jordan, Stacey. 2002. Classification and Typologies. In: *Encyclopedia of Historical Archaeology*, Charles E. Orser, Jr. (ed.). Routledge. London.
 Jordan, Stacey, and Carmel Schrire. 2002. Material Culture and the Roots of Colonial Society at the South African Cape of Good Hope. In: *The Archaeology of Colonialism*, Claire Lyons and John Papadopoulos (eds.). Getty Research Institute. Los Angeles.
 Jordan, Stacey C. 2000. Coarse Earthenware at the Dutch Colonial Cape of Good Hope, South Africa: A History of Local Production and Typology of Products. *International Journal of Historical Archaeology*, Vol. 4, No. 2.
 Jordan, Stacey, Duncan Miller, and Carmel Schrire. 1999. Petrographic Characterization of Locally Produced Pottery from the Dutch Colonial Cape of Good Hope, South Africa. *Journal of Archaeological Science*, Vol. 26.

Stacey Jordan has been professionally involved in the fields of archaeology and history for more than 15 years. She has served as project director and principal investigator on numerous cultural resources management survey and inventory projects on both public and private land, and regularly works in coordination with project stakeholders; municipal historical resources boards; Native American tribal representatives; and local, state, and federal agencies such as county governments, the California Energy Commission, Bureau of Land Management, US Army Corps of Engineers, State Historic Preservation Office, and US Forest Service. Dr. Jordan has the knowledge of and experience with applicable regulatory frameworks and requirements to facilitate the successful and efficient completion of cultural resources services. Dr. Jordan's experience in utility and renewable energy permitting and compliance projects throughout Southern California has given her an understanding of appropriate ways of approaching resource preservation and impact mitigation within diverse utility project and regulatory contexts, including County of San Diego Cultural Resources Guidelines, CEQA, NEPA, and Section 106. Dr. Jordan was the recipient of the Excellence Fellowship at Rutgers University, as well as multiple research grants from the Wenner-Gren Foundation for Anthropological Research. She is the author of various publications and papers presented at national and international conferences. In addition, Dr. Jordan has served on a variety of prehistoric and historic excavations in the United States and abroad.

Project Experience

NextEra, Genesis Solar Energy Project, Blythe, CA

Project director and California Energy Commission Cultural Resources Specialist for ongoing cultural resources and biological compliance services for an approximately 2,000-acre solar power project on Bureau of Land Management land in the western Mojave Desert. Cultural resources support for this project includes extensive data management, multi-agency coordination, archaeological monitoring, supplemental surveys, and data recovery efforts. [06/2011 – Ongoing]

NextEra, McCoy Solar Energy Project, Blythe, CA

Project manager for ongoing cultural resources services, including Bureau of Land Management (BLM) Class III intensive pedestrian survey and resource documentation efforts for an approximately 5,000-acre solar power project on BLM land in the western Mojave Desert under a fast-track American Recovery & Reinvestment Act (ARRA) funding schedule. This project includes extensive records searches and data management, multi-agency coordination and consultation involving BLM and Riverside County, and an ongoing Native American contact and outreach program. [01/2011 – Ongoing]

NextEra, Blythe Solar Power Project, Blythe, CA

Project manager for cultural resources repermitting services, for an approximately 4,000-acre photovoltaic solar power project on BLM land in the western Mojave Desert. This effort includes data management, impact assessment, and development of a Petition to Amend for the California Energy Commission and Revised Plan of Development for the BLM. [12/2012 – Ongoing]

Solar Millennium, Blythe Solar Power Project, Blythe, CA

Project manager and California Energy Commission (CEC) Cultural Resources Specialist of ongoing Bureau of Land Management (BLM) Class III intensive pedestrian survey, resource documentation, and site evaluation and data recovery efforts for an approximately 7,000-acre solar power project on BLM land in the western Mojave Desert under a fast-track American Recovery & Reinvestment Act (ARRA) funding schedule. This project includes extensive records searches and data management, multi-agency coordination and consultation involving BLM and CEC, and an ongoing Native American contact and outreach program. [01/2009 – Ongoing]

Solar Millennium, Palen Solar Power Project, Palen, CA

Project manager of ongoing cultural resources services, including Bureau of Land Management (BLM) Class III intensive pedestrian survey, resource documentation, and site evaluation efforts, for an approximately 5,000-acre solar power project on BLM land in the western Mojave Desert under a fast-track American Recovery & Reinvestment Act (ARRA) funding schedule. This project includes extensive records searches and data management, multi-agency coordination and consultation involving BLM and the California Energy Commission, and an ongoing Native American contact and outreach program. [01/2009 – Ongoing]

Solar Millennium, Ridgecrest Solar Power Project, Ridgecrest, CA

Project manager of cultural resources services, including Bureau of Land Management (BLM) Class III intensive pedestrian survey and resource documentation efforts, for an approximately 2,000-acre solar power project on BLM land in the western Mojave Desert under a fast-track American Recovery & Reinvestment Act (ARRA) funding schedule. This project includes extensive records searches and data management, multi-agency coordination and consultation involving BLM and the California Energy Commission, and an ongoing Native American contact and outreach program. [01/2009 – 01/2011]

Southern California Edison, As-Needed Archaeological Services, CA

Senior Quality Control and Third-Party Reviewer for reporting documents related to on-call survey, resource identification, documentation, testing, and evaluation efforts related to Southern California Edison infrastructure replacements and development throughout California on both private and public lands, including Bureau of Land Management, US Army Corps of Engineers, and US Forest Service land. Project involves completion of State of California Department of Parks and Recreation forms, assessment of resource significance according to National Register of Historic Places eligibility and California Environmental Quality Act (CEQA) significance criteria, and management recommendations. [11/2011 – ongoing]

Bureau of Land Management, National Historic Trails Cultural and Visual Inventory, Multiple States

Cultural resources task manager for ongoing archival research and Phase I cultural resources inventories of National Historic Trails and trail-associated resources on Bureau of Land Management (BLM) lands in New Mexico,

Colorado, Utah, Arizona, California, Nevada, and Wyoming. Inventories include pedestrian survey for the identification of trail traces of the Old Spanish, El Camino Real de Tierra Adentro, California, Oregon, Mormon Pioneer, and Pony Express National Historic Trails; documentation of sites and features associated with the trails during their period of significance; and conditions assessments of observable trail traces. Results of the inventory will be combined with visual and cultural landscape analysis to support BLM's management and protection of high potential route segments and historic sites. [05/2010 – Ongoing]

San Diego Gas & Electric (SDG&E), On-Call Cultural Services, San Diego and Imperial Counties, CA

Director of on-call inventory, survey, monitoring, and reporting work as part of SDG E's infrastructure operations and maintenance activities on both private and public lands. Tasks include records searches, construction monitoring, archaeological survey and documentation, completion of State of California Department of Parks and Recreation (DPR) forms, and management recommendations. [01/2010 – Ongoing]

Southern California Edison, As-Needed Archaeological Services, CA

Director of on-call survey, resource identification, documentation, testing, and evaluation efforts related to Southern California Edison infrastructure replacements and development throughout California on both private and public lands, including Bureau of Land Management, US Army Corps of Engineers, and US Forest Service land. Project involves completion of State of California Department of Parks and Recreation forms, assessment of resource significance according to National Register of Historic Places eligibility and California Environmental Quality Act (CEQA) significance criteria, and management recommendations. [Prior to AECOM]

City of San Diego, City Planning and Community Investment As-Needed Archaeological Services, City of San Diego, CA

Project manager of ongoing cultural resources consulting services in support of community plan updates under the newly adopted City of San Diego General Plan. Services include records searches, Native American contact programs, background information syntheses, and assessments of archaeological potential as part of the community plan update Historic Preservation Elements. [07/2010 – Ongoing]

Naval Facilities Engineering Command (NAVFAC) Southwest, San Nicolas Island Archaeological Evaluations, Ventura County, CA

Project manager for archaeological evaluation of prehistoric sites CA-SNI-316, 361, and 550 on San Nicolas Island in the Channel Islands of the California Bight. This project involved the significance testing and analysis of Middle and Late Holocene sites and synthesis of results with existing island-wide archaeological data. [11/2008 – 08/2010]

NAVFAC Southwest, San Nicolas Island Wind Environmental Assessment Cultural Studies, Ventura County, CA

Cultural resources task manager for cultural resources inventory on San Nicolas Island in the Channel Islands of the California Bight. This project involved Phase I pedestrian surveys, resource documentation, Section 106 resource evaluation, findings of effect, and management recommendations in support of an Environmental Assessment for proposed wind energy development. [10/2009 – 09/2010]

County of San Diego Department of Parks and Recreation, Sage Hill Preserve Cultural Surveys, San Diego County, CA

Cultural resources task manager for Phase I pedestrian survey and cultural resource inventories of the Sage Hill Preserve in unincorporated northern San Diego County. This project involved the identification and documentation of prehistoric and historic resources, built environment features, and existing infrastructure to assist the Department of Parks and Recreation (DPR) in resource management through development of a Resource Management Plan, including Area Specific Management Directives. Extensive archival and background research, including a contact program with local historic societies, was conducted to develop a historical context for the property. Methods and results of the intensive pedestrian survey were reported in a County of San Diego format technical report, which included extensive cultural histories, a descriptive inventory of identified sites, and management guidelines for potentially significant cultural resources. All resources were documented on DPR 523 forms, and field work was conducted in coordination with a Native American monitor. [05/2009 – 02/2010]

San Diego County Water Authority, Emergency Storage Project Cultural Resources, Lake Hodges, San Diego County, CA

Senior archaeologist and report co-author for data recovery project at site CA-SDI-10,920 along Lake Hodges. The project involved integration of regional data to provide context for

the analysis of CA-SDI-10,920 and examination of the Late Prehistoric occupation of the San Dieguito River Valley around present-day Lake Hodges. [10/2008 – 03/2009]

National Park Service, Jefferson National Expansion Memorial Environmental Impact Study, St. Louis, MO

Co-author for prehistoric and historical archaeology background and impact analysis sections related to the proposed expansion of the Jefferson National Expansion Memorial (Gateway Arch) in St. Louis, Missouri, and East St. Louis, Illinois. [10/2008 – 12/2008]

California Department of Parks and Recreation, Old Town State Historic Park Jolly Boy Project, San Diego, CA

Contributor to the archaeological data recovery report for the Jolly Boy Saloon site in Old Town San Diego State Historic Park. Contributions to this project involve the synthesis of existing data on Old Town San Diego and development of an archaeological and historic context for the analysis and interpretation of recovered material. [10/2008 – 05/2009]

Energia Sierra Juarez, ESJ Gen-Tie Project, Imperial County, CA

Cultural resources task manager for cultural resources inventory for proposed electrical generation intertie facilities. This project involves Phase I pedestrian surveys, resource documentation and resource evaluation under CEQA and the County of San Diego Resource Protection Ordinance, and management recommendations. The work is being conducted according to the County of San Diego's Significance Guidelines and Report Content and Format Guidelines. [01/2009 – Ongoing]

California Department of Parks and Recreation, Ocotillo Wells SVRA General Plan & Environmental Impact Report Cultural Resources, Imperial County, CA

Led cultural resources analyses of Ocotillo Wells State Vehicular Recreation Area (SVRA). Involved the analysis of existing cultural resources conditions and recommendations for the treatment of cultural resources. [01/2010 – 11/2010]

County Department of Public Works, Bear Valley Parkway Cultural Resources Inventory and Assessment, San Diego County, CA

Task manager for the survey, documentation, and evaluation of archaeological and historical resources related to the expansion of Bear Valley Parkway in unincorporated San Diego County. Project conducted for the County

Department of Public Works according to County of San Diego guidelines. [03/2009 – 08/2009]

Metcalf & Eddy, Banning State Water Transmission Line, Riverside County, CA

Task manager for cultural resources sensitivity analysis for the construction of an approximately 2.4-mile-long pipeline within the rights-of-way of paved streets within the unincorporated area of the county. As part of this analysis, a records search of the Eastern Information Center was conducted to identify cultural resources studies and identified resources within a 1-mile radius of the proposed alignment. A sacred lands file search was also requested from the Native American Heritage Commission. [11/2008 – 01/2009]

California Department of Parks and Recreation, Heber Dunes SVRA General Plan & Environmental Impact Report, Imperial County, CA

Ongoing Cultural Resources Phase I Survey and Inventory of Heber Dunes State Vehicular Recreation Area (SVRA). Helped to perform analysis of existing cultural resources conditions, assessment of proposed facilities maintenance and development impacts, and recommendations for the treatment of cultural resources. [01/2009 – 05/2009]

Bureau of Land Management, Santa Rosa San Jacinto Mountains National Monument Trails Inventory, Riverside County, CA

As project director, directed cultural resources inventory of trail systems within the Santa Rosa San Jacinto Mountains National Monument, including documentation of prehistoric and historic routes and associated resources within trail corridors. Completed cultural resources inventory report for the Bureau of Land Management (BLM), including BLM-format GIS database. [Prior to AECOM]

City of San Diego, El Camino Real Bridge Historical Evaluation, City of San Diego, CA

Senior archaeologist and historian for a historical resources assessment of a bridge over the San Dieguito River in accordance with CEQA and City of San Diego significance guidelines. Conducted archival research on the bridge's construction history and alterations using historic photographs and original engineering drawings. [Prior to AECOM]

Tierra Environmental Services, El Camino Real Historic Properties Survey and Evaluation Reports, City of San Diego, CA

Senior archaeologist and historian for archival and archaeological investigations along a segment of El Camino Real. Prepared California Department of Transportation (Caltrans)-format Historic Properties Survey Report and Historic Resources Evaluation Report for a segment of the historic El Camino Real through the San Dieguito River Valley, as well as a turn-of-the-century bungalow and an early-20th century Craftsman residence. Conducted extensive research on the San Dieguito River Valley's land use and occupational history. [Prior to AECOM]

San Diego Gas & Electric, SWPL 500-kilovolt Line Studies, San Diego County, CA

Project director for Phase I pedestrian surveys, resource documentation, Section 106 resource evaluation, findings of effect and management recommendations in support of US Army Corps of Engineers wetland permitting associated with proposed jurisdictional water crossing improvement projects in southern San Diego County. [Prior to AECOM]

County of San Diego Department of Parks and Recreation, Boulder Oaks, Sycamore/Goodan, El Capitan/Oakosis/

El Monte/Steltzer Open Space Preserve and Regional Park Cultural Resources Inventories, San Diego County, CA
Project director for Phase I pedestrian survey and cultural resource inventories of open space preserves and regional parks in unincorporated central San Diego County. The projects involved the identification and documentation of prehistoric and historic resources, built environment features, and existing infrastructure to assist the Department of Parks and Recreation in resource management. Inventory reports included extensive archival research and historical narrative, an inventory of identified sites, and management guidelines for potentially significant cultural resources developed in consultation with Native Americans, where appropriate. [Prior to AECOM]

Caltrans, State Route 94 Operational Improvements Inventory and Evaluation, San Diego County, CA

Director of cultural resources efforts and California Department of Transportation (Caltrans) coordination for survey, documentation, and evaluation related to proposed operational improvements along an 18-mile-long stretch of State Route 94 in San Diego County. Development of Caltrans-format documentation for archaeological and built environment resources. [Prior to AECOM]

ESA, High Winds Wind Farm Project, Solano County, CA

Conducted archival and historical research on the settlement and development of southern Solano County. Evaluated nine historic resources and surrounding landscape significance according to CEQA criteria. Completed historical background and assessment report, photographically documented resources and landscape, and updated state Department of Parks and Recreation forms for previously identified resources. [Prior to AECOM]

US Fish and Wildlife Service, Hercules Gunpowder Point Historical Resources Evaluation, Chula Vista, CA

Project director for the historical evaluation of the Hercules Powder Company Gunpowder Point facility. Supervised archival and historical research, directed field survey and documentation efforts, and provided National Register eligibility evaluation for the site. [Prior to AECOM]

Centre City Development Corps, Downtown San Diego African-American Heritage Study, San Diego, CA

As senior historian, documented the development and growth of the African-American community in downtown San Diego through the 19th and 20th centuries. Archival information, oral histories, architectural evaluations, and recognition of potential archaeological sites were used to document the African-American community's economic, social, and political history in the downtown area, and to identify an African-American Thematic Historic District. [Prior to AECOM]

City of San Diego, Mannasse's Corral/Presidio Hills Golf Course, San Diego, CA

Directed and managed archaeological excavation and interpretation of historic refuse and features related to Old Town San Diego located within the city-owned Presidio Hills Golf Course property. Conducted analysis of excavated material, researched and interpreted site history and use, and assessed resource significance, broadening the understanding of Old Town's archaeological signature and historic lifeways. [Prior to AECOM]

California State Parks, Old Town San Diego State Historic Park Archaeological Excavations, San Diego, CA

Managed excavation and analysis of 19th-century deposits recovered from two locations within Old Town State Historic Park representing roadbed flood wash and tavern refuse. Oversaw ceramic and glass cataloguing, and conducted historical research and interpretation on specific site uses and depositional processes. Prepared California Department of Parks and Recreation forms, and assessed resource

significance according to National Register eligibility criteria. [Prior to AECOM]

City of El Centro, Cole Road and Dogwood Road Widening Projects, Imperial County, CA

Project management of field survey and documentation efforts related to the widening of Dogwood Road and Cole Road in unincorporated Imperial County. Produced CEQA and Caltrans-format documentation related to identified resources and proposed project impacts. [Prior to AECOM]

Blackwater West, Cultural Resources Phase I and Phase II Studies, Potrero, CA

Project director overseeing the survey of an approximately 850-acre area in eastern San Diego County and test excavation of identified prehistoric sites. Directed archaeological and built environment documentation, Extended Phase I testing, and Phase II testing efforts under the new County of San Diego Guidelines implemented September 2006. [Prior to AECOM]

Wakeland Housing and Development Corporation, Vine/Carter Hotel Historical Assessment, San Diego, CA

As project manager, conducted extensive archival research and historical assessment of the African-American-owned Vine/Carter Hotel building in San Diego's East Village. Conducted historical research on the building's ownership history and development; its historical uses, managers, and residents; and its place in San Diego's historical African-American community. Photographed and documented the building according to Office of Historic Preservation guidelines, prepared California Department of Parks and Recreation forms, and assessed the building's significance according to local, state, and federal significance criteria. As a result of the project, the Vine/Carter Hotel was nominated as a significant historical resource by the City of San Diego Historical Resources Board. [Prior to AECOM]

Alameda Corridor East Construction Authority, Mission San Gabriel Gardens Excavation, Jump Start Project, San Gabriel, CA

As project manager, conducted monitoring and excavation of Spanish colonial and American-era deposits associated with the construction of the original Mission San Gabriel and later 19th-century occupations. Documented the sites according to State Office of Historic Preservation guidelines, and assessed the resources according to National Register and CEQA significance criteria. [Prior to AECOM]

Wakeland Housing and Development Corporation, Lillian Grant Property Public Art Project, San Diego, CA

As project manager, provided historical research services and written text incorporated into the public art commissioned for the redevelopment of the historical Lillian Grant Property in the East Village of San Diego. The public art, located at 14th and J streets at the Lillian Place affordable housing complex, commemorates the histories, experiences, and contributions of African-Americans to the development of San Diego and the East Village area, in particular. [Prior to AECOM]

Wakeland Housing and Development Corporation, Lillian Grant Property Historic American Building Survey (HABS), San Diego, CA

As project manager, supervised the HABS of the Lillian Grant properties in the East Village community of San Diego, submitted to the City of San Diego. Oversaw archival-quality photographic documentation and architectural line and plan drawings, as well as completed required HABS historical narrative on the subject buildings. [Prior to AECOM]

Alameda Corridor East Construction Authority, San Gabriel Mission Trench Excavation, San Gabriel, CA

As senior archaeologist, conducted historical and archival research on the prehistory and history of the San Gabriel Mission and surrounding areas to assess potential impacts of a proposed below-grade railway trench. Compiled historical narrative, identified potential subsurface features, and recommended appropriate mitigation strategies. [Prior to AECOM]

Los Angeles Department of Parks and Recreation, Camp Seely National Register Evaluation, San Bernardino National Forest, San Bernardino County, CA

As senior historian, conducted National Register evaluation of the early 20th-century Camp Seely recreational camp facility leased by the City of Los Angeles in the San Bernardino National Forest. Conducted historical and archival research on the camp's history and development, its individual buildings, and its architects, including Sumner P. Hunt and Silas R. Burns. Photographed and documented the building according to Office of Historic Preservation guidelines, prepared state Department of Parks and Recreation forms, and assessed resource significance according to National Register eligibility criteria. [Prior to AECOM]

Los Angeles Department of Parks and Recreation, Camp Radford National Register Evaluation, San Bernardino National Forest, San Bernardino County, CA

As senior historian, conducted National Register evaluation of the early 20th-century Camp Radford recreational camp facility leased by the City of Los Angeles in the San Bernardino National Forest. Conducted historical and archival research on the camp's history and development, its individual buildings, and its architects, Sumner P. Hunt and Silas R. Burns. Photographed and documented the building according to Office of Historic Preservation guidelines, prepared state Department of Parks and Recreation forms, and assessed resource significance according to National Register eligibility criteria. [Prior to AECOM]

Papers and Presentations

The Development of Colonial Culture at the South African Cape of Good Hope: Examining the many "functions" of utilitarian ceramics. Presented at the Archaeology of Colonialism Symposium, Archaeological Institute of America Annual Meetings, January 2001.

Urban Archaeology and the Focus of Memory: A Study in the History and Narrative of South Central Los Angeles. Presented at the Society for American Archaeology Annual Meeting, March 2002.

Historical Archaeology as Anthropology: Artifacts, Identities, and Interpretations in the Study of the Recent Past. Presented at the World Archaeological Congress, January 2003.

Old Town Made New Again: The Archaeology of San Diego's First Settlement. Presented at the Society for California Archaeology Annual Meeting, April 2005.

Past as Present: Tourism and Archaeology in Old Town San Diego. Presented at the Society for Applied Anthropology Annual Meeting, April 2005.

The Face of Mercantilism at the South African Cape of Good Hope: Ceramics and the Hesitant Empire. Presented at the Society for Historical Archaeology Annual Meeting, January 2006.

A Patchwork History: Interweaving Archaeology, Narrative and Tourism in Old Town San Diego. Presented at the Society for American Archaeology Annual Meeting, March 2007.

Mannasse's Corral: The Life History of a Piece of Old Town. Presented to the San Diego Presidio Council, January 2008.

Making the Past Present: Archaeology, Heritage and Tourism in Old Town San Diego. Presented at the Society for California Archaeology Annual Meeting, April 2008.

Session organizer and presenter, *Paths of Inquiry: Perspectives on the Study and Management of Trails in the Western United States.* Society for American Archaeology Annual Meeting, March 2011.

Session organizer and presenter, *The ARRA-Funded Historic Trails Inventory Program.* Old Spanish Trail Association Annual Conference, June 2011.

CEQA and Historical Resources. Guest Lecturer, California Environmental Quality Act, UCSD Extension Course, 2008–2011, 2013.

Stephanie Jow

Senior Archaeologist

Education

MA, Anthropology, San Diego State University, 2009
BA, Physical Anthropology, University of California, Santa Barbara, 2004

Affiliations

Member, Society for California Archaeology
Member, Society for Applied Anthropology

Awards + Honors

Norton Allen Scholarship, San Diego State University Department of Anthropology, Fall 2009

Technical Papers & Presentations

Native American Monitor Training Forum, Society for California Archaeology, San Diego, 2012

Professional History

January 2009 – Present
Design + Planning at AECOM
Staff Archaeologist
Contact: Stacey Jordan, 619-233-1454
2007 – 2008
Collections Management Laboratory, San Diego State University
Education Outreach Coordinator
Contact: Lynn Gamble, 805-893-7341
2006 – 2007
Collections Management Laboratory, San Diego State University
Laboratory Technician
Contact: Lynn Gamble, 805-893-7341

Stephanie Jow has 7 years of archaeological and ethnographic experience in Southern California. Her experience includes archaeological testing, data recovery, survey, laboratory analyses, document research, and report production for private, city, county, state, and federal clients. She regularly works in coordination with project stakeholders; Native American tribal representatives; and various agencies such as county governments, the California Energy Commission, California Public Utility Company, Bureau of Land Management, US Army Corps of Engineers, US Fish and Wildlife Services, and the State Historic Preservation Office.

Ms. Jow has also contributed to social science projects for federal, state, and local clients. The resulting documents have included specialized technical studies on social and cultural issues, including community baseline reports, as well as more generalized socioeconomic analysis for NEPA- and CEQA-compliant documents.

Over the past four years, Ms. Jow has served as an archaeologist, cultural lead, field director, and/or project manager on several renewable energy permitting and compliance projects in the Mojave and Colorado Deserts. She also works closely with Southern California Native American groups to assist in project compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966.

Project Experience

Los Angeles Department of Water & Power, Beacon Photovoltaic Project, Kern County, CA

Cultural Resources Specialist for environmental compliance services for the Beacon Photovoltaic Project. Duties include the preparation and implementation of a Worker Environmental Awareness Program and Cultural Resources Monitoring and Mitigation Plan, management and oversight of archaeological and Native American monitors during construction activities for LADWP's joint facilities, and the preparation of a final monitoring report. The project also

includes the evaluation and treatment of inadvertent discoveries when identified in the field. [09/2013 – Ongoing]

RE Barren Ridge 1 LLC, RE Cinco Project, Kern County, CA

Cultural Resource Specialist for the archaeological survey of the proposed RE Cinco solar facility and associated gen-tie transmission line. Duties include the recordation of historic and prehistoric archaeological sites, and the preparation of cultural resources Class I and Class III level reports. Duties also include coordination with the U.S. Fish and Wildlife Service, Bureau of Land Management, and local Native American Tribes; as well as client interaction and consultation. [11/2013 – Ongoing]

San Diego Gas & Electric Company, Salt Creek Substation, San Diego County, CA

Cultural Lead for the cultural resources investigations and environmental compliance services for the proposed Salt Creek substation and associated gen-ties lines. Duties include responding to CPUC PEA comments and data requests, the development and preparation of a Cultural Resources Monitoring and Mitigation Plan, and management and oversight of archaeological monitors during construction phase. [11/2013 – On-going]

NAVFAC Southwest and MCB Camp Pendleton, Public Outreach Program, MCB Camp Pendleton, San Diego County, CA

Project Manager for the development of a public outreach plan as part of the cultural resources program on MCB Camp Pendleton. The project includes the production of cultural resources themed posters, brochures, and a web page, as well as consultation with public interest groups and local Native American groups. [09/2012 – Ongoing]

City of San Diego, City Planning and Community Investment Department, As-Needed Archaeological Services, San Diego, CA

Project manager for archaeological studies to supplement city community plan updates for six communities throughout San Diego County. Duties include record and archival research, Native American consultation efforts, and the production of six individual studies. [08/2010 – Ongoing]

Abengoa Solar, Mojave Solar Power Plant Project, San Bernardino County, CA

Project Manager/Cultural Resource Specialist/Field Director for various project-related tasks. Field director for the archaeological survey of the Lockhart Substation Connection and Communication Facilities portion that included the recordation of historic and prehistoric archaeological sites, and contributions to the preparation of a cultural resources Class III report. Project Manager and Cultural Resource

Specialist for the compliance phase during the construction of the 250 mega-watt solar facility. Duties included overseeing Cultural Resources and Native American Monitors, coordination with the California Energy Commission, Bureau of Land Management Barstow Field Office, and local Native American Tribes; client interaction and consultation; and preparing various compliance reports. The project also included the identification, evaluation, and treatment of unanticipated discoveries encountered during construction monitoring. [09/2010 – 05/2013]

California High-Speed Rail Authority, Merced to Fresno High-Speed Train System Environmental Impact Report/ Environmental Impact Statement, Central Valley, CA

Assistant field director for the archaeological survey of the Merced to Fresno section of the proposed high-speed train. Duties include coordination of pre-field logistics, organization of field data, and assisting with the management of field efforts. Additional duties include architectural survey support, archival research, and report contributions. [01/2011 – 04/2013]

City of Escondido, Regional General Applications Project, Phase II, Escondido, CA.

Cultural Lead for the cultural resources investigations in support of a Programmatic Agreement to conduct routine maintenance activities for City channels, basins, inlets and outlets. The project included a record search, an archaeological survey of 27 channels/basins/inlets/outlets, and the completion of an Archaeological Survey Report. [08/2012 – 09/2012]

Naval Engineering Facilities Command NAVFAC Southwest and Marine Corps Base (MCB) Camp Pendleton, Basewide Water Infrastructure Project, MCB Camp Pendleton, San Diego County, CA

Section 106 consultant for the basewide water infrastructure improvements on MCB Camp Pendleton. Duties include Native American consultation support with local Juaneño and Luiseño Native American tribes. [03/2011 – 09/2012]

NAVFAC Southwest and Marine Corps Air Station MCAS) Yuma, Chocolate Mountains Aerial Gunnery Range, Imperial and Riverside Counties, CA

Archaeologist for the survey of a supplemental magazine and a National Register Evaluation of a prehistoric trail. Additional duties included the coordination of the Native American consultation program and Native American monitor, and contributing to the evaluation report. [2010]

NAVFAC Southwest and MCB Camp Pendleton, Basewide Utilities Infrastructure Project, MCB Camp Pendleton, San Diego County, CA

Section 106 consultant/archaeologist/lab technician for basewide utilities infrastructure improvements. Duties included survey and testing of more than 50 archaeological sites, laboratory analysis and cataloging of project artifacts, and report contributions. Additional duties included seven months of Section 106 Native American consultation work with local Juaneño and Luiseño Native American tribes. [09/2009 – 07/2010]

Archaeologist for the P-1043 excavation, testing and evaluation of site CA-SDI-1313/14791, as part of the basewide utility infrastructure project. [06/2013]

NAVFAC Southwest and MCB Camp Pendleton, Grow the Force Permanent Bed-down Facilities Project, MCB Camp Pendleton, San Diego County, CA

Section 106 consultant/archaeologist/lab technician. Duties included survey and testing of several archaeological sites, laboratory analysis and cataloging of project artifacts, and report contributions. Additional duties included 7 months of Section 106 Native American consultation work with local Juaneño and Luiseño Native American tribes. [09/2009 – 07/2010]

Vanasse Hangen Brustlin, Southern Nevada Supplemental Airport EIS DO 5, Jean, NV

Assistant Project Manager/Field Crew Chief for a cultural resources evaluation of a proposed airport. Duties included leading a crew for the survey and recordation of approximately 230 prehistoric and historic archaeological sites in the Ivanpah Valley region of southern Nevada. Additional duties included contributing to the authorship of a Class III evaluation report. [09/2009 – 11/2010]

Solar Millennium, Blythe Solar Power Project, Riverside County, CA

Archaeologist for a proposed 7,000-acre solar project under review by the BLM and CEC. The project included an archaeological survey of the project site and buffer zones, the recordation of historic and prehistoric archaeological sites, and the preparation of several cultural resources survey, evaluation, and data recovery reports. Duties included field surveys, site recordation, data recovery, and contributions to the various technical reports. [March 2010-December 2011]

City of Fullerton, Engineering Department, Raymond Avenue Grade Separation Project, Orange County, CA

Cultural Lead for a cultural resources evaluation of a proposed grade separation project. Duties included record and archival research, archaeological survey, and consultation with local historic societies and Native American groups. Additional duties included the co- authorship of an evaluation report. [06/2009 – 01/2010]

NAVFAC Southwest and MCB Camp Pendleton, Piedra de Lumbres (PDL) Quarry Evaluation Project, MCB Camp Pendleton, San Diego County, CA

Lab technician for the evaluation of the prehistoric Piedra de Lumbre chert quarry site (CA-SDI-10,008/10,708) on MCB Camp Pendleton. Duties included analysis and cataloging of project artifacts. [2009]

NAVFAC Southwest and MCB Camp Pendleton, Tertiary Treatment Plant Project, MCB Camp Pendleton, San Diego County, CA

Lab technician for the evaluation of the prehistoric site CA-SDI-14,170 and testing of four additional previously identified prehistoric sites and two discovery sites for a reclaimed water pipeline. Duties included analysis and cataloging of project artifacts. [2009]

California Department of Transportation (Caltrans), State Route 76 Mission to Interstate 15 CEQA and NEPA Studies, San Diego, CA

Archaeologist and lab technician for a cultural resources study of two proposed alternatives for the expansion of State Route 76. Duties included archaeological testing of various sites within the project area and the analysis and cataloging of project artifacts. [2009]

Los Angeles Department of Water & Power (LADWP)/County of Imperial, Niland Solar Cultural Resources Evaluation, Niland, CA

Archaeologist for cultural resources evaluation of approximately 1,000 acres. Duties included archaeological surveys of the project area. [2009]

San Diego Department of Parks & Recreation, Jolly Boy, Old Town San Diego State Historic Park, San Diego, CA

Lab technician for the data management of the renovations to an existing building on the site of the former Aguilar Serrano adobe in Old Town San Diego. Duties included analysis and cataloging of project artifacts. [2009]

NAVFAC Southwest, Chocolate Mountain Aerial Gunnery Range (CMAGR) Cultural Affiliation Studies, Riverside and Imperial Counties, CA

Native American consultant for a Cultural Affiliation Study in the Chocolate Mountain Aerial Gunnery Range. Duties included Native American consultation associated with various local tribes. [2009]

Bureau of Land Management, CalNev Environmental Impact Statement (EIS), CA and NV

Socioeconomic analyst for an EIS related to a proposed natural gas pipeline. The project involves the construction,

operation, and maintenance of 233 miles of new 16-inch-diameter pipeline from Colton, California, to Las Vegas, Nevada. Duties included providing demographic and socioeconomic research for the EIS. [2009]

**NAVFAC Southwest, Naval Air Station (NAS) Alameda
Environmental Assessment, Alameda, CA**

Socioeconomic analyst for an EIS related to a proposed housing disposal and reuse plan. The proposed project would involve additional disposal and reuse of the approximately 42 acres (15 hectares) within the North Housing Area. Duties included collecting demographic and socioeconomic research for the EIS. [2009]

APPENDIX B

RECORDS SEARCH RESULTS

(CONFIDENTIAL – Separately Bound)

APPENDIX C

NATIVE AMERICAN CONTACT PROGRAM

NAHC CONTACT PROGRAM

Jow, Stephanie

From: Jow, Stephanie
Sent: Tuesday, January 07, 2014 8:56 AM
To: Dave Singleton (ds_nahc@pacbell.net)
Cc: Wilson, Stacie
Subject: Barren Ridge Solar Project
Attachments: RE_Barren_Ridge_RecordsSearchMap.pdf

Mr. Singleton,

We are contacting you to request a sacred lands file check for the Barren Ridge Solar Project. The project area is located in unincorporated Kern County, approximately 6.5 miles from the community of California City. Attached is a map showing the project area including a 1-mile buffer on the following quadrangles:

Mojave NE	T31S R36E	Sections 12, 13, 14, 23, 24, 25, 26, 35, 36
	T31S R36 ½ E	Sections 12, 13, 24, 25, 36
	T31S R37 E	Sections 7, 8, 17, 18, 19, 20, 29, 30, 31
Cinco	T31S R36E	Sections 12
	T31S R36 1/2E	Sections 12
	T31S R37E	Sections 7

Please let me know if you have any questions.

Thanks so much,
Stephanie

Stephanie Jow, M.A.

Archaeologist
Design + Planning
D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

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NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916) 373-3715
Fax (916) 373-5471
Web Site www.nahc.ca.gov
De_nahc@pacbell.net



January 9, 2014

Ms. Stephanie Jow, M.A., Archaeologist

AECOM

1420 Kettner Boulevard, Suite 500
San Diego, CA 92101

Sent by FAX to: 619-233-0952
No. of Pages: 4

RE: Sacred Lands File Search and Native American Contacts list for the
"Renewable Energy Barren Ridge Solar Project;" located in the north
Antelope Valley, in the Mojave area; Kern County, California.

Dear Ms. Jow:

A record search of the NAHC Sacred Lands File failed to indicate the presence of Native American traditional cultural places in the project site(s) submitted as defined by the USGS coordinates configuring the 'Area of Potential Effect' or APE. However, there are Native American cultural resources south of the APE, considered culturally sensitive by local Native American tribes. Furthermore, the absence of archaeological or other cultural resources does not preclude their existence at the subsurface level.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the Court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources impacted by proposed projects, including archaeological places of religious significance to Native Americans, and to Native American burial sites.

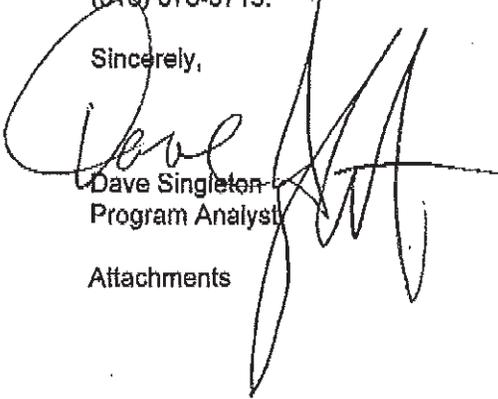
Attached is a list of Native American tribes, Native American individuals or organizations that may have knowledge of cultural resources in or near the project area (APE). As part of the consultation process the NAHC recommends that local government and project developers contact the tribal governments and individuals in order to determine the proposed action on any cultural places/sacred sites. If a response from those listed is not received in two weeks of notification, the NAHC requests that a follow-up telephone call be made to ensure the project information has been received.

California Government Code Section 65040.12(e) defines "environmental justice" to provide "fair treatment of People...with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies" and Executive Order B-10-11 requires consultation with Native American tribes their elected officials and other representatives of tribal governments to provide meaningful input into

the development of legislation, regulations, rules, and policies on matters that may affect tribal communities.

If you have any questions or need additional information, please contact me at (916) 373-3715.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dave Singleton', written over the printed name.

Dave Singleton
Program Analyst

Attachments

Native American Contacts
Kern County California
January 9, 2014

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589 Yokuts
Porterville , CA 93258
chairman@tulerivertribe-nsn.
(559) 781-4271
(559) 781-4610 FAX

Kawailisu Tribe of Tejon Reservation
David Laughinghorse Robinson
PO Box 1547 Kawailisu
Kernville , CA 93238

horse.robinson@gmail.com

Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez, Chairperson
115 Radio Street Yowlumne
Bakersfield , CA 93305 Kitanemuk
deedominguez@juno.com
(626) 339-6785

Kern Valley Indian Council
Julie Turner, Secretary
P.O. Box 1010 Southern Paiute
Lake Isabella, CA 93240 Kawailisu
(661) 366-0497 Tubatulabal
(661) 340-0032 - cell Koso
Yokuts

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838 Fernandefio
Newhall , CA 91322 Tataviam
tsen2u@hotmail.com Serrano
(661) 753-9833 Office Vanyume
(760) 885-0955 Cell Kitanemuk
(760) 949-1604 Fax

San Manuel Band of Mission Indians
Daniel McCarthy, M.S., Director-CRM Dept.
26569 Community Center Drive Serrano
Highland , CA 92346
(909) 864-8933, Ext 3248
dmccarthy@sanmanuel-nsn.
gov
(909) 862-5152 Fax

Tejon Indian Tribe
Katherine Montes Morgan, Chairperson
1731 Hasti-acres Drive, Yowlumne
Suite 108 , Kitanemuk
Bakersfield, CA 93309 Kawailisu
661-758-2303
kmorgan@bak.rr.com
661-215-6530 - FAX

Kern Valley Indian Council
Robert Robinson, Co-Chairperson
P.O. Box 401 Tubatulabal
Weldon , CA 93283 Kawailisu
brobinson@lwvlsp.com Koso
(760) 378-4575 (Home) Yokuts
(760) 549-2131 (Work)

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 5097.95 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Barren Ridge Solar Project of the Los Angeles Department of Water & Power (LADWP); located in the Mojave area of Eastern Kern County, California for which a Sacred Lands file search and Native American Contacts list were requested.

**Native American Contacts
Kern County California
January 9, 2014**

Tubatulabals of Kern Valley
Robert L. Gomez, Jr., Tribal Chairperson
P.O. Box 226 Tubatulabal
Lake Isabella, CA 93240
(760) 379-4590
(760) 379-4592 FAX

Tule River Indian Tribe
Kerri Vera, Environmental Department
P.O. Box 589 Yokuts
Porterville, CA 93258
(559) 783-8892

Tule River Indian Tribe
Joey Garfield, Tribal Archeological
P.O. Box 589 Yokuts
Porterville, CA 93258
(559) 783-8892

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 5097.99 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Barrén Ridge Solar Project of the Los Angeles Department of Water & Power (LADWP) located in the Mojave area of Eastern Kern County, California for which a Sacred Lands file search and Native American Contacts list were requested.

**Barren Ridge Project
Native American Contact Program Communications Log**

Affiliation	Name/Title	Date of Contact	Discussion
Native American Heritage Commission (NAHC)		1/7/2014	Request letter sent.
		1/9/2014	Received results of Sacred Lands search and Native American contact list
Tule River Indian Tribe	Neil Peyron, Chairperson	1/14/2014	Initial letter sent.
		1/20/2014	Follow-up phone call. No one answered so sent follow-up email.
Kawaiisu Tribe of Tejon Reservation	David Laughinghorse Robinson	1/14/2014	Initial letter sent.
		1/20/2014	Phone number not provided by NAHC. Sent email follow-up.
Kitanemuk & Yowlumne Tejon Indians	Delia Dominguez, Chairperson	1/14/2014	Initial letter sent.
		1/20/2014	Follow-up phone call, left message.
Kern Valley Indian Council	Julie Turner, Secretary	1/14/2014	Initial letter sent.
		1/20/2014	Follow-up phone call, left message.
San Fernando Band of Mission Indians	John Valenzuela, Chairperson	1/14/2014	Initial letter sent.
		1/20/2014	Follow-up phone call. Mr. Valenzuela confirmed receipt of letter but has nothing to share with AECOM at this time. Interested in participating in monitoring when construction begins.
San Manuel Band of Mission Indians	Daniel McCarthy, Director-CRM Dept	1/14/2014	Initial letter sent.
		1/20/2014	Follow-up phone call, left message.
	Ann Brierty, Cultural Resources Field Manager	1/21/2014	Ms. Brierty called back indicating that the cultural department will discuss this project and provide information on the cultural resources in the area ASAP. In general, the tribe encourages Native American participation in early stages of

projects.

Tejon Indian Tribe	Katherine Montes Morgan, Chairperson	1/14/2014 1/20/2014	Initial letter sent. Follow-up phone call, left a message.
Kern Valley Indian Council	Robert Robinson, Co-Chairperson	1/14/2014 1/20/2014 1/22/2014	Initial letter sent. Follow-up phone call, left message. Mr. Robinson called back and indicated that the area contains prehistoric resources, especially near the base of the mountain. He said historic resources are also present. Historic sites, roads, structures associated with the railroad, and the development of California City in the 1950's. He encourages Native American participation at the survey level, because Native perspective is helpful in identifying cultural resources. Lastly, he is interested in participating in consultation efforts and requested agency contacts.
Tubatulabals of Kern Valley	Robert L Gomez, Jr., Tribal Chairperson	1/14/2014 1/20/2014	Initial letter sent. Follow-up phone call. Representative said the project was not in the recognized boundary of her group and deferred comment to closer tribes
Tule River Indian Tribe	Kerri Vera, Environmental Department	1/14/2014 1/20/2014	Initial letter sent. Follow-up phone call, left message.
Tule River Indian Tribe	Joey Garfield, Tribal Archaeological Monitor	1/14/2014	Initial letter sent. Follow-up phone call, left message.

January 15, 2014

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589
Porterville, CA 93258

Mr. Peyron,

AECOM has been contracted by RE Barren Ridge I, LLC to conduct cultural resources studies for the Barren Ridge Solar Project (Project), located in unincorporated southeastern Kern County, approximately 6.5 miles northwest of the community of California City, and approximately 12 miles northeast of the community of Mojave, (see attached map). The proposed project includes the installation of a 74-megawatt independent solar photovoltaic (PV) power-generating facility with the following components: (1) a solar field of PV panels mounted on steel and aluminum structures, (2) an electrical collection system that aggregates the output from the PV panels and converts the electricity from direct current to alternating current via inverters, (3) a substation where the electrical output is combined and its voltage is increased by transformers, (4) a generation tie-line that interconnects to the Barren Ridge (LADWP) Substation, and (5) internal infrastructure such as roads and fences.

The purpose of this letter is to inform you of the project and solicit your input. Although a record search of the NAHC Sacred Lands Files failed to indicate the presence of Native American traditional cultural places within the Project area, the NAHC indicated that you may have unique knowledge of resources in the area. If you have knowledge of a traditional cultural place or site that may be affected by the Project, please let me know so that I may include your input in the cultural resources technical report.

Please note that the Section 106 process is a separate effort, and the lead federal agency will contact appropriate tribes directly if they have not already done so. Providing comments now does not limit your ability to comment at a later time.

Yours sincerely,



Stephanie Jow
Archaeologist
stephanie.jow@aecom.com

Enclosures: Map
Stamped reply envelope



AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

January 15, 2014

Kawaiisu Tribe of Tejon Reservation
David Laughinghorse Robinson
PO Box 1547
Kernville, CA 93238

Mr. Laughinghorse Robinson,

AECOM has been contracted by RE Barren Ridge I, LLC to conduct cultural resources studies for the Barren Ridge Solar Project (Project), located in unincorporated southeastern Kern County, approximately 6.5 miles northwest of the community of California City, and approximately 12 miles northeast of the community of Mojave, (see attached map). The proposed project includes the installation of a 74-megawatt independent solar photovoltaic (PV) power-generating facility with the following components: (1) a solar field of PV panels mounted on steel and aluminum structures, (2) an electrical collection system that aggregates the output from the PV panels and converts the electricity from direct current to alternating current via inverters, (3) a substation where the electrical output is combined and its voltage is increased by transformers, (4) a generation tie-line that interconnects to the Barren Ridge (LADWP) Substation, and (5) internal infrastructure such as roads and fences.

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Archaeologist

stephanie.jow@aecom.com

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January 15, 2014

Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez, Chairperson
115 Radio Street
Bakersfield, CA 93305

Ms. Dominguez,

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Stephanie Jow
Archaeologist

stephanie.jow@aecom.com

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1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

January 15, 2014

Kern Valley Indian Council
Julie Turner, Secretary
P.O. Box 1010
Lake Isabella, CA 93240

Ms. Turner,

AECOM has been contracted by RE Barren Ridge I, LLC to conduct cultural resources studies for the Barren Ridge Solar Project (Project), located in unincorporated southeastern Kern County, approximately 6.5 miles northwest of the community of California City, and approximately 12 miles northeast of the community of Mojave, (see attached map). The proposed project includes the installation of a 74-megawatt independent solar photovoltaic (PV) power-generating facility with the following components: (1) a solar field of PV panels mounted on steel and aluminum structures, (2) an electrical collection system that aggregates the output from the PV panels and converts the electricity from direct current to alternating current via inverters, (3) a substation where the electrical output is combined and its voltage is increased by transformers, (4) a generation tie-line that interconnects to the Barren Ridge (LADWP) Substation, and (5) internal infrastructure such as roads and fences.

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Archaeologist
stephanie.jow@aecom.com

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1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

January 15, 2014

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838
Newhall, CA 91322

Mr. Valenzuela,

AECOM has been contracted by RE Barren Ridge I, LLC to conduct cultural resources studies for the Barren Ridge Solar Project (Project), located in unincorporated southeastern Kern County, approximately 6.5 miles northwest of the community of California City, and approximately 12 miles northeast of the community of Mojave, (see attached map). The proposed project includes the installation of a 74-megawatt independent solar photovoltaic (PV) power-generating facility with the following components: (1) a solar field of PV panels mounted on steel and aluminum structures, (2) an electrical collection system that aggregates the output from the PV panels and converts the electricity from direct current to alternating current via inverters, (3) a substation where the electrical output is combined and its voltage is increased by transformers, (4) a generation tie-line that interconnects to the Barren Ridge (LADWP) Substation, and (5) internal infrastructure such as roads and fences.

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Stephanie Jow
Archaeologist
stephanie.jow@aecom.com

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January 15, 2014

San Manuel Band of Mission Indians
Daniel McCarthy, M.S .., Director-CRM Dept.
26569 Community Center Drive
Highland, CA 92346

Mr. McCarthy,

AECOM has been contracted by RE Barren Ridge I, LLC to conduct cultural resources studies for the Barren Ridge Solar Project (Project), located in unincorporated southeastern Kern County, approximately 6.5 miles northwest of the community of California City, and approximately 12 miles northeast of the community of Mojave, (see attached map). The proposed project includes the installation of a 74-megawatt independent solar photovoltaic (PV) power-generating facility with the following components: (1) a solar field of PV panels mounted on steel and aluminum structures, (2) an electrical collection system that aggregates the output from the PV panels and converts the electricity from direct current to alternating current via inverters, (3) a substation where the electrical output is combined and its voltage is increased by transformers, (4) a generation tie-line that interconnects to the Barren Ridge (LADWP) Substation, and (5) internal infrastructure such as roads and fences.

The purpose of this letter is to inform you of the project and solicit your input. Although a record search of the NAHC Sacred Lands Files failed to indicate the presence of Native American traditional cultural places within the Project area, the NAHC indicated that you may have unique knowledge of resources in the area. If you have knowledge of a traditional cultural place or site that may be affected by the Project, please let me know so that I may include your input in the cultural resources technical report.

Please note that the Section 106 process is a separate effort, and the lead federal agency will contact appropriate tribes directly if they have not already done so. Providing comments now does not limit your ability to comment at a later time.

Yours sincerely,



Stephanie Jow
Archaeologist

stephanie.jow@aecom.com

Enclosures: Map
Stamped reply envelope

January 15, 2014

Tejon Indian Tribe
Katherine Montes Morgan, Chairperson
1731 Hasti-acres Drive, Suite 108
Bakersfield,, CA 93309

Ms. Montes Morgan,

AECOM has been contracted by RE Barren Ridge I, LLC to conduct cultural resources studies for the Barren Ridge Solar Project (Project), located in unincorporated southeastern Kern County, approximately 6.5 miles northwest of the community of California City, and approximately 12 miles northeast of the community of Mojave, (see attached map). The proposed project includes the installation of a 74-megawatt independent solar photovoltaic (PV) power-generating facility with the following components: (1) a solar field of PV panels mounted on steel and aluminum structures, (2) an electrical collection system that aggregates the output from the PV panels and converts the electricity from direct current to alternating current via inverters, (3) a substation where the electrical output is combined and its voltage is increased by transformers, (4) a generation tie-line that interconnects to the Barren Ridge (LADWP) Substation, and (5) internal infrastructure such as roads and fences.

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Yours sincerely,



Stephanie Jow
Archaeologist

stephanie.jow@aecom.com

Enclosures: Map
Stamped reply envelope



AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

January 15, 2014

Kern Valley Indian Council
Robert Robinson, Co-Chairperson
P.O. Box 401
Weldon, CA 93283

Mr. Robinson,

AECOM has been contracted by RE Barren Ridge I, LLC to conduct cultural resources studies for the Barren Ridge Solar Project (Project), located in unincorporated southeastern Kern County, approximately 6.5 miles northwest of the community of California City, and approximately 12 miles northeast of the community of Mojave, (see attached map). The proposed project includes the installation of a 74-megawatt independent solar photovoltaic (PV) power-generating facility with the following components: (1) a solar field of PV panels mounted on steel and aluminum structures, (2) an electrical collection system that aggregates the output from the PV panels and converts the electricity from direct current to alternating current via inverters, (3) a substation where the electrical output is combined and its voltage is increased by transformers, (4) a generation tie-line that interconnects to the Barren Ridge (LADWP) Substation, and (5) internal infrastructure such as roads and fences.

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Yours sincerely,

Stephanie Jow
Archaeologist
stephanie.jow@aecom.com

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619.233.1454 tel
619.233.0952 fax

January 15, 2014

Tubatulabals of Kern Valley
Robert L Gomez, Jr., Tribal Chairperson
P.O. Box 226
Lake Isabella, CA 93240

Mr. Gomez,

AECOM has been contracted by RE Barren Ridge I, LLC to conduct cultural resources studies for the Barren Ridge Solar Project (Project), located in unincorporated southeastern Kern County, approximately 6.5 miles northwest of the community of California City, and approximately 12 miles northeast of the community of Mojave, (see attached map). The proposed project includes the installation of a 74-megawatt independent solar photovoltaic (PV) power-generating facility with the following components: (1) a solar field of PV panels mounted on steel and aluminum structures, (2) an electrical collection system that aggregates the output from the PV panels and converts the electricity from direct current to alternating current via inverters, (3) a substation where the electrical output is combined and its voltage is increased by transformers, (4) a generation tie-line that interconnects to the Barren Ridge (LADWP) Substation, and (5) internal infrastructure such as roads and fences.

The purpose of this letter is to inform you of the project and solicit your input. Although a record search of the NAHC Sacred Lands Files failed to indicate the presence of Native American traditional cultural places within the Project area, the NAHC indicated that you may have unique knowledge of resources in the area. If you have knowledge of a traditional cultural place or site that may be affected by the Project, please let me know so that I may include your input in the cultural resources technical report.

Please note that the Section 106 process is a separate effort, and the lead federal agency will contact appropriate tribes directly if they have not already done so. Providing comments now does not limit your ability to comment at a later time.

Yours sincerely,

Stephanie Jow
Archaeologist

stephanie.jow@aecom.com

Enclosures: Map
Stamped reply envelope



AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

January 15, 2014

Tule River Indian Tribe
Kerri Vera, Environmental Department
P.O. Box 589
Porterville, CA 93258

Ms. Vera,

AECOM has been contracted by RE Barren Ridge I, LLC to conduct cultural resources studies for the Barren Ridge Solar Project (Project), located in unincorporated southeastern Kern County, approximately 6.5 miles northwest of the community of California City, and approximately 12 miles northeast of the community of Mojave, (see attached map). The proposed project includes the installation of a 74-megawatt independent solar photovoltaic (PV) power-generating facility with the following components: (1) a solar field of PV panels mounted on steel and aluminum structures, (2) an electrical collection system that aggregates the output from the PV panels and converts the electricity from direct current to alternating current via inverters, (3) a substation where the electrical output is combined and its voltage is increased by transformers, (4) a generation tie-line that interconnects to the Barren Ridge (LADWP) Substation, and (5) internal infrastructure such as roads and fences.

The purpose of this letter is to inform you of the project and solicit your input. Although a record search of the NAHC Sacred Lands Files failed to indicate the presence of Native American traditional cultural places within the Project area, the NAHC indicated that you may have unique knowledge of resources in the area. If you have knowledge of a traditional cultural place or site that may be affected by the Project, please let me know so that I may include your input in the cultural resources technical report.

Please note that the Section 106 process is a separate effort, and the lead federal agency will contact appropriate tribes directly if they have not already done so. Providing comments now does not limit your ability to comment at a later time.

Yours sincerely,

Stephanie Jow
Archaeologist
stephanie.jow@aecom.com

Enclosures: Map
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AECOM
1420 Kettner Boulevard
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San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

January 15, 2014

Tule River Indian Tribe
Joey Garfield, Tribal Archaeological Monitor
P.O. Box 589
Porterville, CA 93258

Mr. Garfield,

AECOM has been contracted by RE Barren Ridge I, LLC to conduct cultural resources studies for the Barren Ridge Solar Project (Project), located in unincorporated southeastern Kern County, approximately 6.5 miles northwest of the community of California City, and approximately 12 miles northeast of the community of Mojave, (see attached map). The proposed project includes the installation of a 74-megawatt independent solar photovoltaic (PV) power-generating facility with the following components: (1) a solar field of PV panels mounted on steel and aluminum structures, (2) an electrical collection system that aggregates the output from the PV panels and converts the electricity from direct current to alternating current via inverters, (3) a substation where the electrical output is combined and its voltage is increased by transformers, (4) a generation tie-line that interconnects to the Barren Ridge (LADWP) Substation, and (5) internal infrastructure such as roads and fences.

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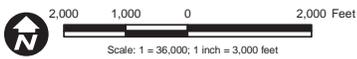
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Yours sincerely,

Stephanie Jow
Archaeologist

stephanie.jow@aecom.com

Enclosures: Map
Stamped reply envelope



CONTACT PROGRAM RESPONSE FORM
Barren Ridge Project

Tule River Indian Tribe
Joey Garfield, Tribal Archeological
P.O. Box 589
Porterville, CA 93258

Please check all that apply:

- Please call me to discuss the project further; my day-time phone number is (____)_____ or my evening phone number is (____)_____
- I have further comments as provided below
- I do not have any comments

Comments:

Signature:

Joey Garfield, Tribal Archeological

Date

Jow, Stephanie

From: Jow, Stephanie
Sent: Monday, January 20, 2014 3:35 PM
To: 'chairman@tulerivertribe-nsn.gov'
Subject: RE Barren Ridge Project
Attachments: RE_Barren_Ridge_RecordsSearchMap.pdf

Mr. Peyron,

AECOM is conducting cultural resources studies for the Barren Ridge Solar Project, located in unincorporated southeastern Kern County, approximately 6.5 miles northwest of the community of California City (map attached). The proposed project includes the installation of a 74-megawatt independent solar photovoltaic (PV) power-generating facility.

I am writing today to get confirmation that you received the information letter, map of the project area, and a response form sent out last week, and solicit your input on any Native American traditional cultural places within or near the project area. Please respond at your earliest convenience.

Thanks and have a great day!

Stephanie

****Please note that the Section 106 process is a separate effort, and the lead federal agency will contact appropriate tribes directly if they have not already done so.*

Stephanie Jow, M.A.

Archaeologist
Design + Planning
D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

AECOM

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www.aecom.com
www.aecom.com/designplanning

Follow us: twitter.com/DesignPlanAECOM

Jow, Stephanie

From: Jow, Stephanie
Sent: Monday, January 20, 2014 3:48 PM
To: 'horse.robinson@gmail.com'
Subject: Barren Ridge Project
Attachments: RE_Barren_Ridge_RecordsSearchMap.pdf

Mr. Robinson,

AECOM is conducting cultural resources studies for the Barren Ridge Solar Project, located in unincorporated southeastern Kern County, approximately 6.5 miles northwest of the community of California City (map attached). The proposed project includes the installation of a 74-megawatt independent solar photovoltaic (PV) power-generating facility.

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Thanks and have a great day!

Stephanie

****Please note that the Section 106 process is a separate effort, and the lead federal agency will contact appropriate tribes directly if they have not already done so.*

Stephanie Jow, M.A.

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www.aecom.com/designplanning

Follow us: twitter.com/DesignPlanAECOM

Jow, Stephanie

From: Jow, Stephanie
Sent: Wednesday, January 22, 2014 9:04 AM
To: 'brobinson@iwvisp.com'
Subject: RE Barren Ridge project

Mr. Robinson,

Thank you again for speaking with me this morning regarding the RE Barren Ridge Project. I will include your input about the area containing both prehistoric and historic resources, as well as your request for Native American participation during the survey. As requested, below is contact information for agency personnel associated with the Project:

USFWS

Lead agency for the plant site and the all-private gentie alternative, Alternative 3

Jorie Clark, Archaeologist

503-625-4377

Jorie_clark@fws.gov

BLM

Lead agency for the gentie alternative that cross BLM land, Alternatives 1, 2

Tiffany Thomas, Archaeologist

951-697-5365

tathomas@blm.gov

Thanks again,
Stephanie

Stephanie Jow, M.A.

Archaeologist

Design + Planning

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Stephanie.jow@aecom.com

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Jow, Stephanie

From: Jow, Stephanie
Sent: Wednesday, January 22, 2014 9:38 AM
To: Ann Brierty (Abrierty@SanManuel-NSN.Gov)
Subject: RE Barren Ridge Project

Hi Ann,

Thank you again for speaking with me yesterday regarding the Barren Ridge Project. I will include your input about the area containing known prehistoric resources, and will update your response when you and Daniel have a chance to provide specific information. I will also include that San Manuel encourages Native American participation in early stages of projects.

As requested, below is contact information for agency personnel associated with the Project:

USFWS

Lead agency for the plant site and the all-private gentie alternative, Alternative 3
Jorie Clark, Archaeologist
503-625-4377
Jorie_clark@fws.gov

BLM

Lead agency for the gentie alternative that cross BLM land, Alternatives 1, 2
Tiffany Thomas, Archaeologist
951-697-5365
tathomas@blm.gov

Thanks again,
Stephanie

Stephanie Jow, M.A.

Archaeologist
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Stephanie.jow@aecom.com

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CULTURAL SURVEY CONTACT PROGRAM

Jow, Stephanie

From: Thomas, Tiffany <tathomas@blm.gov>
Sent: Wednesday, January 29, 2014 11:48 AM
To: Jow, Stephanie
Cc: Guigliano, Jennifer; Marisa Mitchell; Peter Godfrey; Abigail Convery; Evans, Luke; Ireland, Mike; Aranda, Jennifer; Ray Bransfield; Mike Bowes
Subject: Re: RE Cinco (Barren Ridge LLC) Tribal Communication Request
Attachments: Cinco Tribal Contact List.pdf

Jennifer and Stephanie,

Thank you for sending the NAHC list. Attached is the BLM's tribal contact list for the Cinco Project. These are the tribes that we will be consulting with on this Project, and the tribes that AECOM should contact regarding tribal participation during the archaeological surveys.

Thank you,
-Tiffany

Tiffany Thomas
Archaeologist
Renewable Energy Coordination Office

Bureau of Land Management
California Desert District
22835 Calle San Juan de Los Lagos
Moreno Valley, CA 92553
Phone: 951-697-5365
email: tathomas@blm.gov

On Tue, Jan 28, 2014 at 4:16 PM, Jow, Stephanie <Stephanie.Jow@aecom.com> wrote:

Per action item/point 2 below, attached is the list of tribes AECOM received from the NAHC as part of the sacred lands file check. Let me know if you have any questions.

Thanks,

Stephanie

Recurrent Energy – Cinco Gen-Tie Line Project

Initial Letter – January 2014

Tribal Leaders

Genevieve Jones
Chairman
Big Pine Paiute Tribe of the Owens Valley
P.O. Box 700
Big Pine, CA 93513
Phone: (760) 938-2003
email: d.moose@bigpinepaiute.org

June Price
Co-Chairperson
Kern Valley Indian Council
P.O. Box 1010
Lake Isabella, CA 93240
Phone: (661)366-0497
email: paiuteelder@bak.rr.com

Chad Delgado
Chairperson
Bishop Paiute Tribe
50 Tu Su Lane
Bishop, CA 93514
Phone: (760) 873-3584
email: chad.delgado@bishoppaiute.org

Bob Robinson
Co-Chairperson
Kern Valley Indian Council
P.O. Box 401
Weldon, CA 93283
Phone: (661)366-0497
email: paiuteelder@bak.rr.com

Israel Naylor
Chairman
Fort Independence Band of Paiute Indians
P.O. Box 67
Independence, CA 93526
Phone: (760) 878-5160
email: Israel@fortindependence.com

Mary Wuester
Chairman
Lone Pine Paiute-Shosone Tribe
P.O. Box 747
Lone Pine, CA 93545
Phone: (760) 876-1034

Harold Williams
Kawaiisu Tribe
813 Elm St.
Tehachapi, CA 92561
Phone: (661) 333-5032

Council Chairman
Monache Intertribal Council
P.O. Box 168
Kernville, CA 93238
Phone: (760) 376-4240
email: crwermuth@mchsi.com

Patricia Henry
Chairperson
Kern River Paiute Council
P.O. Box 3984
Wofford Heights, CA 93285
Phone: (760) 549-0800
email: nuuicunni@earthlink.net

Carla Rodriguez
Chairwoman
San Manuel Band of Mission Indians
26569 Community Center Drive
Highland, CA 92346
Phone: (909) 864-8933
email: crodriguez@sanmanuel-nsn.gov

Recurrent Energy – Cinco Gen-Tie Line Project

Initial Letter – January 2014

Tribal Leaders

George Gholson
Chairman
Timbi-sha Shoshone Tribe
P.O. Box 1779
Bishop, CA 93515
Phone: (760) 872-3614
email: timbisha@aol.com

Robert Gomes
Chairperson
Tubatulabals of Kern Valley
P.O. Box 226
Lake Isabella, CA 93240
Phone: (760)379-4590
email: drbegay@aol.com

Recurrent Energy – Cinco Gen-Tie Line Project

Initial Letter – January 2014

Tribal Copies

Bill Helmer
Tribal Historic Preservation Officer
Big Pine Paiute Tribe of the Owens Valley
P.O. Box 700
Big Pine, CA 93513
Phone: (760) 938-2003
email: amargosa@aol.com

Raymond Andrews
Tribal Historic Preservation Officer
Bishop Paiute Tribe
50 Tu Su Lane
Bishop, CA 93514
Phone: (760) 937-0351

Priscilla Naylor
Cultural Liaison
Fort Independence Band of Paiute Indians
P.O. Box 67
Independence, CA 93526
Phone: (760) 878-5126; 878-5160; 878-2126

Melvin Joseph
Environmental Coordinator
Lone Pine Paiute-Shosone Tribe
P.O. Box 747
Lone Pine, CA 93545
Phone: (760) 876-4690
email: wjnabahe@lppsr.org

Qwina West
Owens Valley Career Development Center
P.O. Box 847
Bishop, CA 93515
Phone: (760) 872-3604
email: qwest@ovcdc.com

Daniel McCarthy
Cultural Resources Management
Department
San Manuel Band of Mission Indians
26569 Community Center Drive
Highland, CA 92346
Phone: (909) 864-8933 x 3248
email: Dmccarthy@sanmanuel-nsn.gov

Ann Brierty
Cultural Resources Coordinator
San Manuel Band of Mission Indians
26569 Community Center Drive
Highland, CA 92346
Phone: (909) 864-8933x3250
email: abrierty@sanmanuel-nsn.gov

Barbara Durham
Tribal Historic Preservation Officer
Timbi-sha Shoshone Tribe
P.O. Box 1779
Bishop, CA 93515
Phone: (760) 786-2374
email: barbara@timbisha.org /
dvdurbarbara@netscape.com

**RE Cinco Project – Cultural Survey Participation
Native American Contact Program Communications Log**

Affiliation	Name/Title	Date of Contact	Discussion
Big Pine Paiute Tribe of the Owens Valley	Genevieve Jones, Chairperson	4/28/2014	Invite sent via email. Email address invalid, but THPO email address valid.
	Bill Helmer, THPO	4/28/2014	Copied on invite letter sent via email.
		5/6/2014	Follow-up call, left voice message.
Bishop Paiute Tribe	Chad Delgado, Chairperson	4/28/2014	Invite sent via email.
	Raymond Andrews, THPO	4/28/2014	No valid email address on file. Invite sent via USPS.
		5/6/2014	Follow-up call, left voice message.
Fort Independence Band of Paiute Indians	Israel Naylor, Chairman	4/28/2014	Invite sent via email.
	Priscilla Naylor, Cultural Liaison	4/28/2014	No valid email address on file. Invite sent via USPS.
		5/6/2014	Follow-up call, left message with secretary.
Kawaiisu Tribe	Harold Williams	4/28/2014	No valid email address on file. Invite sent via USPS.
		5/6/2014	Follow-up call, left voice message
Kern River Paiute Council	Patricia Henry, Chairperson	4/28/2014	Invite sent via email.
	760-549-0800	5/6/2014	Follow-up call and spoke with Ms. Henry. She indicated that the Kern River Paiutes are interested and to let them know when the surveys are scheduled. Invite resent via confirmed email per her request.

Affiliation	Name/Title	Date of Contact	Discussion
		5/7/2014	Emailed Ms. Henry requesting a list and resumes of potential monitors that are approved to represent her tribe.
		5/9/2014	Follow-up call about list of potential monitors and left a message for Ms. Henry with the secretary.
		5/13/2014	Final follow-up call. Spoke with secretary who said they didn't receive any of 3 emails although they never bounced back to me. She emailed me from her address and I responded resending all previous emails.
Kern Valley Indian Council	June Price, Co-Chairperson	4/28/2014	Invite sent via email.
		5/6/2014	Follow-up call. Referred to Bob Robertson.
	Bob Robertson, Historical Officer/Watershed Coordinator	4/28/2014	Invite sent via email.
		5/6/2014	Follow-up call. Wrong number, but got correct numbers. Left voice message.
	760-549-2131 w 760-378-2915 h	5/7/2014	Emailed Mr. Robertson requesting a list and resumes of potential monitors that are approved to represent his tribe.
		5/9/2014	Follow-up call about a list of potential monitors. Left voice message at both numbers. Mr. Robertson called back and identified a potential monitor (Brandy Kendrick). He will coordinate with her and call back.

Affiliation	Name/Title	Date of Contact	Discussion
.....	Brandy Kendrick, Native American Monitor	5/9/2014	Brandy Kendrick called and left a voice message.
	661-821-1733 h 661-972-0445 c	5/12/2014	Returned Ms. Kendrick's phone call and left her a voice message.
		5/13/2014	Called Ms. Kendrick and she indicated that she was available and interested. I informed client via email that she will be Kern Valley Indians Native American representative for survey.
		5/19/2014- 5/23/2014	Ms. Kendrick participated in survey.
Lone Pine Paiute- Shoshone Tribe	Mary Wuester, Chairperson	4/28/2014	No valid email address on file. Invite sent via USPS.
	Melvin Joseph, Environmental Coordinator	4/28/2014	Invite sent via email.
		5/6/2014	Follow-up call. Left message with secretary.
Monache Intertribal Council		4/28/2014	Invite sent via email.
		5/6/2014	Follow-up call. Ron Wermuth (Council Chairman) passed away last August, but his wife referred me to Bob Robertson.
San Manuel Band of Mission Indians	Carla Rodriguez Lynn Valbuena, Chairwoman	4/28/2014	Invite sent to Chairwoman Rodriguez via email. Ann Brierty informed AECOM that Lynn Valbuena is new chairwoman.
	Daniel McCarthy, Cultural Resources Management Department	4/28/2014	Copied on invite letter sent via email.
	Ann Brierty, Cultural Resources	4/28/2014	Copied on invite letter sent via email. She replied that SMBMI has a new

Affiliation	Name/Title	Date of Contact	Discussion
	Coordinator		chairwoman, Lynn Valbuena.
		5/6/2014	Follow-up call. Ms. Brierty indicated that tribe was interested in participating and can provide resumes and/or contact info of potential participants if needed. Requested additional info when available.
		5/7/2014	Emailed Ms. Brierty requesting a list and resumes of potential monitors that are approved to represent her tribe. She sent a list and resumes for five individuals via email.
		5/9/2014	Ms. Brierty called to confirm receipt of list and resumes and requested a site visit during survey efforts. I informed her that AECOM received the information and an SMBMI Native American participant has been chosen. I provided her with several potential dates for site visit.
		5/19/2014	Emailed Ms. Brierty to schedule site visit. Site visit confirmed for Wednesday, 5/21.
		5/21/2014	Conducted site visit.
	Steven Brierty, Native American Monitor	5/9/2014	Based on resumes, Steven Brierty is the most qualified. Called and emailed him about his availability. Mr. Brierty called back and indicated he was available and interested. I informed client via email that

Affiliation	Name/Title	Date of Contact	Discussion
			he will be SMBMI Native American representative for survey.
		5/19/2014-5/23/2014	Mr. Brierty participated in the survey.
Timbi-sha Shoshone Tribe	George Gholson, Chairman	4/28/2014	Invite sent via email. Email address was invalid but THPO address was valid.
	Barbra Durham, THPO	4/28/2014	Copied on invite sent via email.
	760-786-9002 w 760-258-7161 c	5/6/2014	Follow-up call. Spoke with Ms. Durham and she indicated that the tribe will defer too closer tribes. I sent her BLM and USFWS agency contacts so that she may formally put that on record.
Tubatulabals of Kern Valley	Robert Gomes, Chairperson	4/28/2014	Invite sent via email. Email address invalid, so hard copy was sent via USPS.
		5/6/2014	Follow-up call. Spoke with secretary and she indicated that the project is out of their traditional area so Mr. Gomes would probably not be interested in participating, but he will call if he is.
Owens Valley Career Development Center	Qwina West	4/28/2014	Invite sent via email.
		5/6/2014	Follow-up call. Wrong number. Sent follow-up email instead.



AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

April 22, 2014

Raymond Andrews
Tribal Historic Preservation Officer
Bishop Paiute Tribe
50 Tu Su Lane
Bishop, CA 93514

Subject: **RE Cinco Solar Project Cultural Resources Survey**

Dear Mr. Andrews:

RE Barren Ridge Solar 1 LLC, a subsidiary of Recurrent Energy LLC, proposes to construct, operate, maintain, and decommission the RE Cinco Solar Project. The project is a solar photovoltaic power plant and gen-tie transmission line, located approximately 12 miles north of the town of Mojave in southeastern Kern County (Attachment 1). You received letters for separate portions of this project under BLM and USFWS jurisdiction as part of those agencies' responsibilities under Section 106 of the National Historic Preservation Act (Attachments 2 and 3).

This letter is to inform you that AECOM has been retained to conduct the cultural resources investigations for both portions of the project and we would like to invite you to participate in the survey efforts. We are currently coordinating with the agencies to confirm a start date; however, we are hoping to schedule the survey for early May. If you are interested in participating, please respond to this email or call me at your earliest convenience and I will provide you with additional details as they become available.

I hope to hear from you soon.

Respectfully,

Stephanie Jow
Archaeologist
(619) 684-6942
Stephanie.jow@aecom.com

Attachment 1	Project vicinity map
Attachment 2	BLM APE map
Attachment 3	USFWS APR map

Jow, Stephanie

From: Jow, Stephanie
Sent: Monday, April 28, 2014 11:42 AM
To: 'chad.delgado@bishoppaiute.org'
Subject: RE Cinco Solar Project - Cultural Resources Survey
Attachments: Delgado_Letter.pdf

Mr. Delgado,

Please see the attached letter regarding the RE Cinco Solar Project.

Thank,
Stephanie

Stephanie Jow, M.A.

Archaeologist
Design + Planning
D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

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619.233.1454 tel
619.233.0952 fax

April 22, 2014

Chad Delgado, Chairperson
Bishop Paiute Tribe
50 Tu Su Lane
Bishop, CA 93514

Sent via email: chad.delgado@bishoppaiute.org

Subject: **RE Cinco Solar Project Cultural Resources Survey**

Dear Mr. Delgado,

RE Barren Ridge Solar 1 LLC, a subsidiary of Recurrent Energy LLC, proposes to construct, operate, maintain, and decommission the RE Cinco Solar Project. The project is a solar photovoltaic power plant and gen-tie transmission line, located approximately 12 miles north of the town of Mojave in southeastern Kern County (Attachment 1). You received letters for separate portions of this project under BLM and USFWS jurisdiction as part of those agencies' responsibilities under Section 106 of the National Historic Preservation Act (Attachments 2 and 3).

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Stephanie Jow
Archaeologist
(619) 684-6942
Stephanie.jow@aecom.com

Attachment 1	Project vicinity map
Attachment 2	BLM APE map
Attachment 3	USFWS APR map

Jow, Stephanie

From: Jow, Stephanie
Sent: Monday, April 28, 2014 11:52 AM
To: 'timbisha@aol.com'
Cc: 'barbra@timbisha.org'; 'dvdurbarbra@netscape.com'
Subject: RE Cinco Solar Project - Cultural Resources Survey
Attachments: Gholson_Letter.pdf

Mr. Gholson,

Please see the attached letter regarding the RE Cinco Solar Project.

Thanks,
Stephanie

Stephanie Jow, M.A.

Archaeologist
Design + Planning
D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

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619.233.0952 fax

April 22, 2014

George Gholson, Chairman
Timbi-sha Shoshone Tribe
P.O. Box 1779
Bishop, CA 93515

Sent via email: timbisha@aol.com

Subject: **RE Cinco Solar Project Cultural Resources Survey**

Dear Mr. Gholson,

RE Barren Ridge Solar 1 LLC, a subsidiary of Recurrent Energy LLC, proposes to construct, operate, maintain, and decommission the RE Cinco Solar Project. The project is a solar photovoltaic power plant and gen-tie transmission line, located approximately 12 miles north of the town of Mojave in southeastern Kern County (Attachment 1). You received letters for separate portions of this project under BLM and USFWS jurisdiction as part of those agencies' responsibilities under Section 106 of the National Historic Preservation Act (Attachments 2 and 3).

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Stephanie Jow
Archaeologist
(619) 684-6942
Stephanie.jow@aecom.com

Attachment 1	Project vicinity map
Attachment 2	BLM APE map
Attachment 3	USFWS APR map

Jow, Stephanie

From: Jow, Stephanie
Sent: Monday, April 28, 2014 11:54 AM
To: 'drbegay@aol.com'
Subject: RE Cinco Solar Project - Cultural Resources Survey
Attachments: Gomes_Letter.pdf

Mr. Gomes,

Please see the attached letter regarding the RE Cinco Solar Project.

Thanks,
Stephanie

Stephanie Jow, M.A.

Archaeologist
Design + Planning
D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

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April 22, 2014

Robert Gomes, Chairperson
Tubatulabals of Kern Valley
P.O. Box 226
Lake Isabella, CA 93240

Sent via email: drbegay@aol.com

Subject: **RE Cinco Solar Project Cultural Resources Survey**

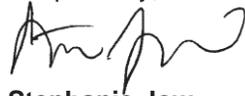
Dear Mr. Gomes,

RE Barren Ridge Solar 1 LLC, a subsidiary of Recurrent Energy LLC, proposes to construct, operate, maintain, and decommission the RE Cinco Solar Project. The project is a solar photovoltaic power plant and gen-tie transmission line, located approximately 12 miles north of the town of Mojave in southeastern Kern County (Attachment 1). You received letters for separate portions of this project under BLM and USFWS jurisdiction as part of those agencies' responsibilities under Section 106 of the National Historic Preservation Act (Attachments 2 and 3).

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Stephanie Jow
Archaeologist
(619) 684-6942
Stephanie.jow@aecom.com

Attachment 1	Project vicinity map
Attachment 2	BLM APE map
Attachment 3	USFWS APR map

Jow, Stephanie

From: Jow, Stephanie
Sent: Monday, April 28, 2014 11:45 AM
To: 'nuuicunni@earthlink.net'
Subject: RE Cinco Solar Project - Cultural Resources Survey
Attachments: Henry_Letter.pdf

Ms. Henry,

Please see the attached letter regarding the RE Cinco Solar Project.

Thank,
Stephanie

Stephanie Jow, M.A.

Archaeologist
Design + Planning
D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

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April 22, 2014

Patricia Henry, Chairperson
Kern River Paiute Council
P.O. Box 3984
Wofford Heights, CA 93285

Sent via email: nuuicunni@earthlink.net

Subject: **RE Cinco Solar Project Cultural Resources Survey**

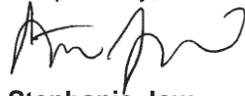
Dear Ms. Henry,

RE Barren Ridge Solar 1 LLC, a subsidiary of Recurrent Energy LLC, proposes to construct, operate, maintain, and decommission the RE Cinco Solar Project. The project is a solar photovoltaic power plant and gen-tie transmission line, located approximately 12 miles north of the town of Mojave in southeastern Kern County (Attachment 1). You received letters for separate portions of this project under BLM and USFWS jurisdiction as part of those agencies' responsibilities under Section 106 of the National Historic Preservation Act (Attachments 2 and 3).

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Respectfully,



Stephanie Jow
Archaeologist
(619) 684-6942
Stephanie.jow@aecom.com

Attachment 1	Project vicinity map
Attachment 2	BLM APE map
Attachment 3	USFWS APR map

Jow, Stephanie

From: Jow, Stephanie
Sent: Monday, April 28, 2014 11:40 AM
To: 'd.moose@bigpinepaiute.org'
Cc: 'amargosa@aol.com'
Subject: RE Cinco Solar Project - Cultural Resources Survey
Attachments: Jones_Letter.pdf

Ms. Jones,

Please see the attached letter regarding the RE Cinco Solar Project.

Thank,
Stephanie

Stephanie Jow, M.A.
Archaeologist
Design + Planning
D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

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April 22, 2014

Genevieve Jones, Chairwoman
Big Pine Paiute Tribe of the Owens Valley
P.O. Box 700
Big Pine, CA 93513

Sent via email: dmoose@bigpinepaiute.org

Subject: **RE Cinco Solar Project Cultural Resources Survey**

Dear Ms. Jones,

RE Barren Ridge Solar 1 LLC, a subsidiary of Recurrent Energy LLC, proposes to construct, operate, maintain, and decommission the RE Cinco Solar Project. The project is a solar photovoltaic power plant and gen-tie transmission line, located approximately 12 miles north of the town of Mojave in southeastern Kern County (Attachment 1). You received letters for separate portions of this project under BLM and USFWS jurisdiction as part of those agencies' responsibilities under Section 106 of the National Historic Preservation Act (Attachments 2 and 3).

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Respectfully,

Stephanie Jow
Archaeologist
(619) 684-6942
Stephanie.jow@aecom.com

Attachment 1	Project vicinity map
Attachment 2	BLM APE map
Attachment 3	USFWS APR map

Jow, Stephanie

From: Jow, Stephanie
Sent: Monday, April 28, 2014 11:49 AM
To: 'crwermuth@mchsi.com'
Subject: RE Cinco Solar Project - Cultural Resources Survey
Attachments: Monache_Letter.pdf

To whom it may concern,

Please see the attached letter regarding the RE Cinco Solar Project.

Thank,
Stephanie

Stephanie Jow, M.A.

Archaeologist
Design + Planning
D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

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619.233.1454 tel
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April 22, 2014

Council Chairman
Monache Intertribal Council
P.O. Box 168
Kernville, CA 93238

Sent via email: crwermuth@mchsi.com

Subject: **RE Cinco Solar Project Cultural Resources Survey**

Dear Sir or Madam,

RE Barren Ridge Solar 1 LLC, a subsidiary of Recurrent Energy LLC, proposes to construct, operate, maintain, and decommission the RE Cinco Solar Project. The project is a solar photovoltaic power plant and gen-tie transmission line, located approximately 12 miles north of the town of Mojave in southeastern Kern County (Attachment 1). You received letters for separate portions of this project under BLM and USFWS jurisdiction as part of those agencies' responsibilities under Section 106 of the National Historic Preservation Act (Attachments 2 and 3).

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Stephanie Jow
Archaeologist
(619) 684-6942
Stephanie.jow@aecom.com

Attachment 1	Project vicinity map
Attachment 2	BLM APE map
Attachment 3	USFWS APR map

Jow, Stephanie

From: Jow, Stephanie
Sent: Monday, April 28, 2014 11:44 AM
To: 'israel@fortindependence.com'
Subject: RE Cinco Solar Project - Cultural Resources Survey
Attachments: Naylor_Letter.pdf

Mr. Naylor,

Please see the attached letter regarding the RE Cinco Solar Project.

Thank,
Stephanie

Stephanie Jow, M.A.

Archaeologist
Design + Planning
D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

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San Diego, CA 92101
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619.233.1454 tel
619.233.0952 fax

April 22, 2014

Israel Naylor, Chairman
Fort Independence Band of Paiute Indians
P.O. Box 67
Independence, CA 93526

Sent via email: israel@fortindependence.com

Subject: **RE Cinco Solar Project Cultural Resources Survey**

Dear Mr. Naylor,

RE Barren Ridge Solar 1 LLC, a subsidiary of Recurrent Energy LLC, proposes to construct, operate, maintain, and decommission the RE Cinco Solar Project. The project is a solar photovoltaic power plant and gen-tie transmission line, located approximately 12 miles north of the town of Mojave in southeastern Kern County (Attachment 1). You received letters for separate portions of this project under BLM and USFWS jurisdiction as part of those agencies' responsibilities under Section 106 of the National Historic Preservation Act (Attachments 2 and 3).

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Archaeologist
(619) 684-6942
Stephanie.jow@aecom.com

Attachment 1	Project vicinity map
Attachment 2	BLM APE map
Attachment 3	USFWS APR map

Jow, Stephanie

From: Jow, Stephanie
Sent: Monday, April 28, 2014 11:47 AM
To: 'paiuteelder@bak.rr.com'
Subject: RE Cinco Solar Project - Cultural Resources Survey
Attachments: Price_Letter.pdf

Ms. Price,

Please see the attached letter regarding the RE Cinco Solar Project.

Thank,
Stephanie

Stephanie Jow, M.A.

Archaeologist
Design + Planning
D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

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April 22, 2014

June Price, Co-Chairperson
Kern Valley Indian Council
P.O. Box 1010
Lake Isabella, CA 93240

Sent via email: paiuteelder@bak.rr.com

Subject: **RE Cinco Solar Project Cultural Resources Survey**

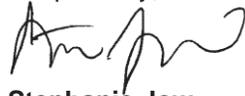
Dear Ms. Price,

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Stephanie Jow

Archaeologist

(619) 684-6942

Stephanie.jow@aecom.com

Attachment 1	Project vicinity map
Attachment 2	BLM APE map
Attachment 3	USFWS APR map

Jow, Stephanie

From: Jow, Stephanie
Sent: Monday, April 28, 2014 11:48 AM
To: 'paiuteelder@bak.rr.com'
Subject: RE Cinco Solar Project - Cultural Resources Survey
Attachments: Robinson_Letter.pdf

Mr. Robinson,

Please see the attached letter regarding the RE Cinco Solar Project.

Thank,
Stephanie

Stephanie Jow, M.A.

Archaeologist
Design + Planning
D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

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San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

April 22, 2014

Bob Robinson, Co-Chairperson
Kern Valley Indian Council
P.O. Box 401
Weldon, CA 93283

Sent via email: paiuteelder@bak.rr.com

Subject: **RE Cinco Solar Project Cultural Resources Survey**

Dear Mr. Robinson,

RE Barren Ridge Solar 1 LLC, a subsidiary of Recurrent Energy LLC, proposes to construct, operate, maintain, and decommission the RE Cinco Solar Project. The project is a solar photovoltaic power plant and gen-tie transmission line, located approximately 12 miles north of the town of Mojave in southeastern Kern County (Attachment 1). You received letters for separate portions of this project under BLM and USFWS jurisdiction as part of those agencies' responsibilities under Section 106 of the National Historic Preservation Act (Attachments 2 and 3).

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Archaeologist
(619) 684-6942
Stephanie.jow@aecom.com

Attachment 1	Project vicinity map
Attachment 2	BLM APE map
Attachment 3	USFWS APR map

Jow, Stephanie

From: Jow, Stephanie
Sent: Monday, April 28, 2014 11:50 AM
To: 'crodriguez@sanmanuel-nsn.gov'
Cc: Daniel McCarthy (DMcCarthy@sanmanuel-nsn.gov); Ann Brierty (Abrierty@SanManuel-NSN.Gov)
Subject: RE Cinco Solar Project - Cultural Resources Survey
Attachments: Rodriquez_Letter.pdf

Ms. Rodriguez,

Please see the attached letter regarding the RE Cinco Solar Project.

Thanks,
Stephanie

Stephanie Jow, M.A.
Archaeologist
Design + Planning
D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

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April 22, 2014

Carla Rodriguez, Chairwoman
San Manuel Band of Mission Indians
26569 Community Center Drive
Highland, CA 92346

Sent via email: crodriguez@sanmanuel-nsn.gov

Subject: **RE Cinco Solar Project Cultural Resources Survey**

Dear Ms. Rodriguez,

RE Barren Ridge Solar 1 LLC, a subsidiary of Recurrent Energy LLC, proposes to construct, operate, maintain, and decommission the RE Cinco Solar Project. The project is a solar photovoltaic power plant and gen-tie transmission line, located approximately 12 miles north of the town of Mojave in southeastern Kern County (Attachment 1). You received letters for separate portions of this project under BLM and USFWS jurisdiction as part of those agencies' responsibilities under Section 106 of the National Historic Preservation Act (Attachments 2 and 3).

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Stephanie Jow

Archaeologist

(619) 684-6942

Stephanie.jow@aecom.com

Attachment 1	Project vicinity map
Attachment 2	BLM APE map
Attachment 3	USFWS APR map

Jow, Stephanie

From: Jow, Stephanie
Sent: Monday, April 28, 2014 1:06 PM
To: 'qwest@ovcdc.com'
Subject: RE Cinco Solar Project - Cultural Resources Survey
Attachments: West_Letter.pdf

Qwina,

Please see attached letter regarding the RE Cinco Solar Project.

Thanks,
Stephanie

Stephanie Jow, M.A.
Archaeologist
Design + Planning
D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

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619.233.1454 tel
619.233.0952 fax

April 22, 2014

Qwina West
Owens Valley Center Development Center
P.O. Box 847
Bishop, CA 93515

Subject: **RE Cinco Solar Project Cultural Resources Survey**

To whom it may concern:

RE Barren Ridge Solar 1 LLC, a subsidiary of Recurrent Energy LLC, proposes to construct, operate, maintain, and decommission the RE Cinco Solar Project. The project is a solar photovoltaic power plant and gen-tie transmission line, located approximately 12 miles north of the town of Mojave in southeastern Kern County (Attachment 1). You received letters for separate portions of this project under BLM and USFWS jurisdiction as part of those agencies' responsibilities under Section 106 of the National Historic Preservation Act (Attachments 2 and 3).

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(619) 684-6942
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Attachment 1	Project vicinity map
Attachment 2	BLM APE map
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AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

April 22, 2014

Harold Williams
Kawaiisu Tribe
813 Elm Street
Tehachapi, CA 92561

Subject: **RE Cinco Solar Project Cultural Resources Survey**

Dear Mr. Williams,

RE Barren Ridge Solar 1 LLC, a subsidiary of Recurrent Energy LLC, proposes to construct, operate, maintain, and decommission the RE Cinco Solar Project. The project is a solar photovoltaic power plant and gen-tie transmission line, located approximately 12 miles north of the town of Mojave in southeastern Kern County (Attachment 1). You received letters for separate portions of this project under BLM and USFWS jurisdiction as part of those agencies' responsibilities under Section 106 of the National Historic Preservation Act (Attachments 2 and 3).

This letter is to inform you that AECOM has been retained to conduct the cultural resources investigations for both portions of the project and we would like to invite you to participate in the survey efforts. We are currently coordinating with the agencies to confirm a start date; however, we are hoping to schedule the survey for early May. If you are interested in participating, please respond to this email or call me at your earliest convenience and I will provide you with additional details as they become available.

I hope to hear from you soon.

Respectfully,

Stephanie Jow
Archaeologist
(619) 684-6942
Stephanie.jow@aecom.com

Attachment 1	Project vicinity map
Attachment 2	BLM APE map
Attachment 3	USFWS APR map



AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

April 22, 2014

Mary Wuester, Chairwoman
Lone Pine Paiute-Shosone Tribe
P.O. Box 747
Lone Pine, CA 93545

Subject: **RE Cinco Solar Project Cultural Resources Survey**

Dear Ms. Wuester,

RE Barren Ridge Solar 1 LLC, a subsidiary of Recurrent Energy LLC, proposes to construct, operate, maintain, and decommission the RE Cinco Solar Project. The project is a solar photovoltaic power plant and gen-tie transmission line, located approximately 12 miles north of the town of Mojave in southeastern Kern County (Attachment 1). You received letters for separate portions of this project under BLM and USFWS jurisdiction as part of those agencies' responsibilities under Section 106 of the National Historic Preservation Act (Attachments 2 and 3).

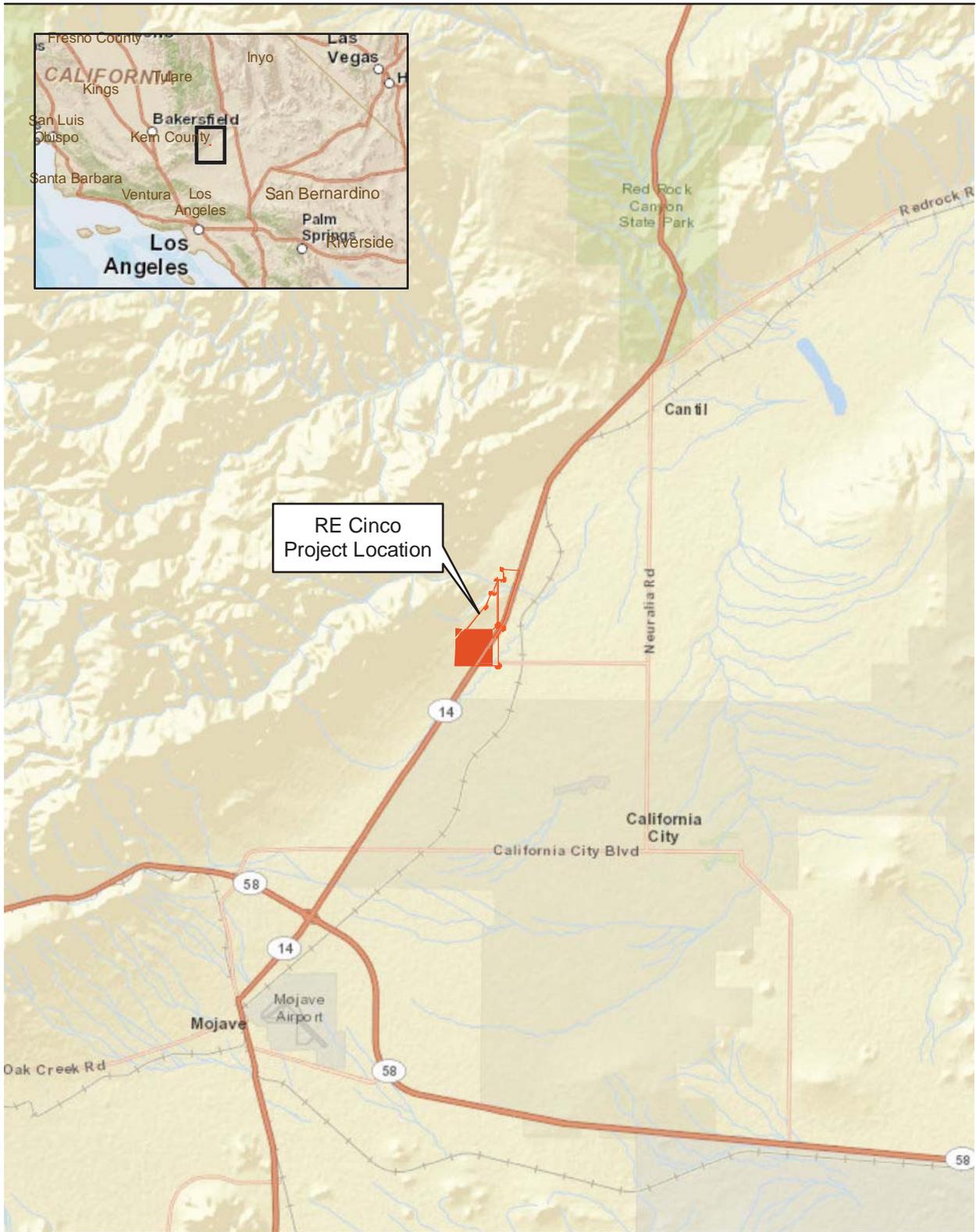
This letter is to inform you that AECOM has been retained to conduct the cultural resources investigations for both portions of the project and we would like to invite you to participate in the survey efforts. We are currently coordinating with the agencies to confirm a start date; however, we are hoping to schedule the survey for early May. If you are interested in participating, please respond to this email or call me at your earliest convenience and I will provide you with additional details as they become available.

I hope to hear from you soon.

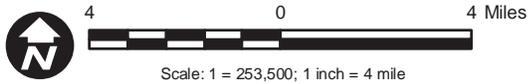
Respectfully,

Stephanie Jow
Archaeologist
(619) 684-6942
Stephanie.jow@aecom.com

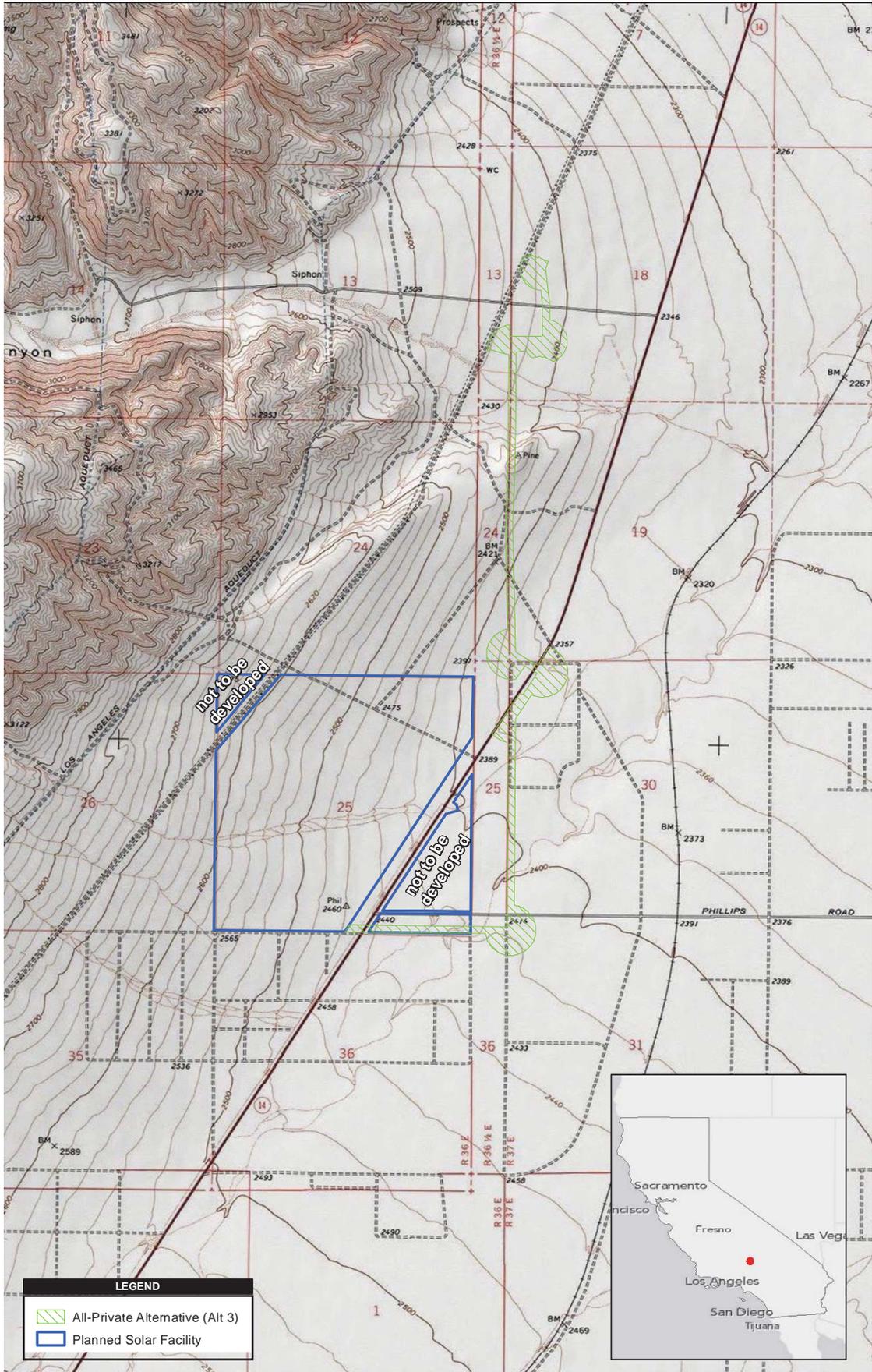
Attachment 1	Project vicinity map
Attachment 2	BLM APE map
Attachment 3	USFWS APR map



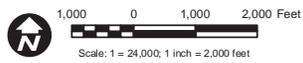
Source: Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom



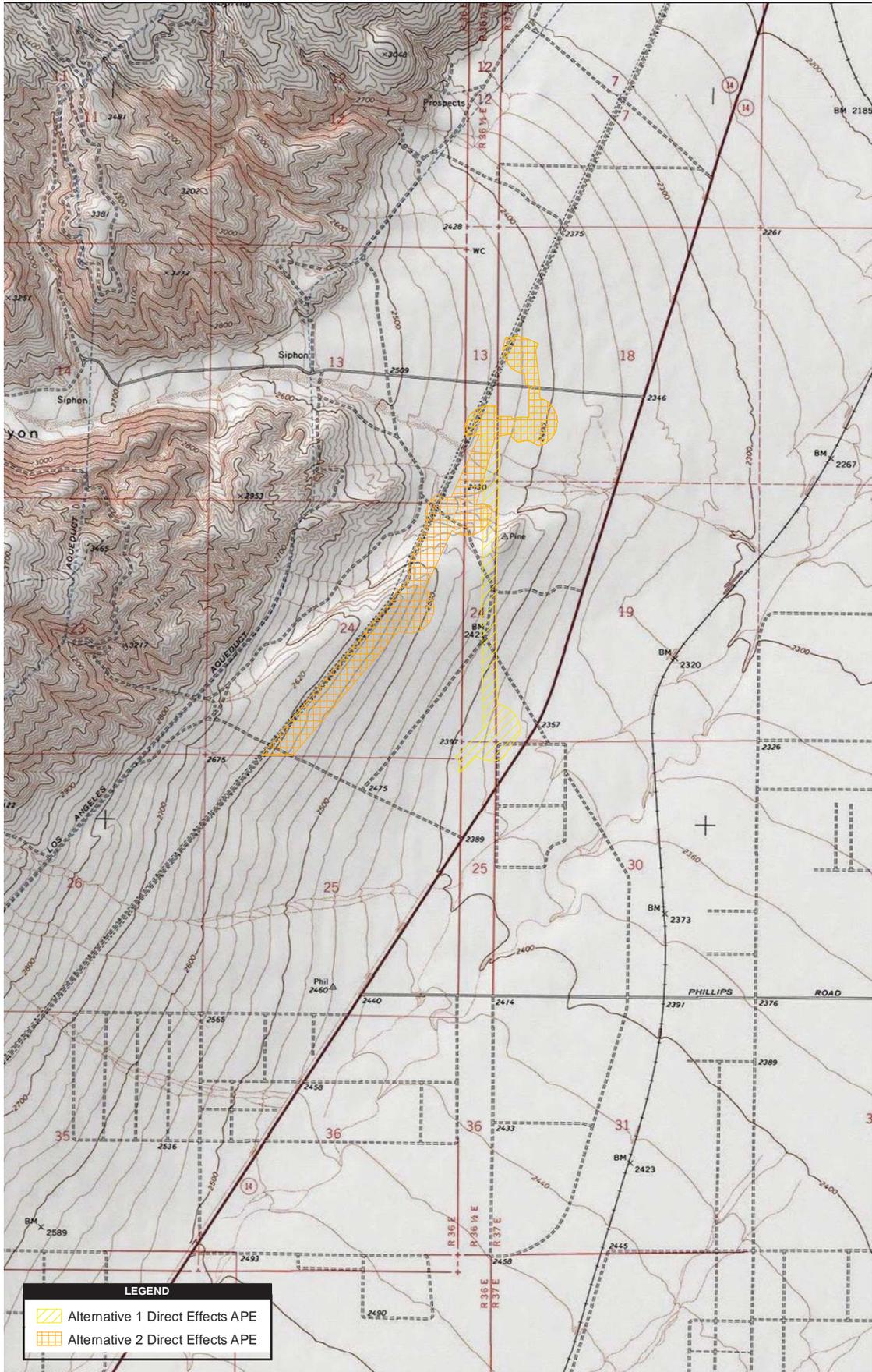
Project Vicinity



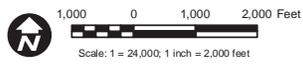
Source: USGS 7.5 Topographic Quadrangle Mojave NE and Cinco CA 1994



USFWS Area of Potential Effects



Source: USGS 7.5 Topographic Quadrangle Mojave NE and Cinco CA 1994



BLM Direct Effects Area of Potential Effects

Jow, Stephanie

From: Ann Brierty <Abrierty@SanManuel-NSN.Gov>
Sent: Monday, April 28, 2014 12:27 PM
To: Jow, Stephanie
Cc: Daniel McCarthy; Ann Brierty
Subject: RE: RE Cinco Solar Project - Cultural Resources Survey

Morning Stephanie,

FYI - the Tribe has a new elected Chairwoman- Lynn "Nay" Valbuena. Contact info is San Manuel Band of Mission Indians, 26569 Community Center Drive, Highland, CA 92346, Tribal Office: (909) 864.8933, Email: lvalbuena@sanmanuel-nsn.gov

Please add to your contacts.

Thank you,
Ann Brierty
San Manuel Band of Mission Indians

From: Jow, Stephanie [<mailto:Stephanie.Jow@aecom.com>]
Sent: Monday, April 28, 2014 11:50 AM
To: crodriguez@sanmanuel-nsn.gov
Cc: Daniel McCarthy; Ann Brierty
Subject: RE Cinco Solar Project - Cultural Resources Survey

Ms. Rodriguez,

Please see the attached letter regarding the RE Cinco Solar Project.

Thanks,
Stephanie

Stephanie Jow, M.A.

Archaeologist
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Stephanie.jow@aecom.com

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Jow, Stephanie

From: Jow, Stephanie
Sent: Wednesday, May 07, 2014 8:41 AM
To: Ann Brierty (Abrierty@SanManuel-NSN.Gov)
Cc: Daniel McCarthy (DMcCarthy@sanmanuel-nsn.gov)
Subject: RE Cinco Cultural Resources Survey

Importance: High

Good morning Ann,

Can you please send me a current list and resumes of potential Native American participants (NAMs) that are approved to represent San Manuel band of Mission Indians on the cultural resources survey for the RE Cinco Project? Please give me a call if you have any questions.

Thanks,
Stephanie

Stephanie Jow, M.A.
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Stephanie.jow@aecom.com

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Jow, Stephanie

From: Ann Brierty <Abrierty@SanManuel-NSN.Gov>
Sent: Wednesday, May 07, 2014 10:31 AM
To: Jow, Stephanie
Cc: Daniel McCarthy; Ann Brierty
Subject: RE: RE Cinco Cultural Resources Survey
Attachments: SBrierty_Feb2014.docx; Pacheco_Steven_Feb2014.docx; vb_resume.doc; Tommy Herrera Resume2014.docx; Boboelliottresume.docx; Cinco Solar Prj_NAM list_May2014.docx

Importance: High

Follow Up Flag: Follow up

Flag Status: Flagged

Morning Stephanie,
Please find attached the list of Native American Monitors (aka: Tribal Participants) and resumes, approved by San Manuel Band of Mission Indians. I'll be contacting you later today.

Respectfully,
Ann Brierty
Cultural Resources Field Manager
Cultural Resources Management Department
San Manuel Band of Mission Indians
26569 Community Center Drive
Highland, CA 92346
Office: (909) 864.8933
Cell: (909) 649.1585
FAX: (909) 425.1409
Email: abrierty@sanmanuel-nsn.gov

From: Jow, Stephanie [<mailto:Stephanie.Jow@aecom.com>]
Sent: Wednesday, May 07, 2014 8:41 AM
To: Ann Brierty
Cc: Daniel McCarthy
Subject: RE Cinco Cultural Resources Survey
Importance: High

Good morning Ann,

Can you please send me a current list and resumes of potential Native American participants (NAMs) that are approved to represent San Manuel band of Mission Indians on the cultural resources survey for the RE Cinco Project? Please give me a call if you have any questions.

Thanks,
Stephanie

Stephanie Jow, M.A.
Archaeologist

Jow, Stephanie

From: Jow, Stephanie
Sent: Friday, May 09, 2014 11:25 AM
To: 'Steven Brierty' (steven.brierty@gmail.com)
Subject: RE Cinco Solar Project - Cultural Resources Survey

Importance: High

Hi Steven,

You were identified as a potential Native American monitor, approved by San Manual Band of Mission Indians, to participate in the cultural resources survey for the RE Cinco Solar Project. If you are interested in participating, please contact me by early next week. We would like to schedule the survey May 19-23.

Thanks,
Stephanie

Stephanie Jow, M.A.

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Jow, Stephanie

From: Ann Brierty <Abrierty@SanManuel-NSN.Gov>
Sent: Monday, May 19, 2014 12:25 PM
To: Jow, Stephanie
Cc: Ann Brierty
Subject: RE: RE Cinco - Cultural Resources survey info

Confirmed-Wednesday, May 21, meet at 10:30 BW, California City. See you then.
Ann

From: Jow, Stephanie [<mailto:Stephanie.Jow@aecom.com>]
Sent: Monday, May 19, 2014 12:23 PM
To: Ann Brierty
Subject: RE: RE Cinco - Cultural Resources survey info

Let's do Wednesday, May 21.

From: Ann Brierty [<mailto:Abrierty@SanManuel-NSN.Gov>]
Sent: Monday, May 19, 2014 12:20 PM
To: Jow, Stephanie
Cc: Ann Brierty
Subject: RE: RE Cinco - Cultural Resources survey info

Stephanie,
This time and meeting location work for me. Which day is best for you?
Thanks,
Ann

From: Jow, Stephanie [<mailto:Stephanie.Jow@aecom.com>]
Sent: Monday, May 19, 2014 12:02 PM
To: Ann Brierty
Subject: RE: RE Cinco - Cultural Resources survey info

Hi Ann,

I confirmed with Brian that they are taking lunch around 11, so how about we meet at the Best Western in California City at 10:30 and we can drive out to site together and meet up with crew at around 11. Sound good?

Stephanie

From: Ann Brierty [<mailto:Abrierty@SanManuel-NSN.Gov>]
Sent: Monday, May 19, 2014 11:33 AM
To: Jow, Stephanie
Cc: Ann Brierty
Subject: RE: RE Cinco - Cultural Resources survey info

No worries Stephanie.
Wednesday lunch works for me. Would this be around 10am or 11am? As they start at 7am.

I'll keep Friday as another option field site visit. Let me know by the end of today, what will work for you.

Thanks,

Ann Brierty

From: Jow, Stephanie [<mailto:Stephanie.Jow@aecom.com>]

Sent: Monday, May 19, 2014 11:29 AM

To: Ann Brierty

Subject: RE: RE Cinco - Cultural Resources survey info

You did say May 21 on the phone, not May 20, my apologies. I may be able to squeeze in a site visit Wednesday. Do you want to meet up with the crew around lunch time on Wednesday and then after lunch we can walk the site for a bit?

From: Ann Brierty [<mailto:Abrierty@SanManuel-NSN.Gov>]

Sent: Monday, May 19, 2014 11:23 AM

To: Jow, Stephanie

Cc: Ann Brierty

Subject: RE: RE Cinco - Cultural Resources survey info

Stephanie,

You are busy?!

Yes, I need to check out the site and meet the crew. I've a field meeting tomorrow that I can't reschedule.

I'm available on Wednesday, May 21 or Friday, May 23 too. I've a place holder on calendar for both days. If it is not possible for you to travel up to site, maybe we can work with one of the CRM's to meet me.

Respectfully,

Ann Brierty

Cultural Resources Field Manager

Cultural Resources Management Department

San Manuel Band of Mission Indians

26569 Community Center Drive

Highland, CA 92346

Office: (909) 864.8933

Cell: (909) 649.1585

FAX: (909) 425.1409

Email: abrierty@sanmanuel-nsn.gov

From: Jow, Stephanie [<mailto:Stephanie.Jow@aecom.com>]

Sent: Monday, May 19, 2014 8:43 AM

To: Ann Brierty

Subject: RE: RE Cinco - Cultural Resources survey info

Ann,

I have to turn around 2 deliverables this week, so my schedule is pretty full. Did you just want to meet the crew and check out the site? I can potentially drive up tomorrow morning and be there around their lunch time (11ish), but I can't drive up tonight to be there first thing in the morning. If you want to do that we will probably have to wait until Friday. Let me know.

Thanks,

Stephanie

Jow, Stephanie

From: Jow, Stephanie
Sent: Tuesday, May 06, 2014 10:20 AM
To: nuuicunni@earthlink.net
Subject: FW: RE Cinco Solar Project - Cultural Resources Survey
Attachments: Henry_Letter.pdf

Importance: High

Ms. Henry,

It was nice talking with you this morning. We would like to start the surveys within the next few weeks, but I will let you know when the dates are confirmed. Please see attached letter.

Thanks,
Stephanie

From: Jow, Stephanie
Sent: Monday, April 28, 2014 11:45 AM
To: 'nuuicunni@earthlink.net'
Subject: RE Cinco Solar Project - Cultural Resources Survey

Ms. Henry,

Please see the attached letter regarding the RE Cinco Solar Project.

Thank,
Stephanie

Stephanie Jow, M.A.
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Design + Planning
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Stephanie.jow@aecom.com

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Jow, Stephanie

From: Jow, Stephanie
Sent: Wednesday, May 07, 2014 9:12 AM
To: nuuicunni@earthlink.net
Subject: RE Cinco Cultural Resources Survey - NA participants

Importance: High

Ms. Henry,

This is a follow-up to the phone conversation we had yesterday. Per that conversation, you expressed interest in participating in the cultural resources survey for the RE Cinco Project. We are prepping to conduct fieldwork as early as next week, so please send me a list, contact information, and resumes of potential monitors as soon as possible. If you have any questions, feel free to call or email me.

Thanks,
Stephanie

Stephanie Jow, M.A.
Archaeologist
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Stephanie.jow@aecom.com

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Jow, Stephanie

From: Jow, Stephanie
Sent: Tuesday, May 13, 2014 9:47 AM
To: 'Nuui Cunni'
Subject: RE: nuui cunni
Attachments: RE Cinco Solar Project - Cultural Resources Survey; FW: RE Cinco Solar Project - Cultural Resources Survey; RE Cinco Cultural Resources Survey - NA participants

Importance: High

Hi Lyn,

Attached are the previous emails I sent.

AECOM is conducting the cultural resources surveys next week and if Kern River Paiute would like to participate, we need a list of potential Native American monitors ASAP. I look forward to hearing from you soon. Thanks so much.

Stephanie

-----Original Message-----

From: Nuui Cunni [<mailto:nuuicunni@earthlink.net>]
Sent: Tuesday, May 13, 2014 9:40 AM
To: Jow, Stephanie
Subject: nuui cunni

Hi Stephanie,

Hope you get this o.k.

Lyn

Jow, Stephanie

From: Jow, Stephanie
Sent: Wednesday, May 07, 2014 9:08 AM
To: paiuteelder@bak.rr.com
Subject: RE Cinco Cultural Resources Survey - NA Participants

Importance: High

Mr. Robertson,

This is a follow-up to the email I sent on 4/28/14 and voice message I left you on 5/6/14 regarding the RE Cinco Project cultural resources survey. We are prepping to conduct field surveys as early as next week and would like to include a Native American participant approved to represent your tribe. Please send me a list, contact information, and resumes of potential monitors as soon as possible. If you have any questions, feel free to call or email me.

Thanks,
Stephanie

Stephanie Jow, M.A.
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Stephanie.jow@aecom.com

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Jow, Stephanie

From: Jow, Stephanie
Sent: Tuesday, May 06, 2014 11:54 AM
To: 'qwest@ovcdc.com'
Subject: RE Cinco Solar Project - Cultural Resources Survey
Attachments: RE Cinco Solar Project - Cultural Resources Survey

Importance: High

Hello,

This is a follow-up to the email I sent 4/28/14 regarding the RE Cinco Solar Project cultural resources survey. Please let me know as soon as possible if you are interested in participating in the survey. Thanks.

Stephanie

Stephanie Jow, M.A.
Archaeologist
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D +1 619.684.6942 M +1 619.233.1454
Stephanie.jow@aecom.com

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APPENDIX D

**BLM CULTURAL USE PERMIT AND
FIELDWORK AUTHORIZATION**

CULTURAL USE PERMIT



United States Department of the Interior

PERMIT FOR ARCHEOLOGICAL INVESTIGATIONS

To conduct archeological work on Department of the Interior lands and Indian lands under the authority of:

- The Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-mm) and its regulations (43 CFR 7).
- The Antiquities Act of 1906 (P.L. 59-209; 34 Stat. 225, 16 U.S.C. 431-433) and its regulations (43 CFR 3).
- Supplemental regulations (25 CFR 262) pertaining to Indian lands.
- Bureau-specific statutory and/or regulatory authority: Federal Land Policy and Management Act of 1976 (Public Law 94-570)

Please use this number when referring to this permit: CA-12-22

1. Permit issued to AECOM-San Diego	2. Under application dated 6/13/12
3. Address 1420 Kettner Blvd. Ste 500 San Diego, CA 92101	4. Telephone number(s) 619-233-1454
	5. E-mail address(es) rebecca.apple@aecom.com
6. Name of Permit Administrator Rebecca Apple Telephone number(s): same as above Email address(es): same as above	7. Name of Principal Investigators: Rebecca Apple, Patrick McGinnis, Andrew L. York, Christy C.V. Dolan, Richard Deis, Steve Heipel, Tanya Wahoff, M.K. (Trina) Meiser, and Stacey Jordan Telephone number(s): same as above Email address(es): first name.lastname@aecom.com
8. Name of Field Director(s) authorized to carry out field projects: Wayne Glenny, Matt Tennyson, Cheryl Bowden-Renna, Stacie Wilson, Theodore Cooley, Mark Carper, Denise Jurich, Jesse Martinez, Sara Dietler, James Wallace, and Stephanie Jow.	Telephone number(s): same as above Email address(es): firstname.lastname@aecom.com
9. Activity authorized Survey and Recordation	
10. On lands described as follows All lands administered by the Bureau of Land Management, California	
11. During the duration of the project From 7/29/12 To 7/28/15	
12. Name and address of the curatorial facility in which collections, records, data, photographs, and other documents resulting from work under this permit shall be deposited for permanent preservation on behalf of the United States Government. Archaeological Curation Unit of UC Riverside	
13. Permittee is required to observe the listed standard permit conditions and the special permit conditions attached to this permit.	
14. Signature and title of approving official Charlotte Hunter, PhD Deputy Preservation Officer	15. Date 7/26/2012

15. Standard Permit Conditions

- a. This permit is subject to all applicable provisions of 43 CFR Part 3, 43 CFR 7, and 25 CFR 262, and applicable departmental and bureau policies and procedures, which are made a part hereof.
- b. The permittee and this permit are subject to all other Federal, State, and local laws and regulations applicable to the public lands and resources.
- c. This permit shall not be exclusive in character, and shall not affect the ability of the land managing bureau to use, lease or permit the use of lands subject to this permit for any purpose.
- d. This permit may not be assigned.
- e. This permit may be suspended or terminated for breach of any condition or for management purposes at the discretion of the approving official, upon written notice.
- f. This permit is issued for the term specified in 11 above.
- g. Permits issued for a duration of more than one year must be reviewed annually by the agency official and the permittee.
- h. The permittee shall obtain all other required permit(s) to conduct the specified project.
- i. Archeological project design, literature review, development of the regional historic context framework, site evaluation, and recommendations for subsequent investigations must be developed with direct involvement of an archeologist who meets the Secretary of the Interior's Standards for Archeology and Historic Preservation; fieldwork must be generally overseen by an individual who meets the Secretary of the Interior's Standards for Archeology and Historic Preservation.
- j. Permittee shall immediately request that the approving official (14. above) make a modification to accommodate any change in an essential condition of the permit, including individuals named and the nature, location, purpose, and time of authorized work, and shall without delay notify the approving official of any other changes affecting the permit or regarding information submitted as part of the application for the permit. Failure to do so may result in permit suspension or revocation.
- k. Permittee may request permit extension, in writing, at any time prior to expiration of the term of the permit, specifying a limited, definite amount of time required to complete permitted work.
- l. Any correspondence about this permit or work conducted under its authority must cite the permit number. Any publication of results of work conducted under the authority of this permit must cite the approving bureau and the permit number.
- m. Permittee shall submit a copy of any published journal article and any published or unpublished report, paper, and manuscript resulting from the permitted work (apart from those required in items q. and s., below), to the approving official and the appropriate official of the approved curatorial facility (item 12 above).
- n. Prior to beginning any fieldwork under the authority of this permit, the permittee, following the affected bureau's policies and procedures, shall contact the field office manager responsible for administering the lands involved to obtain further instructions.
- o. Permittee may request a review, in writing to the official concerned, of any disputed decision regarding inclusion of specific terms and conditions or the modification, suspension, or revocation of this permit, setting out reasons for believing that the decision should be reconsidered.
- p. Permittee shall not be released from requirements of this permit until all outstanding obligations have been satisfied, whether or not the term of the permit has expired. Permittee may be subject to civil penalties for violation of any term or condition of this permit.

15. Standard Permit Conditions (continued)

- q. Permittee shall submit a preliminary report to the approving official within a timeframe established by the approving official, which shall be no later than 6 weeks after the completion of any episode of fieldwork, setting out what was done, how it was done, by whom, specifically where, and with what results, including maps, GPS data, an approved site form for each newly recorded archeological site, and the permittee's professional recommendations, as results require. If other than 6 weeks, the timeframe shall be specified in Special Permit Condition p. Depending on the scope, duration, and nature of the work, the approving official may require progress reports, during or after the fieldwork period or both, and as specified in Special Permit Condition r.
- r. Permittee shall submit a clean, edited draft final report to the agency official for review to insure conformance with standards, guidelines, regulations, and all stipulations of the permit. The schedule for submitting the draft shall be determined by the agency official.
- s. Permittee shall submit a final report to the approving official not later than 180 days after completion of fieldwork. Where a fieldwork episode involved only minor work and/or minor findings, a final report may be submitted in place of the preliminary report. If the size or nature of fieldwork merits, the approving official may authorize a longer timeframe for the submission of the final report as specified in Special Permit Condition "q."
- t. Two copies of the final report, a completed NTIS Report Documentation Page (SF-298), available at <http://www.ntis.gov/pdf/rdpform.pdf>, and a completed NADB-Reports Citation Form, available at http://www.cr.nps.gov/aad/tools/nadbform_update.doc, will be submitted to the office issuing the permit.
- u. The permittee agrees to keep the specific location of sensitive resources confidential. Sensitive resources include threatened species, endangered species, and rare species, archeological sites, caves, fossil sites, minerals, commercially valuable resources, and sacred ceremonial sites.
- v. Permittee shall deposit all artifacts, samples and collections, as applicable, and original or clear copies of all records, data, photographs, and other documents, resulting from work conducted under this permit, with the curatorial facility named in item 12, above, not later than 90 days after the date the final report is submitted to the approving official. Not later than 180 days after the final report is submitted, permittee shall provide the approving official with a catalog and evaluation of all materials deposited with the curatorial facility, including the facility's accession and/or catalog numbers.
- w. Permittee shall provide the approving official with a confirmation that museum collections described in v. above were deposited with the approved curatorial facility, signed by an authorized curatorial facility official, stating the date materials were deposited, and the type, number and condition of the collected museum objects deposited at the facility.
- x. Permittee shall not publish, without the approving official's prior permission, any locational or other identifying archeological site information that could compromise the Government's protection and management of archeological sites.
- y. For excavations, permittee shall consult the OSHA excavation standards which are contained in 29 CFR §1926.650, §1926.651 and §1926.652. For questions regarding these standards contact the local area OSHA office, OSHA at 1-800-321-OSHA, or the OSHA website at <http://www.osha.gov>.
- z. Special permit conditions attached to this permit are made a part hereof.

16. Special Permit Conditions

- a. Permittee shall allow the approving official and bureau field officials, or their representatives, full access to the work area specified in this permit at any time the permittee is in the field, for purposes of examining the work area and any recovered materials and related records.
- b. Permittee shall cease work upon discovering any human remains and shall immediately notify the approving official or bureau field official. Work in the vicinity of the discovery may not resume until the authorized official has given permission.
- c. Permittee shall backfill all subsurface test exposures and excavation units as soon as possible after recording the results, and shall restore them as closely as reasonable to the original contour.
- d. Permittee shall not use mechanized equipment in designated, proposed, or potential wilderness areas unless authorized by the agency official or a designee in additional specific conditions associated with this permit.
- e. Permittee shall take precautions to protect livestock, wildlife, the public, or other users of the public lands from accidental injury in any excavation unit.
- f. Permittee shall not conduct any flint knapping or lithic replication experiments at any archeological site, aboriginal quarry source, or non-site location that might be mistaken for an archeological site as a result of such experiments.
- g. Permittee shall perform the fieldwork authorized in this permit in a way that does not impede or interfere with other legitimate uses of the public lands, except when the authorized officer specifically provides otherwise.
- h. Permittee shall restrict vehicular activity to existing roads and trails unless the authorized officer provides otherwise.
- i. Permittee shall keep disturbance to the minimum area consistent with the nature and purpose of the fieldwork.
- j. Permittee shall not cut or otherwise damage living trees unless the authorized officer gives permission.
- k. Permittee shall take precautions at all times to prevent wildfire. Permittee shall be held responsible for suppression costs for any fires on public lands caused by the permittee's negligence. Permittee may not burn debris without the authorized officer's specific permission.
- l. Permittee shall conduct all operations in such a manner as to prevent or minimize scarring and erosion of the land, pollution of the water resources, and damage to the watershed.
- m. Permittee shall not disturb resource management facilities within the permit area, such as fences, reservoirs, and other improvements, without the authorized officer's approval. Where disturbance is necessary, permittee shall return the facility to its prior condition, as determined by the authorized officer.
- n. Permittee shall remove temporary stakes and/or flagging, which the permittee has installed, upon completion of fieldwork.
- o. Permittee shall clean all camp and work areas before leaving the permit area. Permittee shall take precautions to prevent littering or pollution on public lands, waterways, and adjoining properties. Refuse shall be carried out and deposited in approved disposal areas.
- p. Permittee shall submit the preliminary report within _____ days/weeks of completion of any episode of fieldwork..
- q. Permittee shall submit the final report within _____ days/weeks/months after completion of fieldwork..
- r. Permittee shall submit progress reports every _____ months over the duration of the project.
- s. California special permit conditions are attached.

Special Permit Conditions Continuation Sheet: California Conditions

- a. Work under this permit is limited to specific service approved for each permit. This may consist of non-collection survey, limited testing to determine site content and limits or extensive testing emergency excavation and/or salvage projects. Testing/excavation projects may be conducted under the authority of this permit only upon completion of ARPA consultation with Native American Groups and written approval from the Bureau for such work. (CARIDAPs for the purpose of the identification of archaeological resources are authorized under a FLPMA/ARPA Permit).
- b. Permittees shall verbally and subsequently in writing contact the appropriate BLM Field Manager prior to the beginning of each of his field operations (with follow-up written notification) to inform the BLM of specific work to be conducted. At this time, the BLM Field Manager may impose additional stipulation as deemed necessary to provide for the protection and management of resource values in the general site or project area.
- c. All cultural resources encountered shall be recorded on Department of Parks and Recreation (DPR) Form 523 with maps and photograph documentation. An updated DPR 523 form will be provided for all previously recorded cultural resources unless the current DPR 523 form for the cultural resource is considered by the Permittee, in consultation with the BLM Field Archaeologist, to be complete and accurate. Completion of the DPR 523 form and updates shall follow the guidance provide in the *Handbook for Completing an Archaeological Site Record* (Office of Historic Preservation 1989b) and *Instructions for Completing the California Historic Resources Inventory Form* (Office of Historic Preservation 1990).
- d. The Permittee shall submit a Cultural Resources Report (CRR) to the BLM for approval. The report shall follow "BLM Manual 8110 Guidance (Identifying and Evaluating Cultural Resources, 2004)" and California Office of Historic Preservation Guidance as provided in the *Archaeological Resource Management Report* (ARMR, 1990). The permittee shall report on all field activities including dates, times and locations, findings, samplings, and analyses. All pertinent survey reports, site records, and additional research reports not previously submitted to the California Historical Resource Information System (CHRIS) and the State Historic Preservation Officer (SHPO) shall be included as an appendix to the CRR.
- e. The Cultural Resources Report shall provide an executive summary or abstract for the report which outlines the report's contents and summarizes the findings and recommendations of the consultant. The abstract shall identify as follows:
 - I. Project Name/Title
 - II. Agency: The lead federal agency for the project and any other Federal or State Agencies involved in the undertaking
 - III. Permits: At a minimum, the State Permit and Field Authorization are required, but other reference numbers assigned to the project, including CRM Tracker, NEPA, or Special Permit Application numbers, if known, may also be included.
 - IV. General Location of the project and field survey: nearest town, vicinity, County, or Section, Township and Range
 - V. Dates of Field Survey
 - VI. A Statistical Summary of Survey Activities including:
 - i. Total acreage of the Area of Potential Effect.
 - ii. Total acreage surveyed.
 - iii. The acreage of all lands surveyed at the BLM Class III level and all lands surveyed at the Class II level, regardless of land ownership.
 1. Acreage of BLM lands surveyed at Class III level and the Class II level.
 2. Acreage of other lands surveyed at Class III level and Class II level (Private, State, Other Federal).
 - iv. Total number of cultural properties for which site records were completed (newly recorded cultural properties).
 1. Number of new cultural properties on BLM Lands.
 2. Number of new cultural properties on other lands (Private, State, Other Federal).
 - v. Total number of cultural properties located only within the project's Area of Potential Effect. Provide Trinomials or Property Numbers for both newly recorded and previously recorded properties.
 - vi. Of the cultural properties located only within the Area of Potential Effect:
 1. Number of cultural properties that the consultant has recommended are eligible for the National Register, if applicable.
 2. Number of cultural properties that the consultant has recommended as not eligible for the National

- Register, if applicable.
3. Number of cultural properties within the Area of Potential Effect that can/will be avoided.
 4. Number of cultural properties within the Area of Potential Effect that cannot be avoided and would be affected.
- f. All cultural artifacts and other related materials such as notes, photographs, etc., acquired under the provisions of this permit **remain the property of the United States Government** and may be recalled at any time for the use of the Department of the Interior or other agencies of the Federal Government. Cultural materials collected under the provisions of this permit must be curated at a repository approved by the BLM. Curation shall be at a local qualified repository, if feasible, and an approved curation facility shall be designated prior to all field projects. An itemized list of all materials with accession numbers, curated at the repository will be submitted to the State Office and to the appropriate Field Office within 180 days of the completion of individual field projects. A copy of a receipt from the curation facility must be submitted with the list or catalogue.
 - g. Permittees shall acquire a Trinomial and Primary number from the appropriate Information Center for each cultural resource documented while undertaking work authorized by this permit. Final primary and site trinomial numbers issued by the California Historical Resources Information System Center must be included in the final report.
 - h. The BLM Field Manager or authorized representative may require a monthly briefing or written progress report outlining what was accomplished. The timing and method of progress reports shall be arranged with the BLM Field Manager or authorized representative.
 - i. The individual(s) in direct charge must be academically qualified and possess adequate field experience. At least two weeks prior to initiation of field work, the permittees must provide the BLM Field Manager with the vitae of individuals proposed to be in direct charge if not approved at the time of permit issuance. A list of field crew members should be submitted at the same time. Only the individual(s) listed in Item No. 8 of the permit is/are authorized to be in direct charge of field work conducted under this permit.
 - j. The person(s) in direct charge of field work shall be on site at all times when work is in progress. Failure to comply with permit stipulations will result in removal of subject's name(s) from the approved list of person-in-direct-charge.
 - k. Care should be exercised to avoid directly or indirectly increasing access or potential vandalism to sensitive sites.
 - l. All National Permit Stipulations are binding. The authority for issuing permits in the Bureau of Land Management rests solely with the State Director as Delegated by the Secretary of the Interior and all further delegation is prohibited by Secretarial Order. No Modification of National Permit Conditions 8 or 9 or of the California Special Permit Conditions may occur except by written decision of the State Director.
 - m. GPS data shall be collected and include at a minimum the x-y coordinate location of each archaeological site. The GPS data shall be reported on the site record or in an appropriate electronic table format with site identifier, x coordinates, y coordinates, type of GPS unit utilized in the field, the coordinate(s) and their coordinate system, and whether the reported coordinate is corrected or uncorrected for GPS error.
 - n. A CD-ROM, DVD, or similar durable storage media containing the final report in portable document format (PDF) will be submitted along with hard copies of the final report. Permittees with GIS capabilities shall submit GIS shapefiles representing point, line or polygon entities for resources recorded and the area of investigation will be included. A projection file will be associated with each shapefile and the permittee shall ensure data complies with BLM State requirements. The BLM National Metadata Standards for transmittal of GIS data are attached and should be followed. Submittal of shapefiles will satisfy stipulation m.
 - o. On large or complex projects or at agency discretion, the BLM may require the use of the CA BLM cultural resources geodatabase and attributing tool for the incorporation of resource and investigation data and metadata. The geodatabase will be populated and submitted to the BLM following acquisition and input of primary and trinomial numbers. The BLM will provide training on the use of the attributing tool. Use and submittal of the geodatabase will satisfy stipulations m. and n.
 - p. **Permittee shall not release any reports, site records, or other documents prepared as a result of the work authorized by this Permit to the Applicant, any outside individual or entity, government agency, non-governmental organization, or Indian tribe, unless otherwise directed by BLM.**
 - q. Non-disclosure agreements executed between the Permittee and the Applicant that prohibit the Permittee from providing the BLM with reports, site records, or other documents prepared as a result of the work authorized by this Fieldwork Authorization are inconsistent with Stipulation "f" of the BLM California State Permit Conditions and Stipulation "t" of the BLM National Cultural Resources Use Permit - Standard Permit Conditions.
 - r. Permittee shall disclose that such a non-disclosure agreement has been executed.
 - I. BLM may suspend, terminate, or not issue a Fieldwork Authorization where a non-disclosure agreement has been executed between the Permittee and the Applicant.
 - II. Where the Applicant, an outside individual entity, government agency, non-governmental organization, or Indian tribe has requested reports, site records, or other documents prepared as a result of the work authorized by a Fieldwork

Authorization, the BLM will serve as the conduit through which information shall be provided to the requesting party, unless the consultant is otherwise directed by the BLM.

- s. Permittee is authorized to submit BLM **approved** site records to the California Historical Resources Information System for the purposes of obtaining permanent site numbers.

Revised 7/24/07

By signing below, I, the Principal Investigator, acknowledge that I have read and understand the Permit for Archeological Investigations and agree to its terms and conditions as evidenced by my signature below and initiation of work or other activities under the authority of this permit.

Signature and title:

Rebecca Apple, Principal



Date:

7/26/12

Paperwork Reduction Act and Estimated Burden Statement: This information is being collected pursuant to 16 U.S.C. 470cc and 470mm, to provide the necessary facts to enable the Federal land manager (1) to evaluate the applicant's professional qualifications and organizational capability to conduct the proposed archeological work; (2) to determine whether the proposed work would be in the public interest; (3) to verify the adequacy of arrangements for permanent curatorial preservation, as United States property, of specimens and records resulting from the proposed work; (4) to ensure that the proposed activities would not be inconsistent with any management plan applicable to the public lands involved; (5) to provide the necessary information needed to complete the Secretary's Report to Congress on Federal Archeology Programs; and (6) to allow the National Park Service to evaluate Federal archeological protection programs and assess compliance with the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470). Submission of the information is required before the applicant may enjoy the benefit of using publicly owned archeological resources. To conduct such activities without a permit is punishable by felony-level criminal penalties, civil penalties, and forfeiture of property. A federal agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. Public reporting for this collection of information is estimated to average one hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Departmental Consulting Archeologist; NPS; 1849 C Street, NW (2275); Washington, DC 20240-0001.

Failure of the permit administrator to sign and return this page within 30 days of receipt will result in immediate suspension of the permit. Please return this page to the Bureau of Land Management, 2800 Cottage Way, W-1928, Sacramento, CA 95825 Attn: Cultural Heritage Program or send a digital copy to cahunter@blm.gov.



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
California State Office
2800 Cottage Way, Suite W1834
Sacramento, CA 95825
www.ca.blm.gov

May 29, 2013

In Reply Refer To:
8151(CA-930) P

Rebecca Apple
AECOM
1420 Kettner Blvd. Suite 500
San Diego, CA 92101

Dear Ms. Apple:

Thank you for your correspondence requesting a personnel amendment for your Cultural Use Permit (CA-12-22). BLM professional staff reviewed the permit file and the materials submitted in support of the request for amendment.

Please attach this letter and the revised California Permit Conditions to your permit. Note in particular Section "F" which states that **All cultural artifacts and other related materials such as notes, photographs, etc., acquired under the provisions of this permit remain the property of the United States Government** and Section "P" which states that the **Permittee shall not release any reports, site records, or other documents prepared as a result of the work authorized by this Fieldwork Authorization to the Applicant, any outside individual or entity, government agency, non-governmental organization, or Indian tribe, unless otherwise directed by BLM.**

BLM finds that the resume submitted supports the addition to your permit of archaeologist Denise Jurich as Principal Investigator.

No hard copy of your permit will follow. Should you have any questions, please call Tony Overly at (916) 978-4684 or send an email to soverly@blm.gov.

Sincerely,

Dr. Charlotte Hunter
Deputy Preservation Officer

Special Permit Conditions Continuation Sheet: California Conditions

- a) Work under this permit is limited to specific service approved for each permit. This may consist of non-collection survey, limited testing to determine site content and limits or extensive testing emergency excavation and/or salvage projects. Testing/excavation projects may be conducted under the authority of this permit only upon completion of ARPA consultation with Native American Groups and written approval from the Bureau for such work. (CARIDAPs for the purpose of the identification of archaeological resources are authorized under a FLPMA/ARPA Permit).
- b) Permittees shall verbally and subsequently in writing contact the appropriate BLM Field Manager prior to the beginning of each of his field operations (with follow-up written notification) to inform the BLM of specific work to be conducted. At this time, the BLM Field Manager may impose additional stipulation as deemed necessary to provide for the protection and management of resource values in the general site or project area.
- c) All cultural resources encountered shall be recorded on Department of Parks and Recreation (DPR) Form 523 with maps and photograph documentation. An updated DPR 523 form will be provided for all previously recorded cultural resources unless the current DPR 523 form for the cultural resource is considered by the Permittee, in consultation with the BLM Field Archaeologist, to be complete and accurate. Completion of the DPR 523 form and updates shall follow the guidance provide in the *Handbook for Completing an Archaeological Site Record* (Office of Historic Preservation 1989b) and *Instructions for Completing the California Historic Resources Inventory Form* (Office of Historic Preservation 1990).
- d) The Permittee shall submit a Cultural Resources Report (CRR) to the BLM for approval. The report shall follow “BLM Manual 8110 Guidance (Identifying and Evaluating Cultural Resources, 2004)” and California Office of Historic Preservation Guidance as provided in the *Archaeological Resource Management Report* (ARMR, 1990). The permittee shall report on all field activities including dates, times and locations, findings, samplings, and analyses. All pertinent survey reports, site records, and additional research reports not previously submitted to the California Historical Resource Information System (CHRIS) and the State Historic Preservation Officer (SHPO) shall be included as an appendix to the CRR.
- e) The Cultural Resources Report shall provide an executive summary or abstract for the report which outlines the report’s contents and summarizes the findings and recommendations of the consultant. The abstract shall identify as follows:
 - a. Project Name/Title
 - b. Agency: The lead federal agency for the project and any other Federal or State Agencies involved in the undertaking
 - c. Permits: At a minimum, the State Permit and Field Authorization are required, but other reference numbers assigned to the project, including CRM Tracker, NEPA, or Special Permit Application numbers, if known, may also be included.
 - d. General Location of the project and field survey: nearest town, vicinity, County, or Section, Township and Range
 - e. Dates of Field Survey
 - f. A Statistical Summary of Survey Activities including:
 - i. Total acreage of the Area of Potential Effect.
 - ii. Total acreage surveyed.
 - iii. The acreage of all lands surveyed at the BLM Class III level and all lands surveyed at the Class II level, regardless of land ownership.
 1. Acreage of BLM lands surveyed at Class III level and the Class II level.
 2. Acreage of other lands surveyed at Class III level and Class II level (Private, State, Other Federal).
 - iv. Total number of cultural properties for which site records were completed (newly recorded cultural properties).
 1. Number of new cultural properties on BLM Lands.
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 - v. Total number of cultural properties located only within the project’s Area of Potential Effect. Provide Trinomials or Property Numbers for both newly recorded and previously recorded properties.
 - vi. Of the cultural properties located only within the Area of Potential Effect:
 1. Number of cultural properties that the consultant has recommended are eligible for the National Register, if applicable.
 2. Number of cultural properties that the consultant has recommended as not eligible for the National Register, if applicable.

3. Number of cultural properties within the Area of Potential Effect that can/will be avoided.
 4. Number of cultural properties within the Area of Potential Effect that cannot be avoided and would be affected.
- f) **All cultural artifacts and other related materials such as notes, photographs, etc., acquired under the provisions of this permit remain the property of the United States Government** and may be recalled at any time for the use of the Department of the Interior or other agencies of the Federal Government. Cultural materials collected under the provisions of this permit must be curated at a repository approved by the BLM. Curation shall be at a local qualified repository, if feasible, and an approved curation facility shall be designated prior to all field projects. An itemized list of all materials with accession numbers, curated at the repository will be submitted to the State Office and to the appropriate Field Office within 180 days of the completion of individual field projects. A copy of a receipt from the curation facility must be submitted with the list or catalogue.
 - g) Permittees shall acquire a Trinomial and Primary number from the appropriate Information Center for each cultural resource documented while undertaking work authorized by this permit. Final primary and site trinomial numbers issued by the California Historical Resources Information System Center must be included in the final report.
 - h) The BLM Field Manager or authorized representative may require a monthly briefing or written progress report outlining what was accomplished. The timing and method of progress reports shall be arranged with the BLM Field Manager or authorized representative.
 - i) The individual(s) in direct charge must be academically qualified and possess adequate field experience. At least two weeks prior to initiation of field work, the permittees must provide the BLM Field Manager with the vitae of individuals proposed to be in direct charge if not approved at the time of permit issuance. A list of field crew members should be submitted at the same time. Only the individual(s) listed in Item No. 8 of the permit is/are authorized to be in direct charge of field work conducted under this permit.
 - j) The person(s) in direct charge of field work shall be on site at all times when work is in progress. Failure to comply with permit stipulations will result in removal of subject's name(s) from the approved list of person-in-direct-charge.
 - k) Care should be exercised to avoid directly or indirectly increasing access or potential vandalism to sensitive sites.
 - l) All National Permit Stipulations are binding. The authority for issuing permits in the Bureau of Land Management rests solely with the State Director as Delegated by the Secretary of the Interior and all further delegation is prohibited by Secretarial Order. No Modification of National Permit Conditions 8 or 9 or of the California Special Permit Conditions may occur except by written decision of the State Director.
 - m) GPS data shall be collected and submitted for all site and survey location data following BLM's guidance (Attachment A) which provides the standards required for "Recording Cultural Resource Locations Using Global Position System (GPS) Technology." The GPS data shall be reported on the site record or in an appropriate electronic table format with site identifier, x coordinates, y coordinates, type of GPS unit utilized in the field, the coordinate(s) and their coordinate system, and whether the reported coordinate is corrected or uncorrected for GPS error.
 - n) A CD-ROM, DVD, or similar durable storage media containing the final report in portable document format (PDF) will be submitted along with hard copies of the final report. Permittees with GIS capabilities shall submit GIS shapefiles representing point, line or polygon entities for resources recorded and the area of investigation will be included. A projection file will be associated with each shapefile and the permittee shall ensure data complies with BLM State requirements. The BLM National Metadata Standards for transmittal of GIS data are attached and should be followed. Submittal of shapefiles will satisfy stipulation m.
 - o) On large or complex projects or at agency discretion, the BLM may require the use of the CA BLM cultural resources geodatabase and attributing tool for the incorporation of resource and investigation data and metadata. The geodatabase will be populated and submitted to the BLM following acquisition and input of primary and trinomial numbers. The BLM will provide training on the use of the attributing tool. Use and submittal of the geodatabase will satisfy stipulations m. and n.
 - p) **Permittee shall not release any reports, site records, or other documents prepared as a result of the work authorized by this Fieldwork Authorization to the Applicant, any outside individual or entity, government agency, non-governmental organization, or Indian tribe, unless otherwise directed by BLM.**
 - q) Non-disclosure agreements executed between the Permittee and the Applicant that prohibit the Permittee from providing the BLM with reports, site records, or other documents prepared as a result of the work authorized by this Fieldwork Authorization are inconsistent with Stipulation *f* of the BLM California State Permit Conditions and Stipulation *t* of the BLM National Cultural Resources Use Permit - Standard Permit Conditions.
 - (1) Permittee shall disclose that such a non-disclosure agreement has been executed.
 - (2) BLM may suspend, terminate, or not issue a Fieldwork Authorization where a non-disclosure agreement has been executed between the Permittee and the Applicant.
 - r) Where the Applicant, an outside individual entity, government agency, non-governmental organization, or Indian tribe has requested reports, site records, or other documents prepared as a result of the work authorized by a Fieldwork Authorization, the BLM will serve as the conduit through which information shall be provided to the requesting party, unless the consultant is otherwise directed by the BLM.

- s) Permittee is authorized to submit BLM **approved** site records to the California Historical Resources Information System for the purposes of obtaining permanent site numbers.

Revised 6/21/10

By signing below, I, the Principal Investigator, acknowledge that I have read and understand the Permit for Archeological Investigations and agree to its terms and conditions as evidenced by my signature below and initiation of work or other activities under the authority of this permit.

Signature and title:



, PhD Deputy Preservation Officer

Date:

07/12/2010



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
California State Office
2800 Cottage Way, Suite W1834
Sacramento, CA 95825
www.ca.blm.gov

October 30, 2013

In Reply Refer To:
8151(CA-930) P

Stacey Jordan, Ph.D.
AECOM
1420 Kettner Blvd. Suite 500
San Diego, CA 92101

Dear Dr. Jordan:

Thank you for your correspondence of September 16, 2013, requesting personnel amendments for AECOM's Cultural Use Permit (CA-12-22). BLM professional staff reviewed your permit file and the materials submitted in support of your request for amendment.

Please attach this letter and the revised California Permit Conditions to your permit. Note in particular Section "F" which states that **All cultural artifacts and other related materials such as notes, photographs, etc., acquired under the provisions of this permit remain the property of the United States Government** and Section "P" which states that the **Permittee shall not release any reports, site records, or other documents prepared as a result of the work authorized by this Fieldwork Authorization to the Applicant, any outside individual or entity, government agency, non-governmental organization, or Indian tribe, unless otherwise directed by BLM.**

BLM finds that the resumes submitted support revising Permit CA-12-22 to upgrade Matthew Tennyson to Principal Investigator and to add James Mayer as Principal Investigator. BLM has also modified the permit to list you as the Permit Administrator and has removed Sara Dietler and Mark Carper. As we agreed on the phone, the other individuals listed on the modification request are very well qualified Field Directors but the resumes do not yet demonstrate the needed depth and range of experience to be listed as Principal Investigators on BLM lands in California.

No hard copy of your permit will follow. Should you have any questions, please call Tony Overly at (916) 978-4684 or send an email to soverly@blm.gov.

Sincerely,

Dr. Charlotte Hunter
Deputy Preservation Officer

Special Permit Conditions Continuation Sheet: California Conditions

- a. Work under this permit is limited to specific services approved for each permit. This may consist of non-collection survey, limited excavation (testing to determine site content) and emergency and/or salvage projects limited or extensive excavation (testing). Limited excavation (testing) projects may be conducted under the authority of this permit **only** upon completion of an ARPA consultation with federally recognized American Indian Tribes and written approval from the BLM for such work. (California Archaeological Resources Identification and Data Acquisition Program: Sparse Lithic Scatters (CARIDAP) subsurface testing procedures for the purpose of the identification of archaeological resources are authorized under this Permit). CARIDAP: <http://ohp.parks.ca.gov/pages/1069/files/caridap.pdf>
- b. Permittees shall verbally and subsequently in writing contact the appropriate BLM Field Manager prior to the beginning of each of the field operations (with follow-up, written notification) to inform the BLM of specific work to be conducted. At this time, the BLM Field Manager may impose additional stipulation as deemed necessary to provide for the protection and management of resource values in the general site or project area.
- c. All cultural resources encountered shall be recorded on Department of Parks and Recreation (DPR) Form 523 with maps and photograph documentation. An updated DPR 523 form will be provided for all previously recorded cultural resources unless the current DPR 523 form for the cultural resource is considered by the Permittee, in consultation with the BLM Field Archaeologist, to be complete and accurate. Completion of the DPR 523 form and updates shall follow the guidance provided in the *Handbook for Completing an Archaeological Site Record* (OHP 1989): <http://www.parks.ca.gov/pages/1054/files/manual95.pdf> and *Instructions for Completing the California Historic Resources Inventory Form* (OHP 1990): <http://ohp.parks.ca.gov/pages/1054/files/manual95.pdf>
- d. The Permittee shall submit a Cultural Resources Report (CRR) to the BLM for approval. The report shall follow the BLM Manual 8110 Guidance (Identifying and Evaluating Cultural Resources, 2004): http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_manual.Par.23101.File.dat/8110.pdf and California OHP Guidance as provided in the *Archaeological Resource Management Report 1990 (ARMR)*: (<http://ohp.parks.ca.gov/pages/1054/files/armr.pdf>) The Permittee shall report on all field activities including dates, times and locations, findings, samplings, and analyses. All pertinent survey reports, site records, and additional research reports not previously submitted to the California Historical Resource Information System (CHRIS) and the State Historic Preservation Officer (SHPO) shall be included as an appendix to the CRR.
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 - II. Agency: The lead federal agency for the project and any other Federal or State Agencies involved in the undertaking
 - III. Permits: At a minimum, the State Permit and Field Authorization are required, but other reference numbers assigned to the project, including CRM Tracker, NEPA, or Special Permit Application numbers, if known, may also be included.
 - IV. General Location of the project and field survey: nearest town, vicinity, County, or Section, Township and Range
 - V. Dates of Field Survey
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 - i. Total acreage of the Area of Potential Effect.
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 - iii. The acreage of all lands surveyed at the BLM Class III level and all lands surveyed at the Class II level, regardless of land ownership.
 1. Acreage of BLM lands surveyed at Class III level and the Class II level.
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 - v. Total number of cultural properties located only within the project's Area of Potential Effect. Provide Trinomials or Property Numbers for both newly recorded and previously recorded properties.

vi. Of the cultural properties located only within the Area of Potential Effect:

1. Number of cultural properties that the consultant has recommended are eligible for the National Register, if applicable.
 2. Number of cultural properties that the consultant has recommended as not eligible for the National Register, if applicable.
 3. Number of cultural properties within the Area of Potential Effect that can/will be avoided.
 4. Number of cultural properties within the Area of Potential Effect that cannot be avoided and would be affected.
- f. All cultural artifacts and other related materials such as notes, photographs, etc., acquired under the provisions of this permit **remain the property of the United States Government** and may be recalled at any time for the use of the Department of the Interior or other agencies of the Federal Government. Cultural materials collected under the provisions of this permit must be curated at a repository approved by the BLM. Curation shall be at a local qualified repository, if feasible, and an approved curation facility shall be designated prior to all field projects. An itemized list of all materials with accession numbers, curated at the repository will be submitted to the State Office and to the appropriate Field Office within 180 days of the completion of individual field projects. A copy of a receipt from the curation facility must be submitted with the list or catalogue.
- g. Permittees shall acquire a Trinomial and Primary number from the appropriate Information Center for each cultural resource documented while undertaking work authorized by this permit. Final primary and site trinomial numbers issued by the California Historical Resources Information System Center must be included in the final report.
- h. The BLM Field Manager or authorized representative may require a monthly briefing or written progress report outlining what was accomplished. The timing and method of progress reports shall be arranged with the BLM Field Manager or authorized representative.
- i. The individual(s) in direct charge must be academically qualified and possess adequate field experience. At least two weeks prior to initiation of field work, the permittees must provide the BLM Field Manager with the vitae of individuals proposed to be in direct charge if not approved at the time of permit issuance. A list of field crew members should be submitted at the same time. Only the individual(s) listed in Item No. 8 of the permit is/are authorized to be in direct charge of field work conducted under this permit.
- j. The person(s) in direct charge of field work shall be on site at all times when work is in progress. Failure to comply with permit stipulations will result in removal of subject's name(s) from the approved list of person-in-direct-charge.
- k. Care should be exercised to avoid directly or indirectly increasing access or potential vandalism to sensitive sites.
- l. All National Permit Stipulations are binding. The authority for issuing permits in the Bureau of Land Management rests solely with the State Director as Delegated by the Secretary of the Interior and all further delegation is prohibited by Secretarial Order. No Modification of National Permit Conditions 8 or 9 or of the California Special Permit Conditions may occur except by written decision of the State Director.
- m. GPS data shall be collected and include, at a minimum, the x-y coordinate location of each archaeological site. The GPS data shall be reported on the site record or in an appropriate electronic table format with site identifier, x coordinates, y coordinates, type of GPS unit utilized in the field, the coordinate(s) and their coordinate system, and whether the reported coordinate is corrected or uncorrected for GPS error.
- n. A CD-ROM, DVD, or similar durable storage media containing the final report in portable document format (PDF) will be submitted along with hard copies of the final report. Permittees with GIS capabilities shall submit GIS shapefiles representing point, line or polygon entities for resources recorded and the area of investigation will be included. A projection file will be associated with each shapefile and the permittee shall ensure data complies with BLM State requirements. The BLM National Metadata Standards for transmittal of GIS data are attached and should be followed. Submittal of shapefiles will satisfy stipulation m.
- o. On large or complex projects or at agency discretion, the BLM may require the use of the CA BLM cultural resources geodatabase and attributing tool for the incorporation of resource and investigation data and metadata. The geodatabase will be populated and submitted to the BLM following acquisition and input of primary and trinomial numbers. The BLM will provide training on the use of the attributing tool. Use and submittal of the geodatabase will satisfy stipulations m. and n.
- p. **Permittee shall not release any reports, site records, or other documents prepared as a result of the work authorized by this Permit to the Applicant, any outside individual or entity, government agency, non-governmental organization, or Indian tribe, unless otherwise directed by BLM.**
- q. Non-disclosure agreements executed between the Permittee and the Applicant that prohibit the Permittee from providing the BLM with reports, site records, or other documents prepared as a result of the work authorized by this Permit or a Fieldwork Authorization are inconsistent with Stipulation " f " of the BLM California State Permit Conditions and Stipulation " t " of the BLM National Cultural Resources Use Permit - Standard Permit Conditions.
- r. Permittee shall disclose that such a non-disclosure agreement has been executed.

- I. BLM may suspend, terminate, or not issue a Permit or a Fieldwork Authorization when a non-disclosure agreement has been executed between the Permittee and the Applicant.
- II. Where the Applicant, an outside individual entity, government agency, non-governmental organization, or American Indian tribe has requested reports, site records, or other documents prepared as a result of the work authorized by this Permit or a Fieldwork Authorization, **the BLM will serve as the conduit through which information shall be provided** to the requesting party, unless the consultant is otherwise directed by the BLM.
- s. Permittee is authorized to submit BLM **approved** site records to the California Historical Resources Information System for the purposes of obtaining permanent site numbers.
- t. Permittee shall fully credit USDI, Bureau of Land Management, in any reports, articles, books, films, photographs, video tapes, newspaper/magazine articles, television interviews, electronic media and/or any other media coverage resulting from work generated under this permit.

Revised 4/8/2013

By signing below, I, the Principal Investigator, acknowledge that I have read and understand the conditions for the Permit for Archeological Investigations and agree to its terms and conditions as evidenced by my signature below and initiation of work or other activities under the authority of this permit.

Signature and title:

Tracy Jordan, Project Director

Date:

10/30/13

Paperwork Reduction Act and Estimated Burden Statement: This information is being collected pursuant to 16 U.S.C. 470cc and 470mm, to provide the necessary facts to enable the Federal land manager (1) to evaluate the applicant's professional qualifications and organizational capability to conduct the proposed archeological work; (2) to determine whether the proposed work would be in the public interest; (3) to verify the adequacy of arrangements for permanent curatorial preservation, as United States property, of specimens and records resulting from the proposed work; (4) to ensure that the proposed activities would not be inconsistent with any management plan applicable to the public lands involved; (5) to provide the necessary information needed to complete the Secretary's Report to Congress on Federal Archeology Programs; and (6) to allow the National Park Service to evaluate Federal archeological protection programs and assess compliance with the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470). Submission of the information is required before the applicant may enjoy the benefit of using publicly owned archeological resources. To conduct such activities without a permit is punishable by felony-level criminal penalties, civil penalties, and forfeiture of property. A federal agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. Public reporting for this collection of information is estimated to average one hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Departmental Consulting Archeologist; NPS; 1849 C Street, NW (2275); Washington, DC 20240-0001.

Failure of the permit administrator to sign and return this page within **30 days of receipt** will result in immediate suspension of the Permit. Please return this page to the Bureau of Land Management, 2800 Cottage Way, W-1928, Sacramento, CA 95825 Attn: Cultural Resources Program or send a digital copy to [Tony Overly soverly@blm.gov](mailto:Tony.Overly@blm.gov) with a hard copy to follow by regular mail.

FIELDWORK AUTHORIZATION

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

FIELDWORK AUTHORIZATION

To Conduct Specific Cultural Resource Work Under the Authority of
a Cultural Resources Use Permit Issued by the Bureau of Land Management
Pursuant to Sec. 302(b) of P.L. 94-579, October 21, 1976, 43 U.S.C. 1732
and Sec. 4 of P.L. 96-95, October 31, 1979, 16 U.S.C. 470cc

INFORMATION
REQUIREMENT APPROVED
OMB NO. 1024-0037

FOR BLM USE ONLY

Request Number

Reviewed and Approved by:

1. State Permit Number and Date Issued

CA-12-22, issued 7/26/12

1a. Name of Permittee

Stacey Jordan

2. Mailing Address1420 Kettner Boulevard, Suite 500
San Diego, CA 92101 USA**3a. Telephone Number**

(619) 233-1454

3b. Facsimile Number

(619) 233-0952

3c. Email Address

Stephanie.jow@aecom.com

4. Nature of Cultural Resources Work (If Consultation Work, Identify Client and Project).

Class III survey in support of gen-tie ROW Grant, RE Barren Ridge Solar LLC, Recurrent Energy (RE) Cinco Gen-Tie Line Project

5. Location of Proposed Work (Include Map)**a. Description of Public Lands Involved**

Survey area consists of approximately 200 acres of BLM managed lands located on the following USGS 7.5" quadrangles (see map):
Mojave NE T31S, R36 ½E, Sections 24, 25, and 13
Mojave NE T31S, R36E, Section 24
Mojave NE T31S, R37E, Section 18, 19, and 30

b. Identification of Cultural Resource(s) Involved (if applicable)

AECOM performed a record search of the records on file at the Southern San Joaquin Valley Information Center at California State University, Bakersfield.

A single prehistoric isolate was previously recorded in survey area. Forty-seven previously recorded cultural resources are within one half mile of survey area.

6. Period During Which Work Will Be Conducted

From:

05/5/2014

To:

10/5/2014

(An estimated 3 field days to occur within 5 days receipt of FA)

7. Name of Individual(s) Responsible for Planning & Supervising Field Work & Approving Reports, Evaluations & Recommendations

Stephanie Jow (fieldwork supervisor); Wayne Glenny (crew chief); Stacey Jordan (approve reports, evals & recommendations)

8. Signature of Applicant

9. Date

04/28/2014

10. Signature of BLM Authorizing Officer

11. Date

4/30/2014

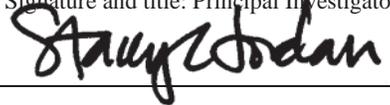
Attach Additional Sheets for Information as Necessary

Special Permit Conditions Continuation Sheet: California Desert District Conditions

The following California Desert District Special Permit Conditions are provided as a supplement to the BLM California State Permit for Archaeological Investigations Standard Permit Conditions and to the BLM California supplemental State Permit Conditions, and in particular to Standard Permit Conditions *n* and *w* of the BLM California State Permit for Archaeological Investigations Standard Permit Conditions, and Special Permit Conditions *b*, *d*, and *f* of the BLM California supplemental State Permit Conditions. All of the Standard Permit Stipulations and all of the California supplemental State Permit Conditions continue to apply to any California State Permit for Archaeological Investigations and any subsequent Fieldwork Authorization.

1. Permittee shall not release any reports, site records, or any other documents or materials that result from the work authorized by this Fieldwork Authorization to any person or entity, including, but not limited to the Applicant seeking authorization from the BLM (i.e., right-of-way grant) which requires that cultural resources activities be conducted, any third party individual or entity, any governmental agency (except the BLM), a non-governmental organization, or Indian tribe, unless otherwise directed in writing by the BLM.
2. Any agreement that is executed by and between the Permittee and the Applicant or any other person or entity that requires the Permittee to release any reports, site records, or any other documents or materials that result from the work authorized by this Fieldwork Authorization to the Applicant or any other person or entity without BLM written approval are inconsistent with Stipulation *f* of the BLM California supplemental State Permit Conditions and section 1, above.
 - a. Permittee shall disclose that such an agreement has been executed.
 - b. BLM may suspend, terminate, or refuse to issue a Fieldwork Authorization where an agreement has been executed between the Permittee and the Applicant or any other person or entity that requires the Permittee to release the reports, site records, or any other documents or materials as noted in section 2, above.
3. The Permittee shall refer to the BLM any and all requests by an Applicant, any third party individual or entity, any governmental agency (except the BLM), a non-governmental organization, or Indian tribe for any reports, site records, or any other documents or materials that result from the work authorized by this Fieldwork Authorization. The BLM will determine whether, to what extent and in what manner, if any, the report, site records, or any other documents or materials will be released.
 - a. Permittee must request and receive permission from BLM to submit site records to the California Historical Resources Information System for the purposes of obtaining permanent site numbers.
4. All reports, site records, and any other documents or materials that result from the work authorized by this Fieldwork Authorization is and remains the sole property of the United States of America and any release without the written approval of the BLM may be determined to be a violation of federal law.

By signing below, I, the Principal Investigator, acknowledge that I have read and understand the Permit for Archeological Investigations and agree to its terms and conditions as evidenced by my signature below and initiation of work or other activities under the authority of this permit.

Signature and title: Principal Investigator


Date:
4/28/2014

Supplemental Stipulations and Guidance

1. This authorization is for field survey only. No artifacts should be collected. If it is determined that collection of artifacts or sub-surface testing is necessary to complete a site evaluation or for the purposes of protecting or preserving special artifacts or materials, please contact the designated Field Area Archaeologist for instruction and authorization.
2. If applicable, final site numbers issued by the appropriate California Historical Resources Information System Center (IC) should be included in the final report. Consultants/applicants are responsible for providing copies of the final report to the California Historical Resources Information System once they have the permission of the BLM.
3. Three copies of the final report, including site forms with final site numbers assigned by the appropriate IC, shall be provided to the authorizing BLM field office after completion of fieldwork. At this time BLM requests, but does not require, that a copy of the report and any associated documents, site forms, and maps also be provided in the PDF electronic document format. We also request to get copies of any digital files created using GIS/GPS, including survey area and locations of sites, as well as associated metadata. As a general GIS standard, BLM utilizes GIS base maps with the 1983 North American Datum (NAD 83, UTM Projection). We request that this information be submitted on CD-ROM.
- 3) BLM requests that you provide summary statistics about this project as an addition/supplement to the executive summary or abstract of your report. BLM is required to compile these statistics on an annual basis as part of our responsibilities under the National Historic Preservation Act and the Archaeological Resources Protection Act. Please see the tabular questionnaire or attached files for more information.

Contact Information:

Supplemental Reporting Guidelines - Cultural Resources Program

Guidelines for carrying out field surveys and reporting are provided by the California Office of Historic Preservation, the Department of the Interior Secretary's Standards and Guidelines for Archaeology and Historic Preservation, and the BLM 8100 Manual Series. In addition to the normal reporting information, BLM requests that you provide the following summary statistics about this project as an addition/supplement to the executive summary or abstract of your report. BLM is required to compile these statistics on an annual basis as part of our responsibilities under the National Historic Preservation Act and the Archaeological Resources Protection Act. You may follow whatever format best serves your needs. There is no standard form. You may include the information in narrative form, **or you may use the attached data sheet** or create your own version. An electronic version of this form is available upon request.

The following information should be included in or supplement the executive summary of your project or survey report.

1. Project Name
2. Your BLM State Permit Number
3. Your Field Authorization Number
4. Dates of Field Survey
5. Total acreage of all lands surveyed at BLM Class II level.
Of Item 5 above:
 - A) Acreage of BLM lands surveyed.
 - B) Acreage of other lands surveyed (Private, State, Other Federal).
6. Total acreage of all lands surveyed at BLM Class III level.
Of Item 6 above:
 - A) Acreage of BLM lands surveyed.
 - B) Acreage of other lands surveyed (Private, State, Other Federal).
7. Total number of cultural properties in project Area of Potential Effect.
Of Item 7 above:
 - A) Total number of cultural properties for which site records were completed (newly recorded cultural properties).
 - B) Number of new cultural properties on BLM Lands.
 - C) Number of new cultural properties on other lands (Private, State, Other Federal).
8. Of the cultural properties located within the Area of Potential Effect:
 - A) Number of cultural properties that you are recommending as eligible for the National Register.
 - B) Number of cultural properties you are recommending as not eligible for the National Register.

Of Item 8A above:

 - a) Number of cultural properties that can/will be avoided.
 - b) Number of cultural properties that will be affected.
 - c) Number of cultural properties that you are recommending data recovery/mitigation.

Of Item 8B above:

 - a) Number of cultural properties that can/will be avoided.
 - b) Number of cultural properties that will be affected.

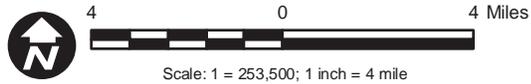
Supplemental Project Statistics Report

1. Project Name.		
2. BLM State Permit Number.		
3. Field Authorization Number.		
4. Dates of Field Survey.		
5. Total acreage of lands surveyed at BLM Class II level.		
Of Item 5 above:		
A) Acreage of BLM lands surveyed		
B) Acreage of other lands surveyed (Private, State, Other Federal) List separately		
6. Total acreage of lands surveyed at BLM Class III level.		
Of Item 6 above:		
A) Acreage of BLM lands surveyed		
B) Acreage of other lands surveyed (Private, State, Other Federal) List separately		
7. Total number of cultural properties in project Area (of Potential Effect).		
Of Item 7 above:		
A) Total number of cultural properties for which site records were completed (newly recorded cultural properties).		
B) Number of new cultural properties on BLM lands		
C) Number of new cultural properties on other lands (Private, State, Other Federal)		
8. Of the cultural properties located within the Area (of Potential Effect): [If properties are not located on BLM, place this number in parentheses () after the number of BLM properties.]		
A) Number of cultural properties that you are recommending as eligible for the National Register.		
B) Number of cultural properties you are recommending as not eligible for the National Register.		
Of Item 8A above:		
a) Number of cultural properties that can/will be avoided.		
b) Number of cultural properties that will be affected.		

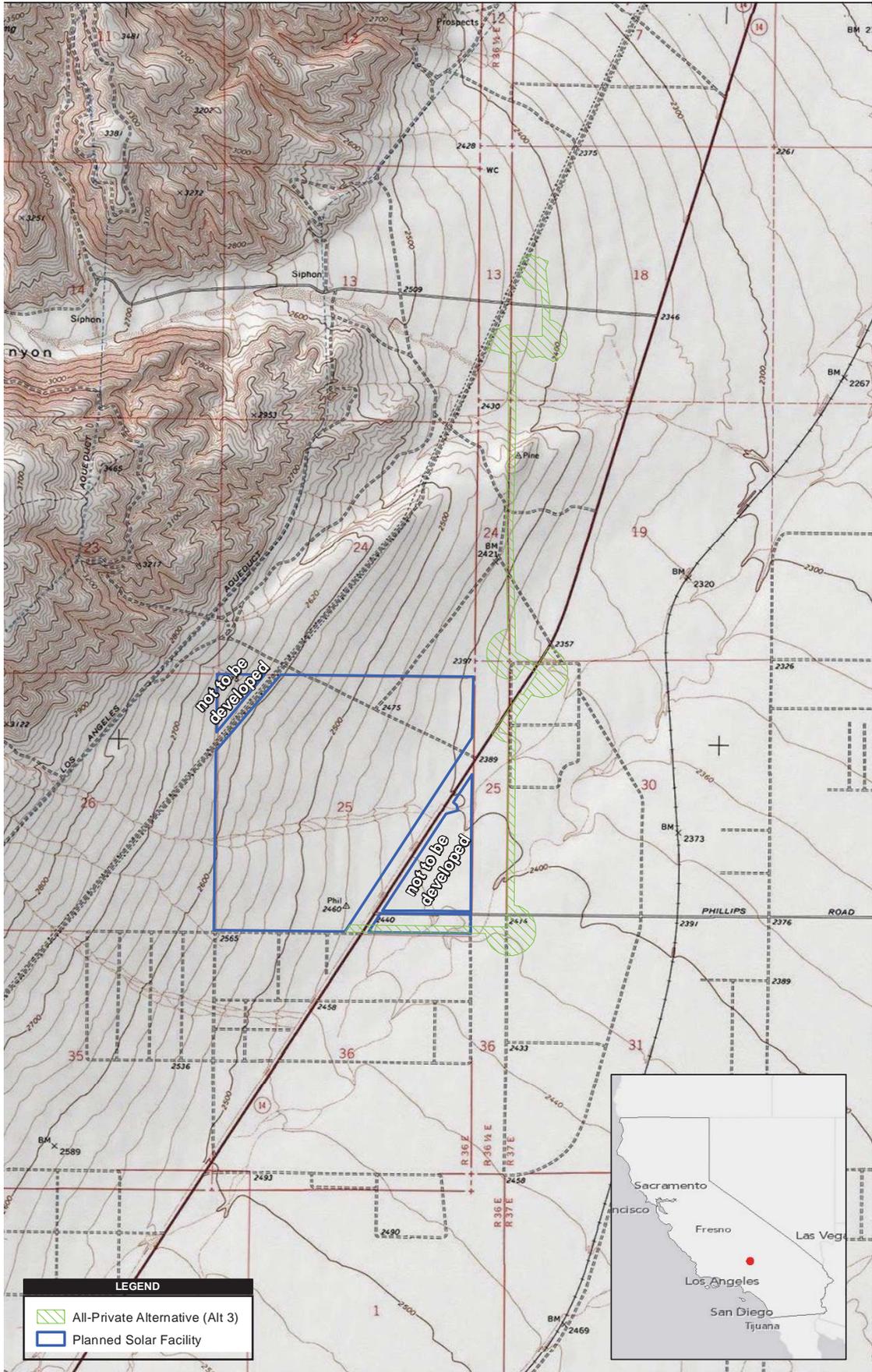
	c) Number of cultural properties that you are recommending data recovery/mitigation.	
	d) Number of cultural properties that were data recovered/mitigated.	
Of Item 8B above:		
	a) Number of cultural properties that can/will be avoided.	
	b) Number of cultural properties that will be affected.	



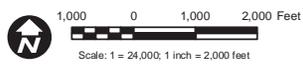
Source: Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom



Project Vicinity



Source: USGS 7.5 Topographic Quadrangle Mojave NE and Cinco CA 1994



USFWS Area of Potential Effects

APPENDIX E

SURVEY RESULTS

(CONFIDENTIAL – Separately Bound)

APPENDIX F

DPR FORMS

(CONFIDENTIAL – Separately Bound)