

APPENDIX G

Cultural Resources Technical Report

**PRELIMINARY DRAFT CULTURAL RESOURCES TECHNICAL
REPORT FOR THE PROPOSED BLYTHE SOLAR POWER PROJECT
RIVERSIDE COUNTY, CALIFORNIA
-NOT REVIEWED-**

Prepared for:

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and
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USGS Quadrangles: McCoy Peak, McCoy Wash, Ripley, Roosevelt Mine 7.5"

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EXECUTIVE SUMMARY

Solar Millennium, LLC and Chevron Energy Solutions (Applicants) are proposing to construct a solar thermal energy generating facility called the Blythe Solar Power Project (BSPP or Project), west of the town of Blythe, in eastern Riverside County. As currently planned, the Project will be a concentrated electrical generating facility composed of four solar parabolic-trough generating stations with a combined electrical output of approximately 1,000 megawatts (MW). The proposed Project will be built entirely on public lands managed by the Bureau of Land Management (BLM), and is currently undergoing review by the California Energy Commission (CEC) in association with the Applicants' submission of an Application for Certification (AFC).

As specified in the Memorandum of Understanding (MOU) between the BLM and CEC concerning solar thermal power plants (BLM 2007), the two agencies are conducting a joint review of the Project satisfying the requirements of both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). To meet applicable regulatory requirements, an intensive Class III cultural resources survey and a historic architectural resources survey of the entire Project as originally proposed were conducted by EDWA|AECOM (EDAW). The surveys were conducted under BLM Cultural Use Permit CA-06-20, and a BLM Fieldwork Authorization dated February 6, 2009. This report presents the inventory and assessment of the cultural resources identified during the Project surveys along with the results of attendant historical research and contact programs. The results of the historical architecture survey and reconnaissance are presented separately in Attachment 6. Additionally, to meet CEC requirements for the preparation of an AFC, local historical societies, the Native American Heritage Commission, and local Native American tribal representatives were contacted for input. The results of the ongoing contact programs are presented in Chapter 3.

Prior to field investigations, on February 11, 2009, cultural resources staff completed a comprehensive records search for the Project area at the California Historical Resources Information System Eastern Information Center (EIC), housed at the University of California, Riverside. The records and literature indicated that a total of 28 previous investigations had been conducted in the Project and within a 1-mile radius of the BLM right of way (ROW). These consist of 24 survey level investigations, one heritage resources program, one management plan, one monitoring report, and one regional overview. Of these, 16 had been conducted within portions of the Project survey area (BLM 1989; Cowan and Wallof 1977; Crew 1980; Greenwood 1977; King et al. 1973; McDonald and Schaefer; McDougall et al. 2006; Mitchell 1989; Padon et al. 1990; Reed 1984 a and b; Schaefer et al. 1996; Swenson 1981; von Werlhof 2004; Underwood et al. 1986; Wilson 1984).

The records search also indicated 70 cultural resources had been previously recorded within a 1-mile radius of the ROW. Of these, five are located within the Project as currently planned. These include a ceramic scatter, a trail segment, a lithic scatter, and two large lithic quarries. Sixty-five cultural resources are located outside of the Project APE but within the one-mile buffer around the Project ROW. These include an intaglio, rock features, multi-component sites, trail segments, rock alignments, cleared areas, lithic scatters and quarries, lithic and ceramic scatters, ceramic

scatters, temporary camps, historic debris scatters, historic tent platforms, can scatters, a historic road bed, and various isolated artifacts.

A Class III cultural resources survey of approximately 7,850 acres was undertaken for the Project beginning on March 30, 2009 and concluding on June 26, 2009. The cultural resources survey included the Project plant site disturbance area with a 200-foot buffer on all sides, and two transmission lines with 50-foot buffers on each side of the proposed alignments, per CEC requirements. The transmission lines surveyed as part of this investigation have since been abandoned due to changes in the location of a planned electrical substation. Although the cultural resources found along those transmission lines are presented here, they are not included in the AFC section to which this report is an appendix, as they are no longer part of the proposed BSPP. When the transmission route is finalized, additional studies will be performed and the information provided to the agencies and other stakeholders.

The cultural resources survey inventoried a total of 227 archaeological sites of which 193 are historic, 29 are prehistoric, and 5 contain both historical and prehistoric materials. Three of the prehistoric sites, and one of the multicomponent sites had previously been recorded. The survey also identified 1,214 new isolated finds. Based on changes to the Project that occurred subsequent to the cultural resources survey, 24 of the archaeological sites and 65 of the isolated artifacts are no longer within the Project disturbance area and associated 200-foot buffer. Most of the sites and isolates are historical in age, and consist predominantly of metal cans, with smaller quantities of glass bottles and jars, milled lumber, broken ceramics, and sundry metal items. Historical features include survey markers, rock features, prospecting pits, stone and wooden structures, as well as cleared areas, fortified positions, can and trash scatters, aircraft parts, smoke land mines, and tank tracks associated with the use of the Project vicinity during WWII as part of the Desert Training Center/California-Arizona Maneuvers Area. Prehistoric cultural materials include flaked stone tools and debitage, groundstone items, tested cobbles, ceramic sherds, cairns, and thermal features.

Assessments of the archaeological sites based on surface materials and conditions indicate that 41 of the sites located within the current disturbance area, or area of potential effect (APE), are potentially significant and eligible for inclusion on the CRHR under either Criteria 1 or 4 and are unevaluated for the NRHP. Only those sites and isolates within the current APE are evaluated. Table ES-1 summarizes the identified archaeological resources and their status. If potentially eligible sites cannot be avoided, further investigations will be required to determine the significance of the identified resources under Section 106 of the National Historic Preservation Act (NHPA).

Table ES-1. Summary of Archaeological Resources Potentially Affected by the BSPP

	Total	Potentially Eligible for CRHR Unevaluated for NRHP	Not Eligible	Not Evaluated
Prehistoric Sites	29	23	2	4
Historic Sites	193	16	148	29
Multi-component Sites	5	2	0	3
Isolated Finds	1,214	0	1,149	65

CHAPTER 1

INTRODUCTION

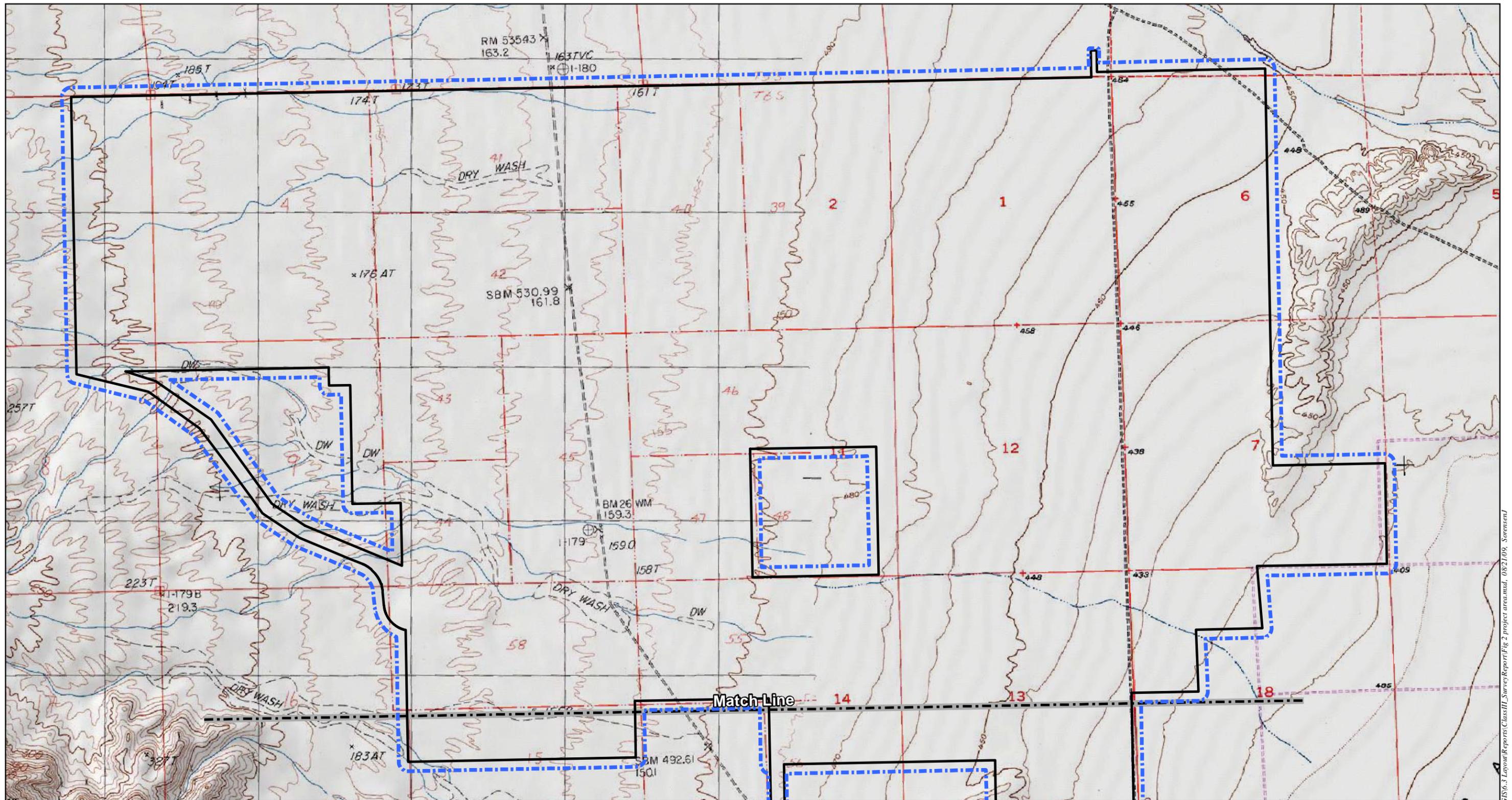
PROJECT DESCRIPTION

Solar Millennium LLC and Chevron Energy Solutions (Applicants) are proposing to develop the Blythe Solar Power Project (BSPP or Project), a solar thermal power generating facility with a capacity of nominal 1,000 megawatts (MW), west of the town of Blythe, in eastern Riverside County, California. (Figure 1 and Figure 2). The BSPP will use a parabolic-trough solar thermal technology to concentrate the sun's energy on linear receivers located at the center point of each parabolic solar sub-array. The energy collected in the array will be channeled to create steam which, in turn, will drive a turbine that generates electricity.

The BSPP will be built on public lands managed by the Bureau of Land Management (BLM), and will produce more than 50 megawatts (MW) upon completion. As such, the Project is required to undergo review by both the BLM and the California Energy Commission (CEC). The two agencies have agreed to conduct combined reviews of large solar thermal power projects, as stipulated in a Memorandum of Agreement (MOA) executed in 2007. EDAW has been retained to conduct cultural resources studies, including archaeological and architectural surveys, for the Project to satisfy state and federal regulations. This report is intended to support compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) as part of the joint review process.

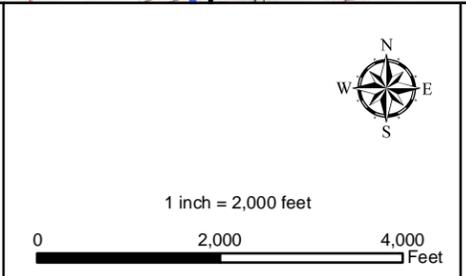
A Class III archaeological survey for the Project area began on March 30, 2009 and concluded on June 26, 2009. The cultural resources survey area included the Project plant site disturbance area with a 200-foot buffer on all sides, and proposed linear features with 50-foot buffers to each side of the proposed alignments. The route of the transmission line that will connect the Project with the regional electricity grid has not been finalized, and the preliminary alignment provided by the Applicants has since been abandoned. That original transmission alignment was surveyed as part of the cultural resources survey, and the resources identified there are presented as part of this report, although they are not included in the Application of Certification (AFC) filing with the CEC. At present, the route of the transmission line is under discussion. If a new route is chosen for the transmission line, the needed cultural resources investigation will be conducted and the results provided to the regulatory agencies and other stakeholders.

Prior to field investigations, a records search was undertaken at the California Historical Resources Information System Eastern Information Center (EIC) housed at the University of California, Riverside. The search area included the BLM right-of-way (ROW), which encompasses the proposed Project area and a 1-mile buffer around the project. The records search indicated that 16 previous studies had been conducted within portions of the Project area, and that four cultural resources had been previously recorded in the Project area. Archaeological field investigations included survey teams of archaeologists walking linear transects across the disturbance areas and buffer zones in order to identify cultural materials located within the Project.



Legend
 Archaeological Survey Area
 Facility Footprint

Source: NAIP, 2005; USGS; AECOM 2009



**Class III Cultural Resources
 Report for the
 Blythe Solar Power Project**

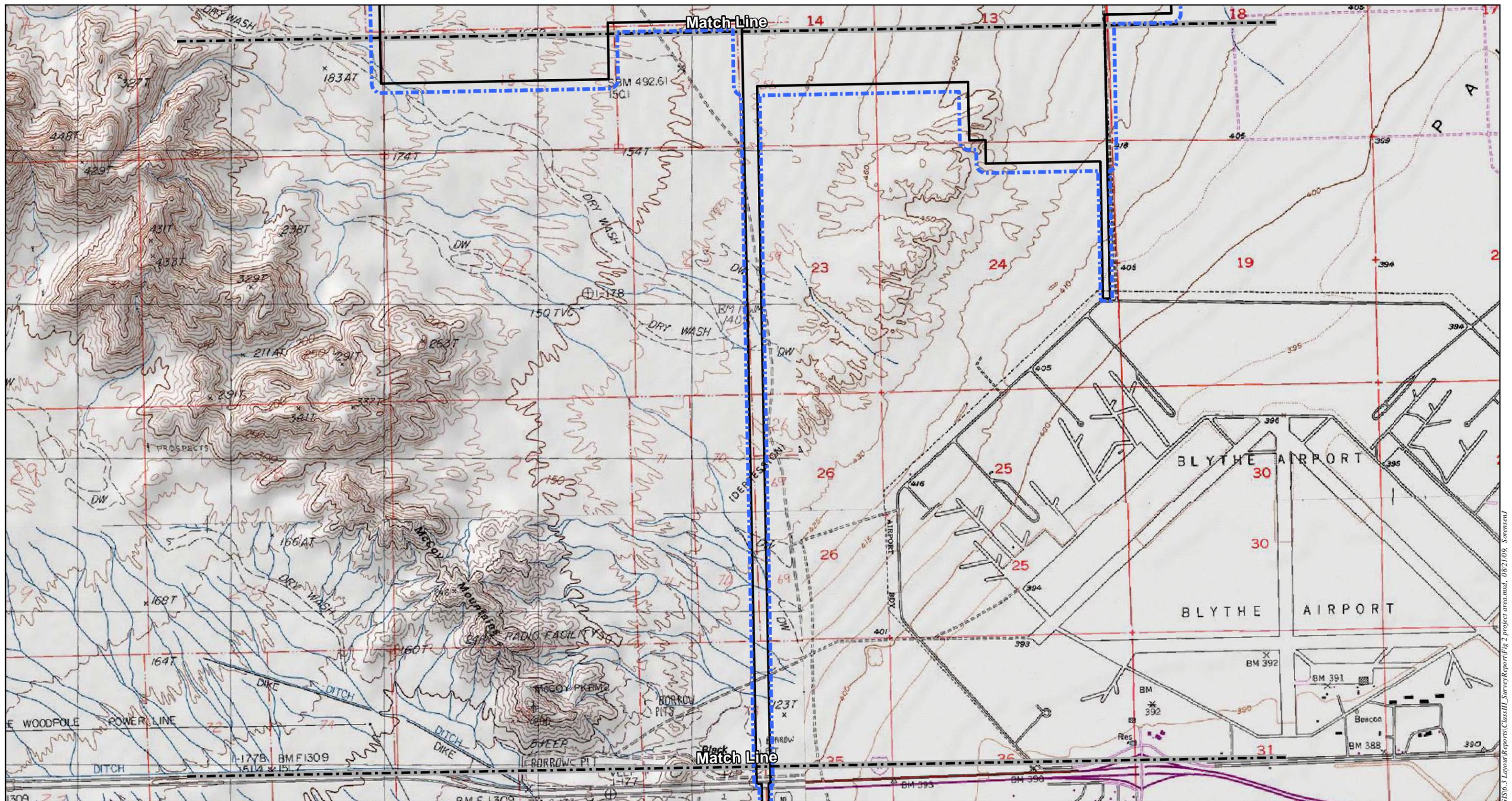
**Figure 2a
 Project Area**

Solar Millennium

AECOM

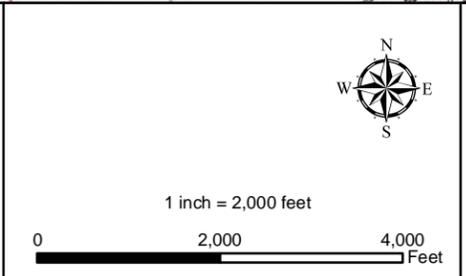
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- Legend**
- Archaeological Survey Area
 - Facility Footprint

Source: NAIP, 2005; USGS; AECOM 2009



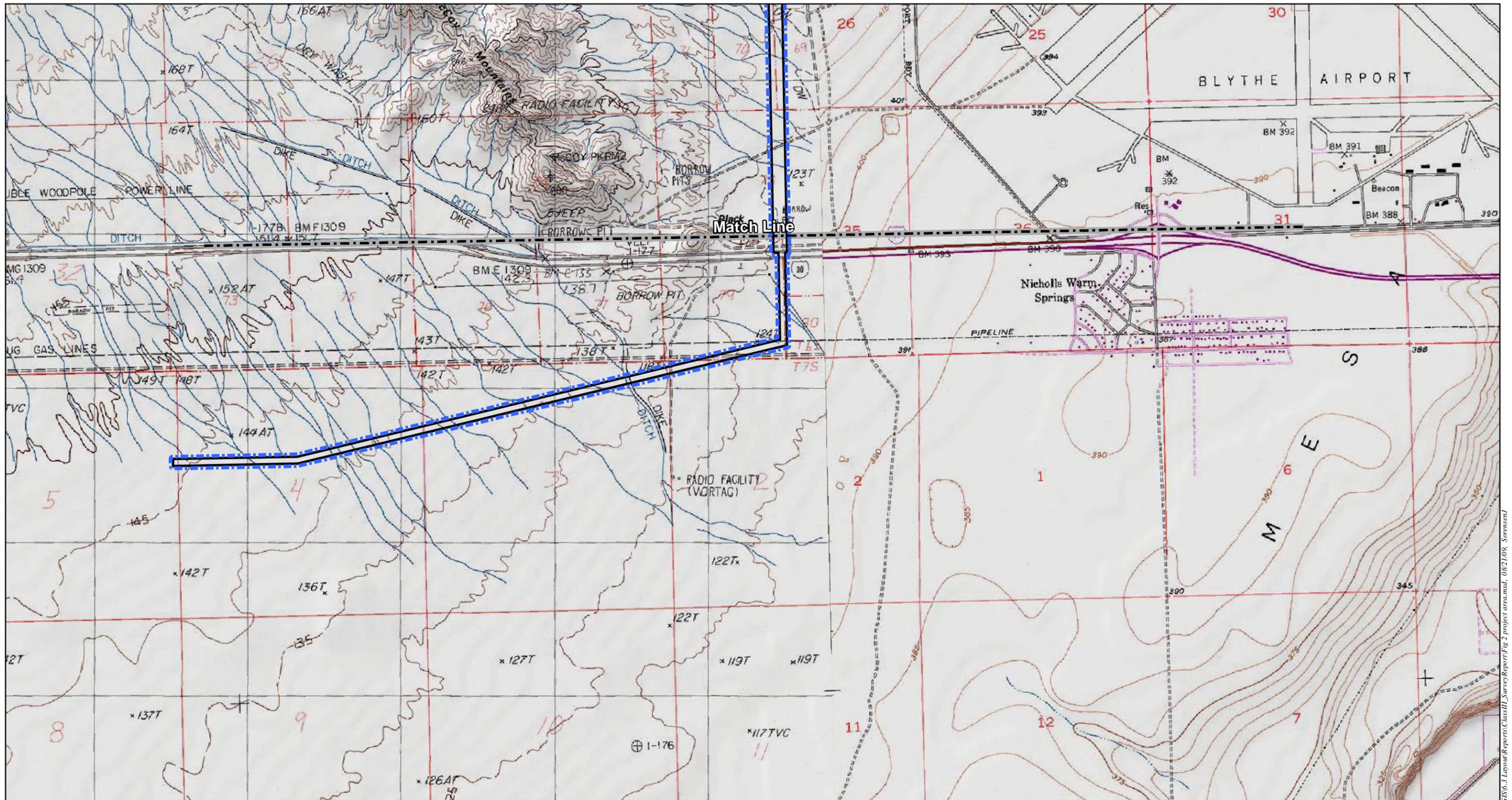
Class III Cultural Resources Report for the Blythe Solar Power Project

Figure 2b Project Area



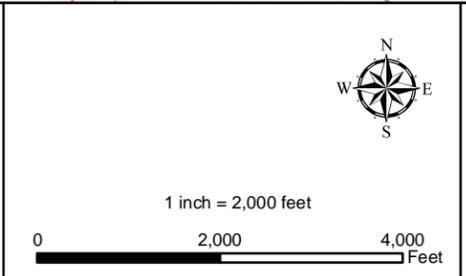

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Legend
 Archaeological Survey Area
 Facility Footprint

Source: NAIP, 2005; USGS; AECOM 2009



Class III Cultural Resources Report for the Blythe Solar Power Project

Figure 2c Project Area

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REGULATORY SETTING

Cultural resources were assessed for eligibility for inclusion in the California Register of Historical Resources (CRHR) and the National Register of Historical Places (NRHP). Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance.

For listing in the CRHR a historical resource must be significant at the local, state or national level under one or more of the following four numbered criteria:

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

For listing in the NRHP, a historical resource must be significant at the local, state or national level under one or more of the following four lettered criteria:

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

All resources nominated for listing must have integrity, which is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling and association. It must also be judged with reference to the particular criteria under which a resource is proposed for nomination.

Assessments of Project impacts are based on the level of direct and indirect physical changes to a significant resource. A significant impact would occur if the Project:

- alters a resource or its setting in a manner that affects the qualities that make it significant. Direct impacts to archaeological resources include grading, and for built resources include removal of key elements (e.g., roof), or demolition;
- indirectly alters the setting, access to, or other elements of the resource in a manner that negatively affects the significance of the resource. Examples of indirect impacts include increased erosion at archaeological sites or visual intrusion of buildings that are left vacant; or
- disturbs any human remains, including those located outside of formal cemeteries.

LORS

Numerous laws, ordinances, regulations, and standards (LORS), on federal, state and local levels, seek to protect and target the management of cultural resources. The BSPP will comply with applicable LORS throughout construction and operation. Applicable LORS are summarized in Table 1 and briefly discussed below.

Table 1. LORS Applicable to Cultural Resources

Laws	Applicability
Federal	
Antiquities Act of 1906, Title 16 United States Code, Sections 431-433	Federal legislation for protection of cultural resources on federal land
National Historic Preservation Act (NHPA), Title 16 United States Code Section 470 et seq.	Establishes national policy of historic preservation; requires that Federal agencies consider significant cultural resources prior to undertakings.
Archaeological Resources Protection Act of 1979, Title 16 United States Code Sections 470aa-470mm	Provides protection for archaeological resources on public lands and Indian lands
Executive Order 11593 of May 13, 1971, 36 Federal Register (FR) 8921	Provides for protection and enhancement of the cultural environment
Secretary of Interior’s Standards for Archaeology and Historic Preservation 48 FR 44716-42	Establishes guidelines for technical reports and standards for evaluation for State Historic Preservation Office
Federal Land Policy Management Act of 1976 Sections 1710 (a)(8) and 1740	Establishes that public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ...and archeological values.
Native American Graves Protection and Repatriation Act, Title 25, United States Code Sections 3001-3013	This law provides for ownership of Native American graves and grave goods on federal lands..
American Indian Religious Freedom Act, Title 42 United States Code Section 1996	Provides protection of Native American religious practices
State	
California Environmental Quality Act (CEQA), Public Resources Code Section 21083.2	Requires public agencies to evaluate impacts to cultural resources; provides guidance for evaluating and mitigating impacts.

Laws	Applicability
CEQA Guidelines, California Code of Regulations Title 14 Sections 15064.5, 10564.7, 105126.4(b), Appendix G Section V	Addresses reburial options for Native American remains and provides for treatment of archaeological discoveries. Encourages agencies to develop thresholds of significance to determine the significance of environmental effects Outlines mitigation measures related to impacts on historical resources. Environmental checklist for identifying potential disturbances to cultural resources
Public Resources Code Sections 5024.1, 5097.98, 5097.99, 5097.991, and 21084.1	Establishes the California Register of Historical Resources Discusses the procedures that need to be followed upon the discovery of Native American human remains. Establishes that removal of Native American grave artifacts or remains is a felony Establishes that it is the policy of the state to repatriate Native American grave artifacts Provides a definition of historical resources, and states that projects that cause a substantial adverse change in the significance of an historical resource are projects that may have a significant effect on the environment
Assembly Bill 2641	Modifies the process that private land owners follow after discovering Native American human remains (set forth in California Public Resources Code 5097.98).
Health and Safety Code Sections 7050.5, and 8010-8011	Establishes procedures for notification in the event of the discovery of human remains. Requires construction to be halted and the County Coroner to be contacted if human remains are encountered. Makes it a misdemeanor to disturb or remove human remains found outside a cemetery.
Local	
Riverside County General Plan, Chapter 5 (Multipurpose Open Space [OS] Element), Policies OS 19.2-19.4	Provides that the County will promote the preservation of cultural resources and promote Native American consultation
Riverside County General Plan, Chapter 5 (Multipurpose Open Space [OS] Element), Policies OS 19.5-19.7	Provides historic structure evaluation and enforcement of the Historic Building Code during development projects
Riverside County General Plan, Exhibit A, CEQA Findings of Fact and Statement of Overriding Considerations, Section 4.7, Mitigation Monitoring Program, Measures 4.7.1A, 4.7.1B, and 4.7.1C	Outlines mitigation measures for cultural resources monitoring programs

Federal LORS

Antiquities Act of 1906, Title 16 United States Code Sections 431 - 433. This Act establishes criminal penalties for unauthorized destruction or appropriation of “any historic or prehistoric ruin or monument, or any object of antiquity” on federal land.

National Historic Preservation Act, Title 16 United States Code Section 470 et seq. The National Historic Preservation Act (NHPA) sets in place a program for the preservation of historic properties. Section 106 of the NHPA requires federal agencies to take in to account the effects of projects on historic properties (resources included in or eligible for the NRHP. It also gives the Advisory Council on Historic Preservation and State Historic Preservation Offices (SHPO) an opportunity to consult. Federal agencies issuing permits for the BSPP would be required to comply with NHPA requirements.

Archaeological Resources Protection Act of 1979, Title 16 United States Code Section 470aa-470mm. This Act provides protection of archaeological resources from vandalism and unauthorized collecting on federal land.

Executive Order 11593 of May 13, 1971, 36 Federal Register (FR) 8921. This Executive Order focuses on the protection and enhancement of the cultural environment. It outlines responsibilities of the federal agencies and Secretary of the Interior with regard to cultural resources.

Archeology and Historic Preservation: Secretary of Interior's Standards and Guidelines 48 FR 44716-42. This document establishes standards and guidelines regarding professional qualification requirements for archaeological and historic preservation professionals, technical report format and content, and standards for resource evaluation required by the State Historic Preservation Officer.

Federal Land Policy Management Act of 1976 43 United States Code Section 1701 et seq. The Federal Land Policy Management Act (FLPMA) declares that it is the policy of the United States that public lands be managed so as to protect historical and archaeological resources, and that the Secretary of Interior shall establish rules and regulations regarding resource protection on public lands.

Native American Graves Protection and Repatriation Act, Title 25 United States Code Sections 3001-3013. Provides for the protection of Native American graves, funerary objects, and "objects of cultural patrimony" on federal land and establishes the procedures for determining ownership for Native American human remains, funerary objects, and other sacred objects under federal jurisdiction

American Indian Religious Freedom Act, Title 42 United States Code Section 1996. This measure establishes a national policy to protect the right of Native Americans and other indigenous groups to exercise their traditional religions. Federal agencies issuing permits for the BSPP would be required to comply with this Act if Native Americans identified issues regarding their right to exercise traditional religious practices.

State LORS

California Environmental Quality Act (CEQA), Public Resources Code Section 21083.2. Under CEQA, the lead agency is responsible for determining whether a project may have a significant effect on historical and archaeological resources. Section 21083.2 states that if the lead agency determines that the project may have a significant effect on "unique" archaeological resources,

an environmental impact report shall address these resources. A unique archaeological resource is an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one of the following criteria: (1) Contains information needed to answer important research questions and that there is a demonstrable public interest in that information; (2) Has a special and particular quality such as being the oldest or best example of its type; or (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require that reasonable efforts be taken to preserve these resources in place or provide mitigation measures. CEC licensing is a CEQA-equivalent process.

CEQA Guidelines, California Code of Regulations Title 14 Section 15064.5. State CEQA Guidelines define a “historical resource” to include:

- Resource(s) listed or eligible for listing on the California Register of Historical Resources (14 California Code of Regulations (CCR) Section 15064.5(a)(1); Resource(s) either listed in the National Register of Historic Places or in a “local register of historical resources” unless “the preponderance of evidence demonstrates that it is not historically or culturally significant.” (14 CCR Section 15064.5(a)(2)); Resources identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code (14 CCR Section 15065.5(a)(2)). Subdivision (g) provides that

[a] resource identified as significant in an historical survey may be listed in the CRHR if the survey meets all of the following criteria:

- 1) The survey has been or will be included in the State Historic Resources Inventory.
- 2) The survey and the survey documentation were prepared in accordance with...procedures and requirements [of the (California) Office of Historic Preservation].
- 3) The resource is evaluated and determined [by the Office of Historic Preservation] to have a significance rating of Category 1 to 5 on [the Department of Parks and Recreation Historic Resources Inventory Form].
- 4) If the survey is five years or more old at the time of its nomination for inclusion in the California Register of Historical Resources, the survey is updated to identify historic resources that have become eligible or ineligible due to changed circumstances or further documentation and those that have been demolished or altered in a manner that substantially diminished the significance of the resource.

Resources identified by such surveys are presumed to be historically or culturally significant unless the preponderance of evidence demonstrates otherwise.

- The final category of “historical resources” may be determined at the discretion of the lead agency:
Any object, building, structure, site, area, place, record, or manuscript, which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, education, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. (14 CCR Section 15064.5(a)(3))

When initial study identifies the existence of, or the probable likelihood of, Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission (NAHC). The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains, and any items associated with Native American burials with the appropriate Native Americans as identified by the NAHC. (14 CCR Section 15064.5(d)).

CEQA Guidelines, California Code of Regulations Title 14, Section 15064.7.

This section encourages lead agencies to develop, publish, and implement thresholds of significance in order to standardize environmental assessments. Such thresholds must be adopted by ordinance, resolution, regulation or rule at the conclusion of a public review process.

CEQA Guidelines, California Code of Regulations Title 14, Section 15124(b).

This section states that where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way. This section also states that the preferred mitigation for historical resources is treatment in a manner consistent with Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. The preferred mitigation for archaeological sites is preservation in place.

CEQA Appendix G Section V. This appendix is a checklist that identifies potential impacts to historical, cultural, or paleontological resources. The checklist includes four questions to determine if a potential project would:

- a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?
- c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
- d) Disturb any human remains, including those interred outside of formal cemeteries?

Questions on the checklist are assessed to determine if a project impacts would be potentially significant, less than significant with mitigation, less than significant, or have no impact. The final determination of project impacts is made by the lead agency on the project.

Public Resources Code Section 5024.1. This section establishes the CRHR. A resource may be listed as a historical resource in the CRHR if it meets NRHP criteria or the following state criteria: (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; (2) Is associated with the lives of persons important in our past; (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or (4) Has yielded, or may be likely to yield, information important in prehistory or history.

Public Resources Code Section 5097.98. This section discusses the procedures that need to be followed upon the discovery of Native American human remains. The NAHC, upon notification of the discovery of human remains by the County Coroner, is required to notify those persons it believes to be most likely descended from the deceased Native American. It enables the descendant to inspect the site of the discovery of the Native American human remains and to recommend to the land owner (or person responsible for the excavation) means of treating, with dignity, the human remains and any associated grave goods.

Public Resources Code Sections 5097.99, 5097.991. These sections establish that it is a felony to obtain or possess Native American artifacts or human remains taken from a grave or cairn and sets penalties for these actions. They also mandate that it is the policy of the state to repatriate Native American remains and associated grave goods.

Public Resources Code Section 21084.1. This section sets forth that a project that may cause a significant adverse change in a significant historical resource is a project that may be considered to have adverse effects on the environment. Historical resources not listed on the CRHR or other local lists may still be considered historical resources at the discretion of the lead agency on the project.

Assembly Bill (AB) 2641. This section provides procedures for private landowners to follow upon discovering Native American human remains. Landowners are encouraged to consider culturally appropriate measures if they discover Native American human remains as set forth in California Public Resources Code 5097.98. AB 2641 further clarifies how the landowner should protect the site both immediately after discovery and into the future.

Health and Safety Code Section 7050.5. This code establishes that any person who knowingly mutilates, disinters, wantonly disturbs, or willfully removes any human remains in or from any location without authority of the law is guilty of a misdemeanor. It further defines procedures for the discovery and treatment of Native American remains.

Health and Safety Code Sections 8010-8011. This code is intended to provide consistent state policy to ensure that all California Indian human remains and cultural materials are treated with

dignity and respect. The code extends policy coverage to non-federally recognized tribes, as well as federally recognized groups.

Local LORS

Riverside County General Plan, Chapter 5 (Multipurpose Open Space Element), Open Space Policies 19.2-19.4. This portion of the General Plan outlines policies intended to promote the preservation of cultural resources in the County of Riverside. Policies within this chapter identify the need for a review of project area archaeological sensitivity, resource confidentiality, Native American consultation, and a report of findings.

Riverside County General Plan, Chapter 5 (Multipurpose Open Space Element), Open Space Policies 19.5-19.7. This portion of the General Plan outlines policies for the preservation of historic resources in the County of Riverside. Policies within this chapter identify the need for review of proposals for large development projects by the History Division of the Riverside County Regional Park and Open-Space District for the purposes of evaluation in relation to the potential destruction or preservation of historical sites. The chapter also calls for promotion of built environment preservation through application of the Historic Building Code and authorization of tax credits for historic building and structure retrofitting.

Riverside County General Plan, Exhibit A, CEQA Findings of Fact and Statement of Overriding Considerations, Section 4.7, Mitigation Monitoring Program, Measures 4.7.1A, 4.7.1B, and 4.7.1C. The Riverside Mitigation Monitoring Program addresses cultural resource protection. Mitigation measures include contacting the County Coroner in the event of the discovery of human remains and contacting the NAHC if the remains are determined to be prehistoric, promoting avoidance as the preferred mitigation measure, and five specific measures (4.7.1C a-e) to be implemented as part of data recovery for sites where impacts cannot be avoided.

AREA OF POTENTIAL EFFECTS (APE)

The BLM and CEC provide guidelines for the inventory and documentation of cultural resources within a proposed project area. For the purposes of this report, this includes the identification and inventory of archaeological resources that are at least 50 years old. According to CEC guidelines, archaeological survey is to be conducted on all project sites and extend beyond project boundaries at least 200 ft. For linear facilities, the right-of-way (ROW) and at least 50 ft either side of the ROW is to be surveyed.

For the purposes of AFC document to which this report is appended, the Project cultural resources survey area is defined as the 7,030-acre plant site disturbance area plus a 200-foot buffer around the entire area, which amounts to 7,550 acres. For the purposes of this report, the survey area is defined as the entire area surveyed by Project personnel including the Project plant site disturbance area, the originally proposed linear features, and CEC-mandated buffers, which totals approximately 7,850 acres. The linear features surveyed for this Class III investigation were subsequently removed from the Project plan. A new transmission line has not been

established for the BSPP. When the transmission line is finalized, new survey will be conducted and the results provided to the involved agencies and appropriate interested parties.

BLM guidelines require that all cultural resources identified during a Class III survey be recorded and reported. In the event that a project footprint changes and cultural resources identified during a survey are outside the revised Project boundary, those cultural resources must still be recorded and included in the Class III report. However, evaluations of the significance of sites located outside the current APE are not included in this report.

PROJECT PERSONNEL

<< *to be provided* >>

REPORT ORGANIZATION

Chapter 1 of this report provides a description of the proposed Project, including the regulatory setting of applicable LORS, and a definition of the Project APE. Chapter 2 is a discussion of the physical and cultural setting of the Project. The physical setting includes climate, hydrology, geology, flora and fauna while the cultural setting includes a discussion of the prehistoric and historic contexts relevant to the immediate area and surrounding Colorado Desert. Archival research, including records searches conducted at the Eastern Information Center (EIC) at the University of California, Riverside and the NAHC as well as research undertaken at the BLM field office in Palm Springs and various historical societies and museums. As requested by the CEC, Project cultural specialists also initiated a contact program with area Native American groups identified by the NAHC, and with local historical societies, as documented in Chapter 3. Field methods, reporting methods, evaluation criteria for inclusion in the NRHP and the CRHR, and the results of fieldwork are summarized in Chapter 4. Chapter 5 provides a synthetic discussion of Project archaeological sites and isolates by theme, context, and type << *to be provided* >>. Summary tables present our significance recommendations and impact assessments for Project sites. Chapter 6 provides a summary and management recommendations for cultural resources within the BSPP << *to be provided* >>.

Attachment 1 includes resumes of key personnel on the Project << *to be provided* >>. Attachment 2 includes the results of the records search undertaken at the EIC. Attachment 3 presents the results of the Native American contact program, historical society contact program, and contacts with the BLM. Attachment 4 includes Project maps. Attachment 5 is the California Department of Parks and Recreation (DPR) site forms for archaeological sites identified during the Class III survey << *to be provided* >>. Attachment 6 is the Historic Architectural Survey Report. Once this report has been finalized, a copy will be sent to the EIC as a permanent record.

CHAPTER 2

PROJECT SETTING

NATURAL CONTEXT

Physiography and Geology

The Project is located on the Palo Verde Mesa, a series of ancient raised river terraces associated with the Pleistocene course of the lower Colorado River. The relatively flat topography of the Mesa slopes gently down from the northwest to the southeast, and is bounded by the McCoy Mountains to the west, and the Little and Big Maria Mountains to the north and east. To the south, the Palo Verde Mesa grades into an east-west trending valley pass through which modern Interstate 10 was built along what was an important prehistoric transportation corridor from the Colorado River to the Pacific Coast.

The Palo Verde Mesa is part of the northern extent of the Colorado Desert, subdivision of the greater Sonoran Desert. Encircling the northern Gulf of California, the Colorado Desert spans portions of northwest Mexico, southwest Arizona, and southeast California. It is a subtropical desert that is periodically influenced by tropical weather conditions, including massive seasonal rain storms known locally as monsoons. In general, the Colorado Desert differs from the Mojave Desert to the north by being lower, flatter, and warmer both in summer and winter (Hickman 1993). Within the Palen, Mule, McCoy, and Maria Mountains, the rocks and basin-and-range physiography of the Colorado Desert is similar to that of the Mojave Desert.

Sediments in the Project vicinity generally originate from quaternary riverine deposits from the Colorado River, and alluvial fan deposits from the mountains to the northwest. Much of the Project contains well-developed, heavily patinated desert pavements subject to deflation from frequent winds. Running northwest to southeast, several alluvial washes cut through stable desert pavement surfaces and transition to active ephemeral washes consisting of sandy silts combined with small cobbles and poorly sorted gravels.

Along the eastern edge of the Project, two large deposits of water-rounded cobbles sit atop remnant river terraces associated with the Pleistocene course of the Colorado River. These terrace-top cobble deposits, known as “pebble terraces” (Schaefer 1985), consist primarily of fist-sized water-rounded rocks representing a variety of stone materials collected from the length of the Colorado River. The pebble terraces were utilized by the prehistoric inhabitants of the region as a ready source of fine-grained stone for the production of flaked stone tools (Schaefer 1985). The most common toolstones present on the pebble terraces are quartzite, chert, and chalcedony. More recently, these pebble terraces have attracted the attention of rock collectors targeting attractive multicolored cobbles (Flenniken and Spencer 2001). Two such pebble terraces exist along the eastern edge of the Project, both of which previously were recognized as prehistoric sites (see section 5.4.2.5, below).

Climate and Hydrology

Conditions within the Colorado Desert are among the hottest in the United States. Average daily temperatures range from the low 40s in winter to 105 degrees Fahrenheit in summer, although summer temperatures can soar into the 120s. A high of 127 degrees Fahrenheit was recorded at the Gold Rock Ranch station, located approximately 15 miles northwest of Yuma. This region also experiences rapid heat loss at night, resulting in a wide daily temperature variance of approximately 30 degrees. Annual rainfall totals within the Colorado Desert are among the lowest in the greater Sonoran Desert, averaging less than 2 inches (5 cm) per year in the Salton Trough and between 2 to 4 inches (5-10 cm) along the Colorado River (Crosswhite and Crosswhite 1982).

Surface water within the region includes both seasonal and perennial sources. In the summer months, the area is occasionally hit by intense thunderstorms which can turn the normally dry washes that crosscut the Palo Verde Mesa into raging torrents. Perennial water is limited to McCoy Spring in the McCoy Mountains roughly 9 miles northwest of the Project, and the Colorado River, 10 miles east of the Project. The Colorado River is one of the major river systems of North America, with its headwaters high in the Colorado Rocky Mountains. The Colorado River travels 1,400 miles (2,253 km) to the Gulf of California, picking up vast quantities of sediment along the way. Prior to completion of a series of dams on the lower Colorado River, beginning with the Hoover Dam in 1935 (later renamed Boulder Dam), the river frequently changed its course and overflowed its banks. The Palo Verde Mesa terraces and associated linear cobble deposits are the result of the ancient meandering and periodic flooding of the Colorado River.

During the Pleistocene, the course of the Colorado River ran through the Project area, creating large remnant river terraces, as described above. Periodically, the Colorado River overflowed its banks and deposited significant quantities of well-rounded boulder- to pebble-sized rocks along its banks. With the movement of the Colorado River to the east, these terrace deposits were left behind in an increasingly arid landscape. Today, the remnant river terraces support well-developed desert pavements with dense concentrations of rounded Colorado River rocks, known as pebble terraces. These pebble terraces run from the northeast to the southwest, reflecting the Pleistocene course of the Colorado River. They are dense stable features, cut only by the larger drainages which generally flow from the northwest to the southeast. Along the back, northwestern side of the pebble terraces, low-velocity alluvial flows have deposited fine silts. These are some of the few areas of the Project with active deposition and, therefore, the potential for subsurface cultural materials is relatively high along the western edges of the pebble terraces. Throughout most of the remainder of the Project, subsurface materials are unlikely owing to aggrading and deflationary regimes.

At the beginning of the Holocene, the Colorado River retreated to the east and began to cut deeply into the surrounding sediments. Periodically, though, the river dramatically flooded, changed course, and flowed into previously dry inland areas. After large flood episodes, water from the Colorado River was occasionally impounded and diverted into the Salton Trough, creating a vast inland freshwater lake, the historical Lake Cahuilla. Impounded waters from the

Colorado River would continue to flow into Lake Cahuilla for years or even centuries until another major flood event sufficiently reworked the river delta at the Gulf of California to allow the river to resume its typical course. At these times, numerous, ethnically and linguistically distinct Native American groups converged on the newly formed lake. Much of the intermittent use of the Palo Verde Mesa likely dates from these episodes of inland lake activity.

Flora and Fauna

The Project's present biotic communities are comparable to those of the Mojave Desert to the north, but with more species diversity due to the Colorado Desert's bimodal pattern of rainfall. For the prehistoric inhabitants of the southern deserts, plant and animal resources would have been a significant factor in the use of the Palo Verde Mesa. Throughout most of prehistory, the Project area offered a relatively limited array of biotic resources, particularly in comparison to the nearby lower Colorado River region with its reliable year-round water. Nevertheless, the Palo Verde Mesa did offer a collection of useful resources for travelers between the larger village communities of the lower Colorado River to the east and the mountains and valleys to the west.

Within the Project area, creosote scrub is the dominant vegetation community, with a greater variety of species occurring along the seasonal washes that crosscut the land from west to east. Vegetation is characteristically sparse, consisting primarily of creosote (*Larrea tridentata*), with smaller quantities of white bursage (*Ambrosia dumosa*), saltbushes (*Atriplex* spp.), and ocotillo (*Fouquieria splendens*). In some washes and along western face of the Pleistocene pebble terraces, stands of mesquite (*Prosopis* spp.) and ironwood (*Olneya tesota*) bushes also grow. Nearer to the Colorado River, washes support the palo verdes (*Parkinsonia florida*) from which the Mesa derives its name, as well as agaves (*Agave* spp.). Of these plants, the mesquites, agaves, and saltbushes were the most important food plants, and edible portions were typically roasted in stone-lined earthen ovens, or roasting pits (Lightfoot and Parrish 2009:347, 356). The remnants of some of these roasting pits may be preserved as piles of fire-affected cobbles identified as prehistoric sites adjacent to the natural pebble terraces at the eastern edge of the Project.

Beyond food plants, the desert also offered medicinal and utilitarian plants. Traditionally, creosote was an important medicinal plant, the leaves of which were brewed as a tea good for treating upset stomach and cough (Bean and Saubel 1972). Both saltbushes and varieties of mesquite were also used as traditional treatments for muscle pain and inflammations (Owen 1962:109). Mesquite and ironwood were prized for their branches which were used to construct houses, fashion weapons, and as quality firewood. Finally, in addition to its use as a foodstuff, agave was harvested for its long leaves which were stripped and processed into an extremely durable fiber used to make nets, bowstrings, sandals, and many other fiber goods (Lightfoot and Parrish 2009:356). This same agave fiber was the primary source of modern rope until the advent of synthetic fiber rope after WWII.

Despite its forbidding appearance, the Colorado Desert is also home to a variety of animal species, all adapted to extreme heat and aridity. Most of the animal species that inhabit the Colorado Desert are also found in the Mojave Desert to the north. Because of the high daytime temperatures, many desert animals have adapted by spending much of the day underground in cool burrows or aestivating (lying dormant to stay cool and preserve water and energy during

extremely hot and dry periods). Small, burrowing rodents are particularly abundant in sandy desert sediments.

Animals commonly found in the Colorado Desert include blacktailed jackrabbit (*Lepus californicus*); desert cottontail (*Sylvilagus auduboni*); kit fox (*Vulpes macrotis*); and a variety of rodents such as round-tailed ground squirrel (*Spermophilus tereticaudus*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), desert and Merriam kangaroo rats (*Dipodomys merriami*), and desert pocket mouse (*Perognathus penicillatus*). Native Americans hunted several of these small mammals, particularly the desert cottontail, as food. Larger mammals are limited to desert bighorn sheep (*Ovis Canadensis nelsoni*), Sonoran pronghorn antelope (*Antilocapra americana sonorensis*), and coyote (*Canis latrans*), although all of these larger species are more common closer to the mountains and river where water is more abundant. A number of bat species are found, including the California leaf-nosed bat (*Macrotus californicus*).

Numerous species of reptiles also make their home in the Colorado Desert. Reptiles with specialized adaptations to sandy environments include fringe-toed lizards (*Uma inornata*, *U. notata*), flat-tailed horned lizard (*Phrynosoma m'calli*), banded sand snake (*Chilomeniscus cinctus*) and the poisonous sidewinder snake (*Crotalus cerastes*). Other desert reptiles include chuckwalla (*Sauromalus obesus*), desert iguana (*Dipsosaurus dorsalis*), rosy boa (*Lichanura trivirgata*), western diamondback (*Crotalus atrox*), and the protected desert tortoise (*Gopherus agassizi*) of which we found many carapace fragments within the Project (Schoenherr 1992; Turner and Brown 1994).

In the Colorado Desert, common avian species include horned lark (*Eremophila alpestris*), common raven (*Corvus corax*), mourning dove (*Zenaida macroura*), Costa's hummingbird (*Calypte costae*), black-throated sparrow (*Amphispiza bilineata*), verdin (*Auriparus flaviceps*), and greater roadrunner (*Geococcyx californianus*). Migratory birds found throughout the southern deserts include several swallow and warbler species of varying genera. Occasionally, smaller raptors such as the northern harrier (*Circus cyaneus*), Swainson's hawk (*Buteo swainsoni*), the western burrowing owl (*Athene cunicularia hypugaea*), and the loggerhead shrike (*Lanius ludovicianus*) are also found in the Colorado Desert.

Holocene Climate Change

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

Terminal Wisconsin to Middle Holocene

Packrat middens from the Pichaco Peak locality suggest that in the Chocolate Mountains and Salton Trough regions, south and west of the Project, during the terminal Wisconsin summer temperatures were cooler than present, but winter temperatures were generally comparable. Rainfall was primarily confined to the winter, at levels around 50 percent greater than present. After about 10,000 years ago, temperatures increased overall but summer temperatures remained cooler than present. There is some evidence of an increase in precipitation at this time, possibly

resulting from more frequent and intense El Niño patterns (Spaulding 1995). First proposed by Antevs (1948), the reconstruction of an arid middle Holocene period (ca. 7,000–4,000 years before present [B.P.]) is now supported by packrat midden, geomorphic, and pollen data (Byrne et al. 1979; Hall 1985; Holliday 1989; Mehringer 1986; Spaulding 1991). Although the middle Holocene was clearly warmer and more arid than present, the various lines of evidence suggest that the period was one of high climatic variability rather than unremitting heat and drought (Grayson 1993).

Table 2. Major Climatic Intervals

Climatic Interval	Years Before Present (B.P.)	Climate and Hydrology
Early Holocene	10,000 - 7000	Cooler summer temperatures; upslope retreat of woodland species; precipitation greater than present
Middle Holocene	7000 - 4000	Warmer temperatures; arrival of modern Colorado Desert vegetation; precipitation generally lower than present
Neoglacial	4000 - 2000	Cooler temperatures; precipitation greater than present
Medieval Climatic Anomaly	1150 - 550	Warmer temperatures; two extreme droughts between 1060–850 B.P. and 740–600 B.P.
Little Ice Age	450 - 150	Cooler temperatures; precipitation greater than present

Late Holocene

Evidence from the late Holocene (after ca. 4000 B.P.) indicates at least three distinct climatic episodes that would have affected humans living in the desert. Studies of macrofossils from packrat middens and evidence for extended lacustral intervals in the Mojave Desert (Drover 1979; Enzel et al. 1992; Smith 1979; Wells et al. 1989), suggest that the period between ca. 4000–2000 B.P. was generally cooler and notably wetter than present. Known as the Neoglacial, in the Mojave Sink region this period was marked by some of the most extensive desert lakestands, supported by the flooding of the Mojave River likely resulting from increased precipitation in the Transverse Ranges.

The Medieval Climatic Anomaly, which extended from about 1,200 to 700 years ago, was marked by generally warm temperatures and punctuated by extreme, extended droughts from A.D. 890 to 1100 and A.D. 1210 to 1350 (Stine 1994). In the Mojave Desert, packrat middens provide evidence of effectively drier conditions associated with increased temperatures. Presently, there are no published records of increased spring activity or desert lake high stands throughout the region during this period (Jones et al. 1999). In the Colorado Desert, however, there is evidence for high stands of Lake Cahuilla during much of this interval (Waters 1983). The sustained high water in Lake Cahuilla may have mitigated the effects of the droughts on local populations.

The generally arid conditions of the Medieval Climatic Anomaly reversed sharply by about 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 roughly 150 years ago.

CULTURAL CONTEXT

Prehistoric Background

Despite more than 80 years of archaeological investigation, our understanding of the prehistory of the Colorado Desert still relies heavily on comparisons with adjacent regions. In fact, the basic culture history of the region has not changed dramatically since pioneering archaeologist Malcolm Rogers (1939, 1945, 1966) published his initial impressions of the chronology and cultural development of the desert. This state of affairs is largely attributable to the dearth of stratified subsurface sites in the region, since many desert sites are entirely superficial. (Schaefer 1994a, 1994b). Additionally, the prehistoric use of the Colorado Desert was apparently episodic, with long periods of low-intensity use of the land during particularly arid times. Nevertheless, ongoing work continues to sharpen our comprehension of the region. What follows is a brief synthesis of the prehistory of the region as it is understood today.

Climatic changes, characterized by temperature and moisture variations, significantly affected the distribution and subsistence practices of prehistoric populations in the Colorado Desert. During the late Pleistocene (25,000 to 10,000 years ago) temperatures in California were generally cool and moist, resulting in widespread montane glaciations and the creation of numerous pluvial lakes (Antevs, 1955; Grayson, 1993). Throughout much of the Pleistocene, the Colorado River ran some 10 to 15 miles east of its current course, adjacent to the Project area. Over millennia, the powerful river carved a series of raised terraces along its western bank as it slowly moved east, toward its present course. During that time, the Project area would have been subject to devastating and unpredictable flooding. Flooding which, depending on the velocity of the water flow, sometimes cut away the land and other times deposited quantities of silt, gravel, and rock. These varying aggrading and depositional actions of the Colorado River created the raised, stepped terraces and cobble deposits of the Palo Verde Mesa.

At the end of the Pleistocene, some 12 to 10 thousand years ago, the first recognizable human use of the Colorado Desert began. The earliest inhabitants of the region were highly mobile hunter-gatherers exploiting a variety of plants and animals. The settlement patterns of the Late Pleistocene and Early Holocene inhabitants suggest that they preferred to live along the shores of prehistoric lakes and on mesas near perennial washes (Schaefer and Laylander 2007).

Roughly 7,000 years ago, local pluvial lakes began to evaporate and settlement shifted to the Colorado River and to perennial springs in the mountains and valley floors. Between the comparatively verdant river banks to the east and the spring-fed mountains to the west, the parched Palo Verde Mesa was not a particularly attractive spot for long-term habitation. The mesa was, as Jay von Werlhof (2004:v) has noted, “basically a through-way”: a well-traveled

corridor from the river to the mountains, and from the southern low desert to the northern high desert. Nevertheless, the visually striking terraces of the Palo Verde Mesa were an important waypoint for travelers. The terraces provided a reliable source of fine-grained toolstone, as well as stands of edible mesquite and saltbush, which could be processed and roasted using terrace cobbles. Although the Project area shows no signs of long-term habitation, the mesa was clearly well known and repeatedly visited throughout prehistory.

Paleoindian Period: San Dieguito (12,000–7,000 years ago)

The San Dieguito complex is thought to represent the earliest use of the Colorado Desert during the Pleistocene–Holocene transition. Malcolm Rogers (1939) defined this cultural complex based on archaeological surveys of southern California coastal and desert regions conducted in the 1930s. San Dieguito materials are most common around now-dry inland lakes and on old desert terraces, but they have also been found at Ventana Cave in southern Arizona, and along the California coast, where they were first documented at the Harris Site (Rogers 1966; Warren 1966). Based on limited material evidence, Rogers inferred that San Dieguito subsistence was focused on highly ranked food resources, particularly large game, although small mammals were also taken. This hunting-focused subsistence strategy, in turn, was thought to have encouraged a pattern of relatively high residential mobility.

The material culture associated with the San Dieguito complex consists entirely of flaked stone tools such as choppers, scrapers, blades, projectile points, and distinctive crescent-shaped items interpreted as amulets (Rogers 1939, 1966; Warren 1966). The lack of millstone implements has long been viewed as evidence that San Dieguito peoples made little use of plant foods, particularly seed plants that require pounding and grinding. Lorann Pendelton (1984:68-74), though, observes that ethnographies of Colorado Desert peoples mention the use of wooden mortars and pestles for the processing of wild mesquite. If similar wooden milling implements were used by San Dieguito peoples, they have not survived in the archaeological record

Beginning with Rogers, archaeologists have attempted to assign cultural materials to the San Dieguito complex based upon the extent of desert-varnish on rock artifacts, and the degree to which artifacts are embedded in the ancient desert pavements. Based on these measures, various cleared circles, trails, and geoglyphs have traditionally been included within the San Dieguito complex. These assignments, however, are no longer considered secure, as both patination and embeddedness have been demonstrated to be unreliable for cross-dating purposes (McGuire and Schiffer 1982). Further, in the case of trails, many were used over multiple generations, often by multiple cultural and linguistic groups. In fact, most of the major routes through southern California deserts and mountain passes used today by modern highways (e.g., Interstates 10 and 15) follow ethnohistorically documented Native American trails.

Despite decades of scholarly research, dating the San Dieguito complex continues to be problematic. Very little datable material is preserved at most San Dieguito sites, and sites in desert regions are often situated on deflated desert pavements where extremely old materials lie side-by-side with modern trash. The related Lake Mojave complex, found in the Mojave Desert to the north, is thought to date to between 12,000 and 7,000 years before present (B.P.) (Warren and Crabtree 1986). More recent work suggests a slightly earlier terminal date of around 8,000 B.P. for the Lake Mojave Complex (see Schroth 1994). If the Lake Mojave and San Dieguito

complexes are contemporaneous, then this highly mobile, hunting-focused use of the land came to a close early in the Holocene as ancient pluvial lakes contracted and large mammals became scarce.

Archaic Period: Amargosa Complex (7,000–1,500 years ago)

The Archaic period in North American prehistory is characterized by the emergence several distinctive regional adaptations to varying local conditions. The Archaic spans the time from the end of cooler and wetter climatic conditions of the early Holocene, at around 7,000 B.P., to the introduction of pottery and bow-and-arrow technology, around 1,500 B.P. (Antevs 1955; Grayson 1993; Van Devender and Spaulding 1979). Regional populations were generally expanding, leading to a diversification and intensification of subsistence activities, and regional trade and interaction networks were established. Groundstone tools, largely absent in the Paleoindian period, became widespread during the Archaic.

In the southern California deserts, the best-known regional culture complexes of the Archaic period are the Gypsum, Pinto, and Amargosa, each defined by recognizably distinct projectile point types. Within the Colorado Desert, the Archaic Period is often subsumed under the Amargosa complex (Rogers 1939), although very few desert sites have components dated to this period. In contrast with the general pattern of population expansion during the Archaic period, there is a dearth of evidence of Archaic occupation in the Colorado Desert (Schaefer 1994b; Weide 1976). This absence of Archaic occupation is a key regional research issue (Schaefer 1994b). Due to the dearth of securely dated Archaic sites in the Colorado Desert, developments within the Archaic must be inferred from the development trajectories of adjacent areas.

Late Prehistoric/Protohistoric Period: Patayan Complex (1,500–100 years ago)

The Patayan complex spans the Late Prehistoric and Protohistoric periods, and dates from approximately 1,500 years ago (A.D. 500) until the American expansion into the area at the turn of the nineteenth century. The Protohistoric period encompasses a protracted 300-year period of sporadic European exploration and colonization that had little effect on aboriginal lifeways in the southern California deserts. There is a clear correspondence between the geographical distribution of archaeologically recognizable Patayan cultural materials and the historically documented territories of Yuman-speaking peoples: the Quechan, Mohave, Cocopah, Paipai, Yavapai, Havasupai, and others. Thus, the archaeological Patayan complex is thought to be directly ancestral to the ethnographic Yuman cultures of the region.

The Patayan complex is characterized by marked changes in the artifact assemblage, economic system, and settlement patterns of the region. Perhaps the most recognizable change from an archaeological perspective was the introduction of paddle-and-anvil pottery, either from Mexico or from the ancestral pueblo groups of the U.S. Southwest (Rogers 1945; Schaefer 2003; Schroeder 1975, 1979). During this time, floodplain horticulture, featuring maize, beans, squash, and other crops, was similarly introduced from the south and east. Arable land along the lower Colorado River came under cultivation, as did the banks of the New and Alamo rivers in Imperial Valley. The Colorado Desert lay on the prehistoric frontier of the westward expansion of agriculturally based subsistence systems to the west.

Bow-and-arrow technology was also introduced at this time, possibly from desert hunter-gatherer groups moving in from the west and north. Smaller, arrow-sized projectile point types of the Cottonwood Triangular and Desert Side-notched series are common. The Cottonwood series projectile points likely predate the Desert Side-notched types, and probably predate the introduction of pottery manufacture in the region. Concomitant with these dramatic subsistence and technology changes were several, apparently related, ceremonial and religious changes. During the Late period, burial practices shifted from inhumations to cremations and partial cremations. Artistic expression on rock (petroglyphs) and land (intaglios) flourishes at this time in association with expanding trade and trail networks, and increasingly elaborate kinship systems tying together extensive territories (McGuire and Schiffer 1982). Warfare likely also increased at this time, and was well documented in the Protohistoric and Historic periods.

Ethnographic Background

A number of ethnographically documented culture groups are associated with the Palo Verde Mesa through historic use and oral history. These include the Mohave, Halchidhoma, Quechan, and Chemehuevi, along the lower Colorado River, and the Cahuilla of the western deserts and mountains (Bean 1972; Bean and King 1974; Bean and Vane 1978; Fowler and Fowler 1971; Laird 1976; Rogers 1939, 1966; Schaefer 2003; Singer 1984). The stretch of the Colorado River immediately adjacent to the Project area was notably contentious, changing hands more than once in the Protohistoric period.

Prior to 1700, the Colorado River adjacent to the Project area may have been occupied by the Maricopa (Kroeber 1925:800), although this is far from certain. At some point, the Maricopa migrated east and the Halchidhoma settled the area. Almost immediately, the Halchidhoma found themselves under attack from the allied forces of the Mohave and Quechan. The traditional focus of Mohave population was to the north in the Mojave Desert, while Quechan peoples had their largest villages to the south between Yuma and the Gulf of Mexico. Generations of near-constant warfare finally drove the Halchidhoma off the river and, ultimately, to their Maricopa allies on the Gila River in Arizona (Kroeber 1925:799).

After the Halchidhoma vacated the Parker-Blythe Valley between 1825 and 1830, the Mohave lived in the area for a year or so, but then returned to the Mohave Valley. The Mohave then encouraged their traditional allies, the Chemehuevi, with whom they shared many ceremonial practices, to move into the former Halchidhoma territory along the Colorado River (Bean and Vane 1982:34). All of these lower Colorado River groups had trading relationships with groups to the west, most notably the Cahuilla, who lived principally in the deserts and mountains around historic Lake Cahuilla. The Cahuilla likely traversed the Project area visiting their river neighbors, and they knew something of the area and its resources.

The Palo Verde Mesa was part of a long-distance transportation corridor from the Colorado River to the Pacific Coast (Bean and Vane 1978, Davis 1961, King 1981, Sample 1950, Singer 1984). The west side of the Colorado River was also an important corridor for travel between southern and northern river groups, particularly the Quechan and Mohave. North-south running trails have been identified along the river as transportation routes as well as ceremonial ways

linking key mountains, springs, and other landscape features (Stone 1991; Woods 1986). These prehistoric trails and important landscape features are frequently associated with rock and earth art, as well as small rock piles known as cairns.

The Colorado Desert is remarkable for its many prehistoric sites associated with what might generally be termed ritual activities (Altschul and Ezzo 1994). In addition to the remains of Native American habitations and resource procurement locations, the region contains abundant earth figures (geoglyphs), rock art (petroglyphs), shrines, cairns, and a well-preserved trail system along which these features tend to cluster (Altschul and Ezzo 1994; Cachora 1994; Johnson 1985; McGuire and Schiffer 1982; Pendleton et al. 1986; Pigniolo et al. 1997; Rogers 1939; Schaefer 1994a, 1994b; von Werlhof 1987). Desolate stretches of desert pavement like that of the Project area may seem uninhabited and insignificant, but as corridors of physical and spiritual travel, they remain important to modern-day Native American groups. As Quechan tribal member and archaeologist Lorey Cachora (2000:79) describes, key landscape features, such as mountains and springs, are connected by a web of power which cannot be broken without affecting “the entire cosmos.” Thus, “although peaks are most important, the valleys between the peaks, and the desert pavements, are also important in that they are pathways for the web that must run through them from one peak to others” (Cachora 2000:79).

In the greater Project vicinity, archaeologists have identified segments of east-west trending trails that likely connected communities along the lower Colorado River with resources and communities in the mountains and interior valleys, as well as north-south running trails paralleling the river (Altschul and Ezzo 1994; Cleland and Apple 2003; Stone 1991, Woods 1986). To the east and west of the Project, archaeologists have also recorded significant rock art and intaglio sites along the Colorado River and in the McCoy Mountains (van Werlhof 2004). No prehistoric rock or earth art was identified during our survey of the Project area, although we did record a 200-meter-long segment of a north-south running trail (see discussion in Section 5.4.2.5).

Quechan

Primary ethnographic sources for the Quechan include Bee (1983), Castetter and Bell (1951) and Forde (1931). The Quechan traditionally lived at the confluence of the Colorado and Gila rivers. However, they were not reported in that area in 1540, when the Alacon and Diaz expeditions reached there (Forbes 1965; Forde 1931). According to Quechan oral tradition, their range extended from near Blythe to Mexico. At the time of contact, the Quechan may have numbered in the thousands. Their economy was based on both horticulture and gathering. During the winter and spring they lived in seasonal settlements location on terraces above the river floodplain. After the spring floods receded, they would disperse to their plots along the river to plant crops. Fishing provided an important source of protein and occurred in non-flood times. After the harvest in the fall, the Quechan would gather in the villages on the terraces (Bee 1983; Forde 1931). Numerous named villages were located along the Colorado River, with *Avi Kwotapai* located on the west side of the Colorado River between Blythe and Palo Verde Valley and *Xenu mala vax* on the east side of the river near present-day Ehrenhberg (Bee 1982). Yuman-speaking groups, including the Quechan, report trails that extend along the Colorado River (e.g., see discussions in Cleland and Apple 2003).

Halchidhoma

Although no longer located in the area, the Halchidhoma were a Yuman-speaking group that lived in Palo Verde Valley and along the Colorado River in the vicinity of Blythe and Needles. There is not a lot of available ethnographic information about the Halchidhoma. Spier's (1933) ethnography of the Maricopa deals only minimally with the Halchidhoma. Other sources include Castetter and Bell (1951), Kroeber (1925), and a modern summary article by Harwell and Kelly (1983).

The Halchidhoma were known to travel and trade over great distances. The Cocomaricopa Trail leading from Palo Verde Valley linked the Halchidhoma with the Pacific Coast (Dobyns et al. 1963). Ceramics seriation and dates on marine shell indicate that their Pacific trade network was established by A.D. 900 (Sample 1950). They also traded with the Hualapai of northern Arizona and had close affiliations with the Maricopa. It appears that the Halchidhoma were frequently in conflict with the Quechan and Mohave, establishing alliances with the Maricopa and Cocopa. Eventually the Halchidhoma moved east to join other Yuman groups along the Gila River.

Mohave

The Mohave were encountered by the Oñate Spanish expedition as far south as the present Colorado River Indian tribes (CRIT) Reservation in 1604 (Stewart 1969) and intermittently controlled areas as far south as Palo Verde (Kroeber 1959). After the Halchidhoma vacated the Parker-Blythe Valley between 1825 and 1830, the Mohave settled this area for a year or so but then returned to the Mohave Valley. Although Mohave and Quechan bands still made use of the area, the Chemehuevi, who had been west of the Chemehuevi and Whipple mountains, moved into the area (Bean and Vane 1982).

Primary ethnographic sources for the Mohave include Castetter and Bell (1951) and Kroeber (1920, 1925). A more recent summary article regarding the Mohave was written by Stewart (1983). The Mojave occupied the area north of Bill Williams River to the Nevada border. Kroeber (1959) reported that their core occupation area included both sides of the lower Colorado River from south of Davis Dam to Topock. According to Stewart (1969) the Mohave also extended their territory from Cottonwood Island to the north and the Chemehuevi and Colorado valleys to the south.

The Mohave lived in villages on terraces above the floodplain and would move onto the floodplain to plant crops in the spring. Like most Colorado River people the Mohave relied on both horticulture and gathering for subsistence. Mesquite and screwbean pods were major food staples. The Mohave were unique among river groups in that individual trees were owned. The pods could be eaten green, but typically were pounded into flour using long stone or wooded pestles. Planted crops included maize, black-eyed beans (cowpeas), squash, and pumpkin. Wild and cultivated plants were supplemented by hunting and fishing. Spring was a good time to hunt, with hunters waiting near springs where young grass would attract deer. Fishing occurred in July and August as the high water receded (Stewart 1957).

The Mohave are well known for their long distance travel. Like other Colorado River tribes, they participated in a trade network up and down the river and extending both east to the Puebloan area and west to the coast.

Chemehuevi

The Chemehuevi are the most southern of the 16 subgroups of the Southern Paiute (Kelly and Fowler 1986). Their traditional territory was a large area southwest of Las Vegas, including the eastern Mojave Desert of California. The Chemehuevi were traditional allies of the Mohave. After the Quechan and Mohave drove the Halchidhoma from the Colorado River area in the early 19th century, the Chemehuevi moved into the river area.

Ethnographic sources for the Chemehuevi include Laird (1976) and Kelly and Fowler (1986). Euler (1966) wrote a comprehensive ethnohistory of the Southern Paiute. When Europeans first reached the California desert, the Chemehuevi occupied the eastern half of the Mojave Desert from south of Death Valley to Riverside and Imperial counties. The traditional Chemehuevi subsistence was based on hunting and gathering. As with other river tribes, small game and mesquite also were important food sources. However, by the mid-19th century, after the Halchidhoma were driven from the Colorado River area by the Quechan and Mohave, the Chemehuevi moved into the river area. Once there, they began practicing floodplain farming (Kroeber 1925; Roth 1976).

Desert Cahuilla

The Desert Cahuilla occupied the Coachella Valley. They were known to be in contact with groups along the Colorado River and one of the routes they would have traveled to reach the river would have been through Chuckwalla Valley. There are a number of ethnographic sources for the Cahuilla (e.g., Barrows 1900; Kroeber 1908; Strong 1929). Since the 1970s, Bean (1972, 1978) has summarized extensive portions of the ethnographic information about the Cahuilla, as well as working with living tribal members (Bean and Saubel 1972).

The Cahuilla, and other Takic speakers are believed to have migrated into California from the southern Great Basin. Details of this migration have not been agreed upon by researchers and are a topic of ongoing discussion (e.g. see Golla 2007; Sutton 2009). Based on linguistic data, as well as archaeological material, suggested dates range from 1500 B.P. to as early as 2500 B.P.

Cahuilla villages were inhabited year-round. However, seasonally as different foods became available, members of the village would move to temporary camps to collect plant resources and hunt. Game animals included rabbits, deer, and bighorn sheep. In addition to exploiting desert plant resources such as agave and mesquite, the Desert Cahuilla traveled up into the mountains to harvest acorns and pinyon nuts that they would take back to their permanent settlements. Other important food resources included yucca, various cacti, and grass seeds.

Historical Background

European exploration of the Colorado Desert began in 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 Protohistoric 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, we describe the Euro-American expansion into the region and subsequent historical developments.

European Exploration

By 1539, the Spanish had begun to explore parts of what they named Alta California. Early explorers, such as Francisco de Ulloa (1539), Hernando de Alarcon (1540), and Francisco de Coronado (1540), led expeditions into the Gulf of California, reaching the mouth of the Colorado River and continuing up the river past the Gila confluence. However, little exploration of the interior deserts was undertaken until much later. Spanish exploration of the interior deserts for the next 200 years was intermittent as the region was considered desolate, remote, and filled with staunch indigenous adversaries such as the Mohave and Quechan.

The first recorded explorer of the interior Colorado Desert region was Father Eusebio Francisco Kino, a Jesuit missionary, cartographer, and explorer. Starting in 1691, Kino established a string of missions in northern Mexico and southern Arizona, finally reaching the Colorado River in 1702. Almost 70 years later, Father Francisco Garcés followed Kino's route, reaching the villages of the Quechan Indians at the junction of the Gila and Colorado rivers in 1771. Garcés's party crossed the Colorado River and traveled west through the desert until they could see the San Jacinto Mountains in the distance, before returning to Sonora. Three years later, Father Garcés and a Spanish border captain named Juan Bautista de Anza attempted an overland route to Monterey. When they reached the Colorado River, Anza found the local Quechan to be surprisingly friendly. The Quechan assisted the Spanish in fording the river, locating wells and trails, and ultimately rescuing an exploring party lost in the desert. In the 1800s, most of the travel from Arizona to central California followed Anza's route.

The American Expansion: Mining

The first Americans to arrive in the Colorado Desert in any numbers were prospectors hunting for the next big gold strike. Mining and prospecting activity was most intense in the mountains and high deserts of the Mojave, but small-scale mining has been a consistent feature of the Colorado Desert from the 1800s to the present day. Generally speaking, mining productivity in the Colorado Desert was greatest between 1890 and 1910, with a brief resurgence during the Great Depression in the 1930s (Rice et al. 1996; Morton 1977).

In the 1820s, limited placer mining began in the eastern Colorado Desert. In the early 1800s, prospectors were some of the only Euro-Americans traveling in the California deserts, and they frequently came into conflict with Native American groups. From the 1840s through the 1880s, the U.S. cavalry established a series of camps and forts through Arizona, Nevada, and California deserts to protect settlers and immigrants from the often hostile tribes whose territories they were invading. In 1849, the discovery of gold in California brought a tremendous influx of American and European settlers to the state. Between 1849 and 1860 an estimated 8,000 emigrants crossed the Colorado Desert on their way to California (Laflin 1998:10). In the 1850s, some would-be miners tried their luck in the eastern Colorado Desert, but found very little gold. Most miners simply passed through the desert on their way to the larger strikes to the west and north.

Sustained economic development in the Colorado Desert region only began in the 1870s, and came to fruition in the early part of the 20th century. Development was dependent largely on two things: transportation and water. The first of these came in 1872, with the construction of the Southern Pacific Railroad from the ocean to the eastern edge California. The Southern Pacific line began on the coast and reached Yuma on September 30, 1877. The railroad was the single most important boost to mining in the southeastern Colorado Desert, offering convenient transportation of heavy mining equipment, supplies, personnel, and, when the miners were lucky, bullion. By 1880, the Southern Pacific Railroad was providing access to gold and silver ore deposits in the Chocolate Mountains, Cargo Muchachos, and Palo Verde Mountains, all north of the immediate Project area.

In addition to gold and silver, area mines produced quantities of utilitarian minerals including gypsum and manganese. North of the Project, the now-defunct Arlington Mine was a major producer of manganese during WWI and WWII, the ore being used to harden steel for armaments (Butler 1998:44). In the immediate vicinity of the Project, prospector's mining claims – typically in the form of wooden stakes, small stone cairns, and /or metal cans containing claim papers – are most common along the base of the McCoy Mountains and into the many drainages that cut the mountain range. There were two main periods of active prospecting in the area: the late 1880s and early 1900s following the initial gold strikes in California, and the 1930s during the depth of the Great Depression when a hard-scrabble existence in the desert seemed preferable to unemployment in the cities.

Agriculture and Ranching

Agriculture became an important industry, second only to mining, by the late 1850s. Homesteading formed the foundation for California's agricultural economy in the 19th century, and the official passage of the Homestead Act in 1862 opened vast areas of the public domain to private citizens. The Desert Land Act of 1877 also promoted the acquisition of open tracts of land, with an entitlement to 640 acres for each applicant, who were primarily speculators. Generally, lands that fell under this act were marginal for sustained agriculture.

In transforming arid land into productive farming and grazing lands water was the fundamental key. In the 1930s, the Metropolitan Water District was created to effect transport of water from the Colorado River to the Los Angeles basin. The Metropolitan Aqueduct was constructed from Parker Dam through the mountains east of Indio to Riverside and, finally, to Los Angeles. It was the largest construction project in the world at the time, and it provided much-needed jobs during the Depression (Pittman 1995). Agriculture became an important industry in the Palo Verde Valley near Blythe during the early 20th century, based largely on diverting water from the Colorado River. Agriculture continues to be a significant contributor to the Blythe economy, although the immediate Project area is too arid for successful agricultural production.

Military Training: World War II

During World War II (WWII), shortly after the bombing of Pearl Harbor and the U.S. entry into the war, Lt. General Lesley J. McNair, Director of Army Ground Forces and Combat Training for the War Department, decided to establish the Desert Training Center in southeastern California, Arizona, and Nevada in order to train U.S. troops in the event they would be sent to

North Africa to fight the Germans. General George S. Patton, Jr. was tasked with overseeing the transformation of the desert stretching from the California-Arizona border and the Mexican border up to the lower part of Nevada. General Patton scouted the area by plane, jeep, and horseback beginning in March of 1942. The area was suitable for training because of its general lack of human habitation, established railroads and highways, and the presence of several military installations throughout the region (Henley 1992:5-7).

After 19 months of training and expansion, the Center was officially renamed “The Desert Training Center California-Arizona Maneuver Area” (DTC/C-AMA), and had grown in size to an area twice the size of Maryland. The Center included tank, infantry, and air units all training for desert warfare. Patton established his base of operations at Shaver’s Summit (now Chiriaco Summit) at Camp Young. Troops began arriving at the Center in April of 1942 and endured harsh physical training that included restricted access to water, physical endurance training, and lack of sleep. Life at the Desert Training Center was so difficult that the officers and enlisted men came to refer to the area as “the place that God forgot” (Henley 1992:22-24).

Patton commanded the Desert Training Center until July of 1942, when he was placed in charge of “Operation Torch,” the Allied invasion of North Africa. Patton was replaced by Major General Alvan Gillem, Jr. Twelve thousand troops were stationed at the Desert Training Center when Patton left. As WWII continued, that number grew to over 200,000 by May of 1943 (Henley 1992:25). The need for troops around the world during World War II required that troops be trained for combat in places other than North Africa. In light of this need, the California-Arizona Maneuvers Area was closed in April of 1944.

To support the mission of the DTC/C-AMA, several desert airfields were taken over and significantly improved by the Army between 1942 and 1944. One of these wartime training bases was the Blythe Army Air Base, which was originally constructed by the Civil Aeronautics Administration (CAA) in 1940 as Intermediate Flying Field Site 21 (Wilson 2008:4). With the development of the Desert Training Center, the little airfield west of Blythe was identified as an excellent candidate for Army use, and it was officially taken over by the Army in April 1942, under the direction of General Henry H. Arnold, Commanding General of the Army Air Forces (Wilson 2008:12). One month later, the first airmen deployed to the DTC, the 46th Bombardment Group, arrived in Blythe, where they continued the work of building base housing, bringing in utilities, and significantly improving the airfield. By September of 1942, the airfield was formally designated the Blythe Army Air Base, with paved runways suitable for heavy aircraft. From the fall of 1942 to 1945, the Blythe Army Air Base supported numerous training exercises in the DTC/C-AMA, and became known for its excellent training of heavy bomber crews who went on to complete hundreds of successful bombing missions in Europe during WWII (Wilson 2008).

With the end of WWII came a reduction in the military activity in the Colorado Desert region. Civilian buildings and airports converted for use by the military during the war years returned to civilian use. Surplus military barracks were recycled for a variety of uses throughout the local communities. The primary post-war activities in the area were mining and agriculture. Agricultural practices were primarily confined to the mid- to western side of the county, but also

developed in the Palo Verde Valley along the lower Colorado River and centered on the town of Blythe.

Military Training: Joint Exercise Desert Strike

In the spring of 1964, the enormous area that had been the DTC/C-AMA once again supported large-scale military training exercises employing both ground and air forces. From May 17th to 30th 1964, a joint Army–U.S. Air Force training exercise, known as Desert Strike, took over the Palo Verde Mesa and more than 12 million acres along the California-Arizona border. Amidst the escalating nuclear arms race, the U.S. Strike Command elected to conduct the largest and most costly training exercise, at the time, to “become familiar with the concepts and doctrines associated with large-scale employment of nuclear weapons” (Desert Strike n.d.:312). Army and Air Force units were trained in passive and active tactics, concepts and procedures for joint operations, and the use of and defense against tactical nuclear weapons.

The exercise was a two-sided enactment, with fictitious world powers code named “Calonia” and “Nezona” sharing a common border at the Colorado River. The premise of the conflict between these two entities, each led by a Joint Task Force and two designated War Cabinets, was a dispute over water rights. Major tactical operations during the exercise included deep armor thrusts, defensive operations along natural barriers, counterattacks including airmobile and airborne assaults, and the simulated use of nuclear weapons. The Air Force provided fighter, air defense, interdiction, counter-air reconnaissance, and troop carrier operations in support of both joint task forces (Desert Strike n.d.:316). In the first phase of Desert Strike, Nezona initiated mock battle with a full-scale invasion of Calonia. A new concept for military river crossings was put into operation during this invasion, accomplished with a combination of assault boats, amphibious armored personnel carriers, ferries, bridges, and fords at eight major sites across a 140-mile long stretch of the Colorado River. The practice of attack and counterattack continued into a second phase, in which simulated nuclear strikes and airborne assaults were traded between the forces.

Desert Strike “proved once again the lessons which had been learned in World War II when this same area had been part of the great California-Arizona Maneuver Area,” with one commander General Bastion praising the extensive Desert Maneuver Area as it “provided freedom of maneuver and reduced the dependence of units on existing road nets. The long distances involved, the possibility for uninhibited movement, and the lack of civilian population centers as an alternate supply source provided extremely fine tests in logistics, communications, and maintenance” (Desert Strike n.d.:325).

The magnitude of the troop movements, and the required supplies and equipment, was one of the largest operations that occurred in the United States since the WWII period (Desert Strike undated:319). The nature of the Desert Strike joint training exercise proved cumbersome and somewhat controversial. The total cost of Desert Strike was \$35,342,493, with the participation of 89,788 troops (Desert Strike n.d.:323). The U.S. Continental Army Command initially critiqued the operation as being inefficiently planned because of poor timing in the unit training cycles, equipment degradation in the difficult environment, and a lack of value in troop training for the time and cost (Desert Strike n.d.:321). After Desert Strike, large scale joint filed training

exercises were discontinued in the Desert Maneuver Area, as the country became completely engaged in the war in Vietnam.

CHAPTER 3

ARCHIVAL RESEARCH AND CONTACT PROGRAM

This chapter outlines the results of records searches and background research of the BSPP and vicinity. Archival research was conducted for the Project to identify previous surveys within or near the Project. Various sources were consulted, including historic maps and photographs on file with different agencies and institutions that may have information pertinent to the Project area. A contact program was initiated with individual Native American individuals and tribal groups to solicit their input on the Project. Historical societies located near the Project area were also contacted to learn of any additional information or concerns they may have relevant to the Project.

Archival research was conducted to encompass the areas required under Section 106 of NHPA, as well as CEC siting regulations. The archival research included a record search (Attachment 2) through the California Resources Information System, Eastern Information Center (EIC) at the University of California, Riverside.

RECORDS SEARCH

Prior to field investigations, records search was conducted by the California Historic Resources Information System, Eastern Information Center (EIC) at the University of California, Riverside. Conducted on February 11, 2009, the records search covered the Project area, the BLM ROW, and a one-mile radius buffer around the Project. The search included a review of archaeological, historical, and environmental literature in addition to the archaeological site records and survey maps on file at the EIC. In addition to records housed at the EIC, cultural resources staff conducted a background literature review that included:

- National Register of Historic Places, California Register of Historical Resources, as well as local listings
- BLM site files
- Historic GLO maps
- The General Patton Memorial Museum
- Palo Verde Historical Museum and Society.

Previous Surveys

The records and literature search identified 28 previous investigations conducted within a one-mile radius of the Project ROW. These consist of 24 survey-level investigations, one heritage resources program, one management plan, one monitoring report, and one regional overview. Of these, 16 were conducted within portions of the Project area (BLM 1978; Cowan and Wallof 1977; Crew 1980; Greenwood 1977; King et al. 1973; McDonald and Schaefer 1998; McDougall et al. 2006; Mitchell 1989; Padon et al. 1990; Reed 1984 a and b; Schaefer et al. 1996; Swenson 1981; von Werlhof 2004; Underwood et al. 1986; Wilson 1984). Table 3 lists all previous investigations conducted within one mile of the Project ROW.

Table 1. Summary of Previous Surveys within Records Search Limits

EIC Report Number	Year	Author	Title
01249	1978	Bureau of Land Management (BLM)	<i>California Desert Program: Archaeological Sample Unit Records for the Big Maria Planning Unit.</i>
00220	1977	Cowan, Richard and Kurt Wallof	<i>Interim Report – Fieldwork and Data Analysis: Cultural Resources Survey of the Proposed Southern California Edison Palo Verde-Devers 500 kV Power Transmission Line.</i>
00982	1980	Crew, Harvey	<i>An Archaeological Survey of Geothermal Drilling Sites in Riverside County.</i>
04005	1996	Demcak, Carol	<i>Report of Archaeological Survey for L.A. Cellular Site #C601, Nicholls Warm Springs, Riverside County, California.</i>
00160	1977	Greenwood, Roberta	<i>Archaeological Resources Survey – West Coast –Mid-Continent Pipeline Project, Long Beach to the Colorado River, Addendum.</i>
00161	1978	Greenwood, Roberta	<i>Paleontological, Archaeological, Historical, and Cultural Resources – West Coast-Midwest Pipeline Project, Long Beach to Colorado River.</i>
00092	1973	King, Thomas, George Jefferson, and Michael Gardner	<i>Archeological and Paleontological Impact Evaluation: American Telephone and Telegraph Company’s Oklahoma City/Los Angeles “A” Cable Route, Between the Colorado River and Corona, California.</i>
04061	1998	McDonald, Meg, and Jerry Schaefer	<i>Cultural Resources Inventory of 1,542 Acres of Palo Verde Mesa and Palo Verde Valley Catellus/Bureau of Land Management Exchange Area.</i>
06707	2006	McDougall, Dennis, Joan George, and Susan Goldberg	<i>Cultural Resources Surveys of Alternative Routes within California for the Proposed Devers-Palo Verde 2 Transmission Project.</i>
02481	1989	Mitchell, Mike	<i>An Archaeological Inventory and Evaluation of the Pebble Terraces in Riverside County, California.</i>
03029	1990	Padon, Beth, Scott Crownover, Jane Rosenthal, Rebecca Conard	<i>Cultural Resources Assessment Southern California Gas Company Proposed Line 5000, Riverside County, California.</i>
05714	2004	Raschkow, Wanda	<i>Heritage Resources Program-Project Review and Statistical Summary for Project McCoy Wash Flood Retention Dam-Access Road.</i>
01300	1981	Reed, Judyth	<i>Mule Mountains – Area of Critical Environmental Concern– Management Plan.</i>
01842	1984a	Reed, Judyth	<i>Archaeological Inventory CA-050-MP3-13.</i>
01814	1984b	Reed, Judyth	<i>Results of Inventory and National Register Assessment of Archaeological Materials on Seven Terraces in the Colorado Desert.</i>
00002	1953	Rogers, Malcolm	<i>Miscellaneous Field Notes – Riverside County, San Diego</i>

			<i>Museum of Man.</i>
01461	1982	Salpas, Jean	<i>An Archaeological Assessment of Parcel 18032.</i>
07790	2003	Schaefer, Jerry	<i>A Class II Cultural Resources Assessment for the Desert-Southwest Transmission Line, Colorado Desert, Riverside and Imperial Counties, California.</i>
07753	1998	Schaefer, Jerry, Drew Palette, and Jim Eighmey	<i>A Cultural Resources Inventory and Evaluation of the Parker-Blythe 161 kV Transmission Line No. 2 Riverside & San Bernardino Counties, California.</i>
05564	2003	Schmidt, James	<i>Archaeological Monitoring Report, Southern California Edison Blythe-Eagle Mountain 161 kV Deteriorated Pole Replacement Project.</i>
05245	2005	Schmidt, James	<i>Negative Archaeological Survey Report: Southern California Edison Company: Blythe-Eagle Mountain 161 kV Deteriorated Pole Replacement Project.</i>
01334	1981	Swenson, James	<i>An Archaeological Assessment of the Proposed Wastewater Treatment Plant Site in Section 33 and 28, T6S, R7E, SBBM, in the Coachella Valley, Riverside County, California.</i>
02210	1986	Underwood, Jackson, James Cleland, Clyde Woods, and Rebecca Apple	<i>Preliminary Cultural Resources Survey Report for the US Telecom Fiber Optic Cable Project, From San Timoteo Canyon to Socorro, Texas: The California Segment.</i>
01211	1980	von Till Warren Elizabeth, Robert Crabtree, Claude Warren, Martha Knack, and Richard McCarty	<i>A Cultural Resources Overview of the Colorado Desert Planning Units.</i>
03334	1989	von Werlhof, Jay	<i>Archaeological Investigations of the Soil Conservation Service, McCoy Wash Project Near Blythe, California.</i>
04784	2004	von Werlhof, Jay	<i>Archaeological Examinations of Mesa Verde Pipeline Improvement.</i>
01317	1974	von Werlhof, Jay, and Sherilee von Werlhof	<i>Archaeological Assessment of a Proposed Weigh Scale Station Along I-10, West of Blythe, California (P.M. 143.8/145/5).</i>
02078	1984	Wilson, Ruth	<i>Biological and Archaeological Survey of Two Proposed State Prison Sites, Blythe, California (Sec. 2 Cultural Resources – Archaeological Survey Only).</i>

The records search also identified 70 previously recorded cultural resources within the Project ROW and one-mile buffer. Of these, four are located within the Project area. These are a ceramic scatter (CA-RIV-1136), two large prehistoric lithic quarries (CA-RIV-2846 and -3419) on top of Pleistocene pebble terraces, and a linear feature identified as a prehistoric trail segment (CA-RIV-1464). The 66 cultural resources located outside of the Project area, but within the 1-mile buffer, include an intaglio, rock features, trail segments, rock alignments, cleared areas, lithic scatters and quarries, lithic and ceramic scatters, temporary camps, historic debris scatters, historic tent platforms, can scatters, historic road beds, multi-component sites, and isolated

artifacts. Table 4 presents all cultural resources identified by previous researchers within a one-mile radius of the Project boundaries.

Table 2. Summary of Previously Recorded Cultural Resources

Primary Number (P-33-)	Permanent Trinomial (CA-RIV-)	Description	Date(s) Recorded	Within Project Area	Within One-mile Radius of Project Area
<i>Archaeological Sites</i>					
N/A	53T	Prehistoric trail segment	2007; 2004; 1991; 1989; 1987; 1980; 1979; 1955; 1954; 1953		X
661	661	Rock alignment	1991; 1978; 1974		X
662	662	Intaglio	1991; 1974		X
880	880	Cleared area; lithic scatter	1973		X
885	885	Cleared areas; lithic scatter; trail segment	1973		X
1135	1135	Lithic quarry	2000; 1997; 1976		X
1136	1136	Ceramic scatter	1976	X	
1464	1464	Trail segment	1978	X	
2790	2790	Lithic scatter	1984		X
2791	2791	Lithic scatter	2005; 1984		X
2792	2792	Lithic scatter	1984		X
2793	2793	Lithic scatter	1984		X
2794	2794	Lithic scatter	1984		X
2795	2795	Lithic scatter	1984		X
2796	2796	Lithic scatter	1984		X
2844	2844	Lithic scatter	1984		X
2845	2845	Lithic scatter	1984		X
2846	2846	Lithic quarry	2003; 2000; 1988; 1984	X	
3417	3417	Lithic quarry	1989; 1988		X
3418	3418	Lithic quarry	2001; 2000; 1997; 1988		X
3419	3419	Lithic quarry	2008; 1988; 1984	X	
3671	3671	Lithic scatter	2000; 1989		X
3672	3672	Lithic quarry	2001; 1989		X
3673	3673	Trail segment with associated lithics	2000; 1989		X
N/A	3799	Temporary camp	1990; 1989		X
N/A	4568	Trail segment	1991		X

8032	5982H	Historic debris scatter	2000; 1997	X
8135	6045	Lithic scatter	1997	X
8136	6046	Lithic and ceramic scatter	1997	X
8138	6048	Lithic quarry and scatter	1997	X
9669	7174H	Historic tent platforms, can scatters, and animal enclosures	2000	X
9670		Historic can scatter; isolate – prehistoric biface	2000	X
9671	7175	Lithic scatter	2001	X
9672	7176	Ceramic scatter	2000	X
9673	7177H	Historic can scatter	2000	X
9675	7179	Ceramic scatter; historic tent platforms	2000	X
9676	7180H	Historic foundations and debris scatter	2000	X
12912		Ceramic scatter	2000; 1990	X
13310		Fire-affected rock features	2001	X
13617		Ceramic scatter	1990	X
13672		Lithic scatter	2004	X
14150		Historic two-track road	2005	X
14175		Ceramic scatter	2005	X
17169	8934	Historic debris scatter	2008	X
17170	8935	Historic debris scatter	2008	X
17312	9005	Historic debris scatter	2008	X
17315		Historic debris scatter	2008	X
17317	9007	Lithic scatter	2008	X
17318	9008	Lithic scatter	2008	X
17319	9009	Historic debris scatter	2008	X
17320	9010	Lithic scatter	2008	X
17323	9011	Historic debris scatter	2008	X

Isolated Artifacts

12821	N/A	Isolate - biface	1986	X
12902	N/A	Isolate – historic shell casings	1990	X
12903	N/A	Isolate – historic glass bottle	1990	X
12904	N/A	Isolate – biface	2000	X
12905	N/A	Isolate – historic glass bottle	2000	X
12906	N/A	Isolate – two ceramic sherds	1990	X
12907	N/A	Isolate – test cobble	1990	X
12908	N/A	Isolate – historic shell casings	1990	X
12909	N/A	Isolate – tested cobble	1990	X
12910	N/A	Isolate – historic shell	1990	X

		casings		
12911	N/A	Isolate – historic shell casings	1990	X
12913	N/A	Isolate - debitage	1990	X
12914	N/A	Isolate – three historic cans	2004; 1990	X
13611	N/A	Isolate – debitage	1980	X
13612	N/A	Isolate – ceramic sherd	1980	X
13613	N/A	Isolate - debitage	1980	X
13633	N/A	Isolate – debitage	1989	X
17325	N/A	Isolate – historic cans	2008	X

OTHER ARCHIVAL RESEARCH

Various sources were consulted for the BSPP. Archival research is useful in learning more about the regional history of an area to provide a more refined historical context for a Project. Research for the BSPP included historic topographic maps and archival records on file at different agencies and institutions.

The results of archival research are discussed below. Historic maps on file at California State University Chico and the University of Alabama were referenced online. In addition, historic maps from Malcolm Rogers on file at the Museum of Man in San Diego were also reviewed.

Historic Maps

<< to be provided >>

Table 5. Historic Maps << to be provided >>

Map Name	Scale	Year
McCoy Peak		
McCoy Wash		
Ripley		
Roosevelt Mine		

Museums and Historical Societies

The General Patton Memorial Museum at Chiriaco Summit near Desert Center was visited on April 30, 2009. The museum yielded information about the DTC/C-AMA and military history related to the Project area in the form of exhibits and interpretive narratives. The museum's reference library was unavailable for research; the museum did offer publications regarding the DTC for purchase.

The Palo Verde Historical Museum and Society in Blythe was visited on May 4–5, 2009. The reference library contained several vertical files pertaining to the history of the region, particularly focusing on the development of the Blythe community. Vertical files also contained unpublished memoirs, photographs, pamphlets, and newspaper clippings filed by themes, topics,

places, important individuals, and eras. The society also had a comprehensive collection of relevant local periodicals, specifically the local newspaper, the *Palo Verde Valley Times*. The society's President of the Board of Directors, Sylvia Summers, provided assistance in the location of references and an expansive knowledge of regional history.

BLM Archives

The BLM Field Office in Palm Springs was visited on May 4, 2009. BLM references include General Land Office (GLO) plat maps of the Project area, desert land entries, and various survey reports. Christopher Dalu, Archaeologist, provided archived reports and site information from the BLM files.

CONTACT PROGRAM

Native American Contact Program

Native American tribes in the Colorado Desert maintain strong traditional ties to the land and to the cultural resources that have been left by their ancestors. The knowledge and beliefs of Native American groups are an important factor in the siting of any large project that may disturb traditional cultural resources or disrupt access to traditional resources and landscape features. In accordance with federal mandates, the BLM has also initiated government-to-government consultation with Native Americans to address these issues.

The CEC, however, requires that the Applicants make significant efforts to identify Native American concerns for cultural resources and sites of traditional and religious significance within the Project area. To satisfy this requirement, EDAW cultural resources staff contacted the Native American Heritage Commission (NAHC) on April 13, 2009 to request a list of local Native American groups who might have an interest in the Project area, as well as a search of the NAHC's confidential Sacred Sites files for areas of concern in the vicinity of the Project. On April 20, 2009, David Singleton, Program Analyst for the NAHC, responded and indicated that no sacred sites or traditional cultural properties are known within a one-half-mile radius of the Project area. He noted, though, that "numerous Native American cultural resources" exist in the Project vicinity. Additionally, Mr. Singleton provided a list of Native American contacts who may have an interest in the Project Area. On May 1, 2009, Project cultural resources personnel mailed formal requests for input and information to these contacts. Copies of correspondence with the NAHC and Native American groups are provided in Attachment 3. Follow up calls to the identified Native American groups are ongoing. Table 6 details the history of tribal contacts initiated by EDAW.

To date, nine responses of various kinds have been received. Of those, seven responses are requests for more information or notifications that the matter has been passed to another contact person for further comment. Joseph R. Benitez, a Chemehuevi Tribe member, suggested that the Chemehuevi Tribe be contacted directly (Chairperson Charles Wood had previously been

contacted). Patricia Tuck, THPO for the Agua Caliente Band of Cahuilla Indians, has requested a summary report of the archaeological survey of the BSPP before commenting on the Project. Two responses indicate no comment on the Project at this time. Bennae Calac, Tribal Council Member of the Pauma Valley Band of Luiseño Indians, conveyed that the tribe has no comment on the BSPP at this time, but he urged EDAW and the BLM to contact any other regional tribes that might be interested in the project. Esadora Evanston, Environmental Coordinator for the Fort Mojave Indian Tribe, responded that her department has no comment on the Project at this time, but other agents of the tribe reserve the right to comment independently.

Table 6. Summary of the Native American Contact Program

Contact	Affiliation	Date of Initial Contact	Response
Joseph R. Benitez	Chemehuevi	5/1/2009	6/14/2009 – Indicated Chemehuevi Tribe should be contacted
Ann Brierty, Policy Cultural Resources	San Manuel Band of Mission Indians	5/1/2009	None to date
Bennae Calac, Tribal Council Member	Pauma Valley Band of Luiseño Indians	5/1/2009	7/22/2009 – No comment on the BSPP; request that other involved tribes be contacted
Darryl Mike, Chairperson	Twenty-nine Palms Band of Mission Indians	5/1/2009	7/22/2009 – Matter referred to Anthony Madrigal, Environmental Department, for comment
Diana L. Chihuahua, Cultural Resources Coordinator	Torres-Martinez Desert Cahuilla Indians	5/1/2009	None to date
Michael Contreras, Cultural Heritage Program Manager	Morongro Band of Mission Indians	5/1/2009	None to date
Esadora Evanston, Environmental Coordinator	Fort Mojave Indian Tribe	5/1/2009	7/23/2009 – No comment at this time from the Environmental Department
Gary Goforth, Tribal Administrator	Fort Mojave Indian Tribe	5/1/2009	7/23/2009 – Gary Goforth no longer works for the FMIT
Joseph Hamilton, Chairman	Ramona Band of Cahuilla Mission Indians	5/1/2009	None to date
Linda Otero, Director	AhaMaKav Cultural Society, Fort Mojave Indian Tribe	5/1/2009	7/22/2009 – Checking records; will contact EDAW if there are concerns

Contact	Affiliation	Date of Initial Contact	Response
James Ramos, Chairperson	San Manuel Band of Mission Indians	5/1/2009	None to date
Michael Tsosie, Cultural Contact	Colorado River Reservation	5/1/2009	None to date
Patricia Tuck, THPO	Agua Caliente Band of Cahuilla Indians	5/1/2009	7/23/2009 – Request summary of archaeological report for comment
Tim Williams, Chairperson	Fort Mojave Indian Tribe	5/1/2009	7/23/2009 – Matter referred to Jeff Castillo, Tribal Business Development contact, for comment
Charles Wood, Chairperson	Chemehuevi Reservation	5/1/2009	None to date

Historical Society Contact Program

Local historical societies were contacted regarding the Project, as presented in Table 7. Letters were sent to various local historical societies, museums, and research institutions on June 1, 2009, requesting information or comment on any part of the Project and surrounding environs. Follow-up calls were made to each entity on July 17, 2009. To date, no responses have been received.

Table 7. Historical Society Contact Program

Historical Society/Museum	Dates of Contact	Response
General Patton Memorial Museum	6/1/2009 (Letter) 7/17/2009 (Phone)	None to date No response at number
Historic Resources Management Programs, UC Riverside	6/1/2009 (Letter) 7/17/2009 (Phone)	None to date No response at number
Palm Springs Air Museum	6/1/2009 (Letter) 7/17/2009 (Phone)	None to date No response at number
Palm Springs Historical Society	6/1/2009 (Letter) 7/17/2009 (Phone)	None to date No response at number
Palo Verde Historical Museum and Society	6/1/2009 (Letter) 7/17/2009 (Phone)	None to date No response at number
Riverside County Historical Commission	6/1/2009 (Letter) 7/17/2009 (Phone)	None to date No response at number

Agency Contacts

As part of the regular course of our cultural resources investigation, Project cultural resources professionals contacted several governmental agencies. Regulatory agencies with jurisdiction over the BSPP are listed in Table 8, along with contact information.

Table 8. Agency Contacts for the BSPP

Agency & Official Contact	Contact Information	Regulatory Purview
Native American Heritage Commission David Singleton, Program Analyst	915 Capitol Mall, Room 364 Sacramento, CA 95814 (916) 653-6251 nahc@pacbell.net	Coordination of Native American cultural issues in California
State Historic Preservation Office Milford Wayne Donaldson, SHPO	1416 9th Street, Room 1442-7 Sacramento, CA 95814 (916) 653-6624 calshpo@parks.ca.gov mwdonaldson@parks.ca.gov	NHPA and CEQA compliance
California Historical Resources Information System Eastern Information Office Matthew C. Hall, Coordinator	Department of Anthropology University of California, Riverside Riverside, CA 92521 (951) 827-7369 matthew.hall@ucr.edu	Cultural resources and historical architectural resources data repository for Riverside County
Bureau of Land Management Palm Springs-South Coast Field Office Chris Dalu, Archaeologist	1201 Bird Center Drive Palm Springs, CA 92262 (760) 833-7105 Christopher_Dalu@ca.blm.gov	BLM Fieldwork Authorization and coordination of fieldwork on behalf of the BLM; government-to-government Native American consultation
California Energy Commission Siting, Transmission, and Environmental Protection Division Michael McGuiert, Planner II	1516 9th Street, MS 40 Sacramento, CA 95814 MMcGuiert@energy.state.ca.us (916) 654-4870	Certifying governmental agency for power-generating projects in California

Required Permits

The BSPP is located entirely on public lands managed by the BLM. To conduct any archaeological field investigations on BLM land, qualified cultural resources personnel must file a Fieldwork Authorization Request with the BLM, which may then approve or deny the request. Prior to fieldwork on the BSPP, Project cultural resources specialists filed a Fieldwork Authorization Request under BLM Cultural Use Permit CA-06-21. The request indicated areas to be surveyed, supervisory personnel, and survey dates. An approved Fieldwork Authorization was issued by the BLM on March 27, 2009.

Since the completion of the Class III survey, cultural resources monitoring has continued on the Project in association with geotechnical investigations and water well testing. Ongoing cultural

resources monitoring work on the Project is being conducted under BLM Cultural Use Permit CA-09-22 and a BLM Fieldwork Authorization dated August 5, 2009.

CHAPTER 4 METHODOLOGY

SURVEY METHODS

Project archaeologists conducted a Class III archaeological survey of the approximately 7,850-acre Project area, including the Project footprint and a 200-foot buffer per CEC requirements. The survey corridor for linear components included 50 feet on either side of linear alignments. The Class III survey was conducted by qualified four- to eight- person survey teams, each led by a qualified crew chief. A maximum survey interval of 20 m was employed, although crew members frequently walked between transect lines to record isolated artifacts and sites. After the initial pedestrian survey phase, site-recording teams returned to the identified sites to record them in greater detail.

When archaeological sites were encountered, the survey crew determined the location of the site using handheld global positioning system (GPS) units, and then flagged and mapped the location for subsequent recording by the dedicated site-recording teams. All flagging was removed when the recording teams completed their work. For the Project, four or more artifacts were considered a site, and an arbitrary distance of 30 meters between artifacts and features was used to divide cultural material into individual sites.

Isolated single artifacts and collections of less than four 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 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 crew also attempted to relocate previously reported site locations as documented at the EIC. To guide our field studies, Project staff members plotted previously recorded archaeological sites on Project base maps at a scale of 1 inch to 2,000 feet. Field crews also used 7.5-minute United States Geological Survey (USGS) topographic maps and large-scale aerial photographic maps. Previously recorded sites were only re-mapped or otherwise re-recorded if the existing records were deemed inaccurate due to a change in the site condition or configuration.

Site recording included intensive survey of the site area, along with photographic documentation (site overviews and detail shots including diagnostic artifacts), site sketch maps, artifact and feature descriptions, and descriptions of the environmental context. To better preserve the cultural resources, archaeological teams did not collect any artifacts or other materials during the survey. Artifacts were documented and identified in the field by experienced crew members. Archaeological survey in the BSPP commenced on March 30, 2009 and concluded on June 26, 2009.

Documentation

Sites identified during the survey were documented on appropriate DPR 523 forms. Minimally, these included primary forms (Form 523A) and location maps overlaid on a USGS topographic map (Form 523J). More complex resources potentially required an Archaeological Site Record (Form 523C), Linear Feature Form (Form 523E), and/or a Sketch Map (Form 523K). Sketch maps included a site datum, features, artifacts concentrations, and other cultural elements. Isolated finds were noted and their location mapped. In addition to information for site forms, detailed field notes were produced for each site. Field notes contained information about site impacts, geology, vegetation, and diagnostic information about cultural materials at each site.

All isolates identified in the Project were recorded on a primary form and USGS location map. Resource locations were determined using a hand-held GPS unit. 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. All completed DPR site forms will be sent to the EIC for the assignment of Primary number designations in the state inventory system. DPR forms are currently being completed and will be provided when they are finished..

SITE TYPES

The Class III survey was designed to identify and evaluate archaeological sites to the extent possible from observed surface conditions. Prior to field investigations, it was important to consider the types of cultural resources that were likely to be encountered, and the relevance of such resources for the investigation of regional research issues. Sites types common to the Colorado Desert were compiled in the Class III Work Plan (Apple and Cleland 2009) and are listed below.

Prehistoric

Trails

Trails are generally tamped into stable surfaces, sometimes with larger gravel and pebbles pushed to the sides to form slight berms along the edges of the trail. In the desert, trails are typically found on shoulders and along tops of ridge systems, on relatively stable alluvial fans, on desert pavements, and in upland areas where they often disappear into a washes. Prehistoric trails can follow washes for considerable distances. Several trails have been documented along the Colorado River where they are also associated with petroglyphs, ground figures, and cairns (Altschul and Ezzo 1994; Cachora 1994; Johnson 1985; McGuire and Schiffer 1982; Pendleton et al. 1986; Pignuolo et al. 1997; Rogers 1939; Schaefer 1994a, 1994b; von Werlhof 1987).

Lithic Scatters and Flaking Stations

This resource category can range from single flaking stations to large scatters that often contain numerous flaking stations with a light background scatter of debitage. Discrete flaking stations, where a single episode of lithic reduction occurred, often include cores and debitage, but rarely finished tools or useable flakes. When tools are found in lithic scatters, they are usually broken

blanks from early in the manufacturing process, or expedient tools. The debitage in lithic scatters is the result of various core and biface reduction activities.

Debitage size and character is often associated with the size of the parent material. A lithic study in the nearby McCoy Wash included a detailed in-field analysis of reduction techniques as reconstructed from the preserved debitage and cores (Flenniken and Spencer 2001). The researchers concluded that four discrete reduction technologies were represented in the wash, all of them apparently contemporaneous and directly related to the size and shape of the source materials chosen for reduction (Flenniken and Spencer 2001:61). Although lithic scatters are generally interpreted by archaeologists as places where toolstone acquisition and tool manufacture 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).

Ceramic Scatters and Pot Drops

“Ceramic scatter” refers to a dispersed surface distribution of ceramics, typically from multiple vessels. A “pot drop” is traditionally defined as a small, distinct concentration of sherds from a single vessel. As early as the 1930s, Malcolm Rogers recognized that shrines along trails and other ceremonially significant sites in the Colorado Desert frequently contain concentrations of prehistoric ceramics.

Cleared Circles

Cleared circles, sometimes referred to as “sleeping circles,” are commonly found throughout the regional study area. These are cleared areas in the desert pavement that are roughly circular in outline. Following Malcolm Rogers’ (1966) initial work, archaeologists have interpreted larger cleared circles as “sleeping” or resting places, and identified smaller ones as vision quest or meditation circles (Davis 1980; Ezzo and Altschul 1993; Pignuolo et al. 1997; Rogers 1966; von Werlhof and von Werlhof 1977). Habitation debris is rarely found in direct association with cleared circles (Rogers 1966), and subsurface deposits at cleared circles in the Colorado Desert generally are very rare (Marmaduke and Dosh 1994; Pendleton et al. 1986; Schaefer 1986).

Rock Rings

Prehistoric rock rings are commonly found throughout southeastern California, southwestern Arizona and Utah, southern Nevada, and the Pinacate region of Mexico. Rock rings are found as isolates or in clusters and are situated in areas of desert pavement or other stable surfaces. Rings larger than 1 m in diameter are generally regarded as habitation places, with the rocks possibly used to support the brush walls of temporary structures (Pignuolo et al. 1997; von Werlhof and von Werlhof 1977). Smaller rock rings may have delineated hearths, or they might have had a ceremonial function (Cleland 2005; Pignuolo et al. 1997). Although generally circular in shape, some are more oval or rectangular in shape (Rogers 1966). Rock rings are typically composed of a single course of cobble- to boulder-sized rocks, although some contain two or more courses of stacked stone.

Prehistoric Cairns

Within the Colorado Desert, prehistoric cairns are typically situated on stable surfaces. The cairns, which may be partially collapsed, are composed of multiple courses of dry-stacked rocks

ranging from pebbles to small boulders. Prehistoric cairns are frequently found associated with trails or other prehistoric features.

Habitation Sites

Habitation sites typically are characterized by a variety of occupation debris and, occasionally, the remains of domestic architecture. These sites can contain living areas (see also rock rings and cleared circles above); cooking hearths; subsistence remains (faunal bone and plant remains); midden deposits; artifact scatters; and often discrete activity areas, such as lithic reduction, milling, or other subsistence-related activities.

Petroglyphs

Petroglyphs are formed by removing, by various means, the desert varnish or weathered surface from boulders or bedrock outcrops. Considered ceremonial in nature, petroglyphs in the Colorado Desert include anthropomorphic, zoomorphic, abstract, and geometric forms (Cleland and Apple 2003; Ezzo and Altshul 1993). Although single, isolated petroglyphs are occasionally found, petroglyphs usually occur clustered on rock faces forming panels with likely compositional significance.

Ground Figures – Geoglyphs and Rock Alignments

For the purposes of this study, two types of ground figures are recognized: geoglyphs and rock alignments. Both are considered to have ceremonial or ritual significance. Geoglyphs, sometimes referred to as intaglios, are lines and figures created through various means on stable ground surfaces (Harner 1953; Johnson 1985; Rogers 1945). Geoglyphs may be formed through a deliberate subtractive process, or incidentally from repetitive motion upon the land.

In the Colorado Desert, geoglyphs are typically formed by removing the uppermost layer of desert pavement rocks and gravel, exposing the lighter-colored soil beneath. The removed gravel is often pushed to the edge of the exposed surfaces, forming a low gravel berm around the geoglyph figure. Depending on the construction method and the degree of erosion, these berms can range from well-defined to ill-defined or nonexistent (von Werlhof 1987). Geoglyphs may alternatively be tamped into the desert pavement rather than incised. For example, in tamped rings the pavement surface is compressed but not actually removed, possibly as a result of the repetitive movements involved in ritual circle dances (Johnson 1985; Solari and Johnson 1982; von Werlhof 2004).

Ground figures can also be formed by an additive process wherein cobbles and/or small boulders are arranged on the ground surface in various shapes and alignments (Johnson 1985; von Werlhof 1987). For this Project, we refer to these additive ground features as “rock alignments.”

Cremations/Human Remains

All human cultures have deeply held beliefs and specific practices associated with the treatment and disposition of the dead. For that reason, the disturbance of human remains is always a sensitive issue culturally, ethically, and legally. Traditionally, the peoples of the Colorado River area practiced cremation, although other practices, including burial, are known archaeologically.

Although relatively rare, sites with cremations or burials have been recorded in the Colorado Desert. Human remains are subject to special protection under federal and state law, and within the BSPP the disposition of any Native American human remains and associated funerary objects would be subject to the requirements of NAGPRA.

Groundstone Quarries and Groundstone Tools

Evidence of groundstone production has been found in the Palo Verde Hills (Apple et al. 2001), Palo Verde Point (Johnson 2001), the Picacho Basin (Pendleton et al. 1986), and along the Colorado and Gila Rivers (Ezzo and Altschul 1993; Schneider and Altschul 2000). Boma Johnson's (2001) work suggests that there are large quarries in the Palo Verde Point area, that were utilized for the manufacture of mano, metate, and pestle blanks. At temporary campsites and larger habitation sites, mobile groups often cached groundstone tools for use upon their return to the same locales.

Historic

Transportation Routes

Transportation routes consist of historic trails and roads. The condition of the roads may vary from faint two-tracks to graded or paved alignments, where the route not the road is significant. Several unimproved roads run through and adjacent to the Project, most associated with the initial survey of the land and the transport of goods and people to mining activities in the region.

Historic Camps

Evidence of temporary historic camps is found throughout the Colorado Desert. These camps often include features such as campfire/hearths and debris scatters, as well as cleared areas that are possibly historic tent pads. Types of camps include construction camps for linear facilities (railroads, transmission lines, water conveyance, etc.), mining camps, and military camps and bivouacs.

Refuse Scatters and Dumps

This feature type ranges from small discrete deposits to large debris scatters. Often these are found along trails or roads, complicating temporal and cultural assignments. The Project is located within the former boundaries of the DTC/C-AMA, which was a large-scale military training facility during WWII. Directly south of the BSPP is the Blythe Army Air Base, developed in its present form as an air support and heavy-aircraft training facility for the DTC/C-AMA. Refuse scatters dating to the early 1940s, and particularly 1942 to 1945, are likely representative of DTC/C-AMA activities including ground maneuvers and aircraft training. Most earlier refuse deposits are likely associated with sporadic mining activities in the vicinity, as well as a few brief attempts to establish farms or ranches on the Palo Verde Mesa.

Refuse scatters from the later 20th century may represent a variety of activities which may be difficult to distinguish. From the end of WWII forward, the Palo Verde Mesa supported peripatetic mining activity, focused cobble-collection activities on the pebble terraces (for prized river-rounded cobbles), recreational use, and a brief reoccupation of the area as part of the Desert Strike joint Army-US Air Force Exercises of May 1964.

Historic Cairns

Many of the rock piles within the Colorado Desert are associated with historic mining claims. These can vary in size and composition. Rarely a can or other container in the cairn will contain information regarding the claim. In addition, some historic cairns in the BSPP may be related to the use of the area during WWII as part of the DTC/C-AMA.

Isolated Finds

Isolated finds consist of single, occasionally multiple, prehistoric or historic artifacts. Isolates have been found on a variety of surfaces, including desert pavement, gravel beds, and washes.

RESEARCH ISSUES AND THEMES

Research issues in the Colorado Desert region include questions that relate to both prehistoric and historic archaeological sites. Research issues can be categorized into research themes designed to answer questions about the past. Questions relevant to the region can be addressed by identification and analysis of cultural resources. Site types listed above can be assigned to various themes that may be used to answer questions about the use and development of the BSPP over time.

Prehistoric Research Themes

Chronology

Chronology building continues to be a major research emphasis in the Colorado Desert. Most of the known sites are surface sites consisting of lithic artifacts and ceramics. Stratified sites of any kind are very rare in the region as a whole (Cleland and Apple 2003; Schaefer 1994b). The general concentration of populations within the lower river valleys has meant that the majority of sites with intact, datable deposits have been removed from the archaeological record by fluvial action. Thus, various factors have conspired to hinder the development of an adequate culture chronology in the region.

In view of this, one of the most important aspects of a prehistoric research program for the Colorado Desert should be to aid in the refinement of the regional chronological framework. Any site that contains organic cultural remains suitable for radiocarbon dating could prove useful in this endeavor. Beyond this general observation, key chronometric topics that might be addressed include (1) the reliability of regional dating methods, (2) issues regarding the earliest phases of human occupation of the region, (3) problems related to the Archaic period occupation, and (4) refinements of the regional ceramic sequence. Additional areas of research include lithic technology, site formation processes, and trade and travel. Site types that may be associated with this theme include lithic scatters with temporally diagnostic projectile points, ceramic scatters and pot drops, and habitation sites.

Prehistoric Subsistence

The BSPP is located in an area that has been categorized as a resource procurement area for highly mobile populations, primarily in the Late Prehistoric and Protohistoric periods (Singer 1984). Archaeological research in the Colorado Desert has not fully answered questions regarding the use of low-yield desert pavement regions like that of the Project area (Schaefer 1994b) as resource areas, transportation corridors, and temporary habitation locales. Sites in the BSPP that may relate to this theme include lithic scatters and flaking stations, ceramic scatters and pot drops, cleared circles, rock rings, thermal features like hearths and roasting pits, and groundstone tools.

Lithic Technology

The ways that hunter-gatherers chose to organize the procurement, manufacture, and discard of flaked stone tools varies 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.

Because of high transport costs, groundstone tools are often cached or left in situ in places to which mobile groups intend to return. Though, high costs of groundstone transport may have been reduced by river transport (Schneider 2006). Because of this cost, these tool types may be good indications of a location of relatively frequent and/or long-term use. Groundstone procurement patterns have been studied along the lower Colorado River (Huckell 1986, Schneider 2006). The Bullhead City quarry, approximately 100 miles north of the BSPP on the Colorado River, produced a material variously referred to as alkali-olivine basalt or andesite used in the manufacture of metates (Schneider 2006). Huckell (1986) and Schneider (2006) both document Bullhead City (aka Big Bend) quarry. Huckell notes that the quarry appears to have been utilized by the Mohave for a period of a few hundred years (1986:55). Huckell further argues that the specialized nature and geographic range of metates is indicative of production and exchange of groundstone tools rather than simple procurement for personal use (1986:56). Site types that may relate to this theme include lithic scatters, flaking stations, and groundstone tools.

Historic Research Themes

Previous cultural surveys suggested that historic period resources are present in lower frequency than prehistoric resources in the Colorado Desert, but this has not proven accurate in the Project area. Not surprisingly, previous research efforts have similarly focused on prehistory, leaving historical period research questions relatively underdeveloped. From the inventory work that has been accomplished in the region, it appears that the following themes are most relevant to the BSPP: transportation, mining, agriculture and ranching, and military training activities.

Transportation

Today, the main route through the Palo Verde Mesa is I-10. In addition to established roads, numerous unpaved routes are present throughout the Colorado Desert. Two-track roads, unimproved roads, and graded dirt roads often are the remnants of early wagon or automobile routes. Material culture associated with early routes is evident on the landscape as well. Historic debris from early travel across the desert is evident in the form of cans or other refuse associated with vehicle maintenance. Oftentimes, debris associated with early automobile use is found adjacent to modern roadways, which may indicate the age and historic use of the route through time.

Mining

Though large-scale mining was not a major endeavor in the Palo Verde Mesa or surrounding mountains, evidence of mining activities is still evident on the landscape. Remnants of prospect mining for various raw materials and claim posts with historic cans or jars may indicate that prospecting has taken place. Likewise, historic cairns may also indicate mining activities. Other signs include prospect pits, tailings, and debris located near a cairn or claim post. Historic references indicate that mining took place in the region well into the 20th century. Identifying mining activities, no matter the scale, informs the past development of the Project area and the region as a whole.

Agriculture and Ranching

California's agricultural economy boomed with the advent of the Gold Rush, and further developed in the late 19th century with the passage of the Homestead Act in 1862 and the Desert Land Act of 1877. Passage of these acts allowed agriculture to develop in the Palo Verde Valley. Agriculture and ranching, though did not develop in the immediate environs of the Project. As agriculture and farming required larger tracts of land in order to achieve success, homesteading became marginalized over time. Though agriculture and ranching never became major industries in the Project, early 20th century attempts at taming the land are evident as structures, water troughs and pipes, and associated debris.

Military Training

Finally, one of the most significant research issues surrounds the area's use as a military training facility. The history of the WWII-era DTC/C-AMA has been well documented (see Bischoff 2000; Henley 1992; Meller 1946), though the material culture of the actual maneuver areas outside of the camps is not well known. The DTC/C-AMA was the largest military training facility ever operated and physical evidence of its use is visible throughout the region. Various activities may be identified due to the material remains of the DTC/C-AMA. One of the starkest pieces of evidence of DTC/C-AMA activities are tank tracks that have survived for decades. Just as prehistoric trails feature tamped surfaces from use over time, tank tracks leave a semi-permanent mark on the land.

WWII-related military activity was not the only military presence in the BSPP in the past. Subsequent to Patton and the DTC/C-AMA, the joint Army – U.S. Air Force Exercise Desert Strike (discussed in Chapter 2 above) utilized the Project area for active maneuvers (Desert Strike n.d.).

Debris from military activities is evident on the ground surface in the form of tank tracks, military ration cans, oil and fuel cans, beer cans, munitions, aircraft parts, and a number of land-modification features like tent pads and fortified positions. While metal cans tend to have wide dates of manufacture, several identifiable aspects, such as opening method, have been extremely useful in distinguishing between early mining activities, WWII-era military training, and later activities. Tin cans are often overlooked in terms of their potential to yield information about a site, especially when artifacts like bottles are more easily dated. This can lead to archaeologists ignoring or not giving proper attention to their details (Busch 1981:102). However, proper identification and documentation of cans as one of several lines of evidence has the potential to narrow the range of historic archaeological sites.

CHAPTER 5 ARCHAEOLOGICAL RESULTS

Project archaeologists performed pedestrian surveys of the Project between March 30, 2009 and June 26, 2009. Ground visibility was extremely good, ranging between 95 and 100 percent. Within the BSPP, the cultural resources survey inventoried a total of 1,214 isolated artifacts and 227 archaeological sites, of which 223 had not been recorded previously. One previously recorded site in the Project cultural resources survey area could not be relocated by the survey crew, as described below. Of the 227 archaeological sites, 193 are historic, 29 are prehistoric, and 5 contain both historic and prehistoric materials. The archaeological survey area, along with site and isolate locations are provided on 7.5-minute USGS topographical maps in Attachment 4.

Due to design changes since the completion of the cultural resources survey, 27 of the recorded archaeological sites are no longer within the Project APE. Sites in areas removed from the Project are not evaluated. In addition, nine archaeological sites are in the 200-ft buffer around the current Project APE. Since these resources will not be impacted by the construction of Project as currently proposed, no assessments were made of those resources at this time. A summary of the identified resources are provided in Table 9. [DPR forms will be included in Attachment 5 when they are complete.]

Table 9. Archaeological Sites Identified in the BSPP

Temporary Number	Site Type/	Cultural Context	Cultural Constituents	Chronological Assessment	Location
<i>Archaeological Sites: Newly Recorded</i>					
SMB-H-107	Historic debris scatter	Historic use of the Palo Verde Mesa	sanitary cans	20th century	Buffer
SMB-H-109	Historic debris scatter	DTC/C-AMA (possible Desert Strike)	military ration cans, aluminum-top pull-tab can	1942-1944 (WWII) and Late 20th century	In Project
SMB-H-110	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-111	Historic cairns and debris scatter	Mining	rock cairns associated with prospecting pits and debris	Early 20th century	Buffer
SMB-H-113	Historic cairns and debris scatter	DTC/C-AMA and Mining	aircraft parts, cairns	1942-1944 (WWII) and Early 20th century	In Project
SMB-H-114	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-115	Historic debris scatter	DTC/C-AMA	military ration cans, bullet casing, metal wire	1942-1944 (WWII)	In Project
SMB-H-116	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project

Temporary Number	Site Type/	Cultural Context	Cultural Constituents	Chronological Assessment	Location
SMB-H-118	Historic debris scatter	DTC/C-AMA	military ration cans, fuel can, military mess-kit spoon (embossed with "U.S."), bullets, metal wire	1942-1944 (WWII)	In Project
SMB-H-119	Historic debris scatter	Mining	evaporated milk cans, key-wind meat can	Late 19th to Early 20th century	In Project
SMB-H-120	Historic debris scatter	Mining	sardine cans, key-wind sanitary can	Late 19th to Early 20th century	In Project
SMB-H-121	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-122	Historic debris scatter	DTC/C-AMA	military ration cans, military mess-kit spoon (embossed with "U.S.")	1942-1944 (WWII)	In Project
SMB-H-123	Historic debris scatter	DTC/C-AMA	military ration cans, glass jar	1942-1944 (WWII)	In Project
SMB-H-124	Historic debris scatter	DTC/C-AMA	military ration cans, military-issue internal friction can, sanitary cans	1942-1944 (WWII)	In Project
SMB-H-125	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-126	Historic debris scatter	DTC/C-AMA	military ration cans, glass jar	1942-1944 (WWII)	In Project
SMB-H-127	Historic debris scatter	Historic use of the Palo Verde Mesa	sanitary cans	20th century	In Project
SMB-H-129	Historic debris scatter	Mining	sardine can, sanitary cans, glass Coke bottles	Early 20th century	In Project
SMB-H-130	Historic debris scatter	DTC/C-AMA (possible Desert Strike)	military ration cans; aluminum-top beer can, glass jug	1942-1944 (WWII) and Late 20th century	In Project
SMB-H-131	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-132	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-133	Historic debris scatter and rock feature	DTC/C-AMA	military ration cans, rock feature	1942-1944 (WWII)	In Project
SMB-H-134	Historic debris scatter	DTC/C-AMA and Mining	military ration cans, amber bottle glass	1942-1944 (WWII) and Early 20th century	In Project
SMB-H-135	Historic debris scatter	DTC/C-AMA	military ration cans, glass bottle fragment, metal band, smoke land mine	1942-1944 (WWII)	In Project
SMB-H-136	Historic debris scatter	DTC/C-AMA	military ration cans, brass bullet, sheet metal, glass jar (embossed with 1943 date)	1942-1944 (WWII)	In Project
SMB-H-137	Historic debris scatter	DTC/C-AMA	military ration cans, wooden lathe, survey marker (dated 1917)	1942-1944 (WWII) and Early 20th century	In Project
SMB-H-138	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project

Temporary Number	Site Type/	Cultural Context	Cultural Constituents	Chronological Assessment	Location
SMB-H-139	Historic debris scatter	DTC/C-AMA and Mining	military ration cans; rotary-opened food can	1942-1944 (WWII) and Early 20th century	In Project
SMB-H-140	Historic debris scatter	DTC/C-AMA	military ration cans, military mess-kit spoon, bullet shells, lathe	1942-1944 (WWII)	In Project
SMB-H-143	Historic debris scatter and well	Historic settlement of the Palo Verde Mesa	key-wind meat can, other sanitary cans, milled lumber, well head	Late 19th to Early 20th century	In Project
SMB-H-144	Historic debris scatter	Historic use of the Palo Verde Mesa	sanitary cans	20th century	In Project
SMB-H-145	Historic debris scatter	DTC/C-AMA	military ration cans, glass Coke bottle, glass jar	1942-1944 (WWII)	In Project
SMB-H-147	Historic debris scatter	DTC/C-AMA (possible Desert Strike)	military ration cans, aluminum-top beer can	1942-1944 (WWII) and Late 20th century	In Project
SMB-H-148	Historic debris scatter	DTC/C-AMA and Historic use of the Palo Verde Mesa	military ration cans, other sanitary cans	1942-1944 (WWII) and Late 20th century	In Project
SMB-H-151	Historic debris scatter	DTC/C-AMA and Historic use of the Palo Verde Mesa	military ration cans, other rotary-opened food cans	1942-1944 (WWII) and Late 20th century	In Project
SMB-H-152	Historic debris scatter	DTC/C-AMA and Historic use of the Palo Verde Mesa	military ration cans, other rotary-opened food cans	1942-1944 (WWII) and Late 20th century	In Project
SMB-H-153	Historic debris scatter	DTC/C-AMA	cans, metal bracket with military-style coating	1942-1944 (WWII)	In Project
SMB-H-154	Historic debris scatter	DTC/C-AMA	military ration cans, butchered bone, boot sole, flat glass fragment	1942-1944 (WWII)	In Project
SMB-H-155	Historic debris scatter	DTC/C-AMA	military ration cans, glass jar, wooden lathe and plank, embossed sheet metal	1942-1944 (WWII)	In Project
SMB-H-156	Historic debris scatter	DTC/C-AMA and Mining	military soluble coffee can, other food cans, glass bottles	1942-1944 (WWII) and Early 20th century	In Project
SMB-H-157	Historic debris scatter	DTC/C-AMA	garbage can lid (embossed with 1942 date), evaporated milk can and other cans	1942-1944 (WWII)	In Project
SMB-H-158	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-159	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-P-160	Lithic scatter	Lithic reduction	flakes	Prehistoric	In Project
SMB-H-161	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, metal band	20th century	In Project
SMB-H-162	Historic debris scatter	DTC/C-AMA and Mining	military ration cans, glass jug fragments	1942-1944 (WWII) and Early 20th century	In Project
SMB-H-163	Fortified positions	DTC/C-AMA	military ration cans, auto parts, fortified positions	1942-1944 (WWII)	In Project

Temporary Number	Site Type/	Cultural Context	Cultural Constituents	Chronological Assessment	Location
SMB-H-164	Historic debris scatter and hearth	Historic use of the Palo Verde Mesa	cans, glass bottles and fragments, metal post, band, and wire, hearth	20th century	In Project
SMB-H-165	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-166	Historic debris scatter	DTC/C-AMA	military ration cans, glass jar	1942-1944 (WWII)	In Project
SMB-H-167	Historic debris scatter	DTC/C-AMA	military ration cans, fuel can, metal bucket, glass bottles	1942-1944 (WWII)	In Project
SMB-H-168	Historic debris scatter	DTC/C-AMA	military ration cans, ceramic fragment, glass fragments, miscellaneous metal	1942-1944 (WWII)	In Project
SMB-H-169	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, glass bottles, vehicle parts, aluminum foil	Late 20th century	In Project
SMB-H-170	Historic hearth	Historic use of the Palo Verde Mesa	sanitary can, rock ring with charcoal fragments	Late 20th century	In Project
SMB-H-171	Historic debris scatter	DTC/C-AMA	military ration can dump and glass bottles	1942-1944 (WWII)	In Project
SMB-H-173	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-H-175	Historic debris scatter and hearth	DTC/C-AMA	military ration cans, glass fragments, hearth	1942-1944 (WWII)	In Project
SMB-H-176	Historic debris scatter and hearth	Historic use of the Palo Verde Mesa	cans, metal wire, metal bar, wood pile, hearth	20th century	In Project
SMB-H-177	Historic debris scatter and hearth	Historic use of the Palo Verde Mesa	aluminum-top pull-tab beer cans, possible hearth	Late 20th century	In Project
SMB-H-178	Historic debris scatter and rock feature	DTC/C-AMA and Historic use of the Palo Verde Mesa	sanitary can dump, propane tank, jack, vehicle tire, hack saw, glass bottle, rock alignment	1942-1944 (WWII) and 20th century	In Project
SMB-H-179	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-H-180	Historic debris scatter	DTC/C-AMA (possible Desert Strike)	cans	1942-1944 (WWII) and Late 20th century	In Project
SMB-H-181	Historic debris scatter	DTC/C-AMA	cans, glass jar	1942-1944 (WWII)	In Project
SMB-H-182	Historic debris scatter	DTC/C-AMA and Historic use of the Palo Verde Mesa	military ration cans, ceramic fragments, glass jar, glass bottles, other glass fragments	1942-1944 (WWII) and Early 20th century	In Project
SMB-H-183	Historic debris scatter	Historic use of the Palo Verde Mesa (possible Mining)	church-key-opened beer cans	Early 20th century	In Project
SMB-H-184	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-185	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project

Temporary Number	Site Type/	Cultural Context	Cultural Constituents	Chronological Assessment	Location
SMB-H-186	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-H-189	Historic debris scatter	DTC/C-AMA (possible Desert Strike)	military ration cans, aluminum-top beer cans, glass bottles	1942-1944 (WWII) and Late 20th century	In Project
SMB-H-190	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-191	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, glass bottle, glass jar	20th century	In Project
SMB-H-192	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-H-193	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-H-194	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, glass jar	Late 20th century	In Project
SMB-H-195	Historic debris scatter	DTC/C-AMA	military ration can, other cans, glass jar	1942-1944 (WWII)	In Project
SMB-H-197	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, broken glass bottles	Late 20th century	In Project
SMB-H-198	Historic debris scatter	Historic settlement of the Palo Verde Mesa	church-key-opened beer cans, other sanitary cans, metal pipe fragment, metal cable	Late 19th to Early 20th century	In Project
SMB-H-199	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-H-200	Historic debris scatter	Historic use of the Palo Verde Mesa	can, vehicle wheels, metal wire, electric box	20th century	In Project
SMB-H-202	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, milled lumber, metal wire	20th century	In Project
SMB-H-203	Historic cleared areas	DTC/C-AMA	cleared areas arrayed in a line	1942-1944 (WWII)	In Project
SMB-H-204	Historic debris scatter	Mining	key-wind meat can, fuel can, other sanitary cans	Early 20th century	In Project
SMB-H-205	Historic debris scatter	Mining	sanitary cans, glass fragments, metal wire, prospecting pits	Early 20th century	In Project
SMB-H-206	Historic debris scatter	Historic settlement and use of the Palo Verde Mesa	cans, metal pipe fragments, vehicle parts, glass fragments	20th century	In Project
SMB-H-207	Fortified positions	DTC/C-AMA	can lids, grenade spoon, shell casing, metal strapping, fortified positions	1942-1944 (WWII)	In Project
SMB-H-208	Historic debris scatter	DTC/C-AMA and Historic use of the Palo Verde Mesa	military ration cans, glass ink well	20th century	In Project
SMB-H-209	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, cement block with post, lathe	Late 20th century	In Project
SMB-H-210	Fortified positions	DTC/C-AMA	military ration cans, milled lumber, ammunition clips, metal strapping, fortified positions	1942-1944 (WWII)	In Project

Temporary Number	Site Type/	Cultural Context	Cultural Constituents	Chronological Assessment	Location
SMB-H-212	Historic debris scatter	DTC/C-AMA	cans and can lids	1942-1944 (WWII)	In Project
SMB-H-213	Historic debris scatter	Historic settlement of the Palo Verde Mesa	can, metal pipe fragment, metal spring and rod, glass jar	Early 20th century	In Project
SMB-M-214	Prehistoric cobble feature with historic debris	Historic and Prehistoric use of the Palo Verde Mesa	sanitary can, thermal cobble feature (prehistoric)	20th century and Prehistoric	In Project
SMB-H-215	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-216	Historic debris scatter	DTC/C-AMA	cans	1942-1944 (WWII)	In Project
SMB-H-218	Historic debris scatter	Historic use of the Palo Verde Mesa	automobile parts, metal, wire, hearth	Early 20th century	In Project
SMB-H-219	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-H-220	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-221	Historic debris scatter	Historic settlement of the Palo Verde Mesa	cans, glass fragments, metal rods	Early 20th century	In Project
SMB-H-222	Historic debris scatter and rock feature	DTC/C-AMA	military ration cans, hearths, letters created from alignments of quartz rocks	1942-1944 (WWII)	In Project
SMB-H-223	Fortified positions	DTC/C-AMA	military ration cans, fortified positions	1942-1944 (WWII)	In Project
SMB-H-224	Historic debris scatter	DTC/C-AMA	military ration cans, glass jar, glass fragments, ceramic fragments, metal teapot, metal screen, miscellaneous metal wire, bands, and sheets	1942-1944 (WWII)	In Project
SMB-H-226	Historic cairns and rock feature	Historic use of the Palo Verde Mesa	rock ring sundial feature, cairns	20th century	Buffer
SMB-H-227	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-P-228	Lithic scatter	Lithic reduction	quartzite flakes, quartzite flake core, hammerstone	Prehistoric	In Project
SMB-H-229	Historic debris scatter	DTC/C-AMA	cans, milled lumber	1942-1944 (WWII)	In Project
SMB-H-230	Historic debris scatter	DTC/C-AMA	military ration cans, glass bottle	1942-1944 (WWII)	In Project
SMB-H-231	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-H-232	Historic debris scatter	DTC/C-AMA and Historic use of the Palo Verde Mesa	military ration cans, other sanitary cans, can lids, glass bottle	1942-1944 (WWII) and 20th century	In Project
SMB-H-233	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project

Temporary Number	Site Type/	Cultural Context	Cultural Constituents	Chronological Assessment	Location
SMB-H-234	Historic debris scatter and cairn	DTC/C-AMA	military ration cans, small cairn	1942-1944 (WWII)	In Project
SMB-H-235	Historic debris scatter	DTC/C-AMA	military ration cans, metal wire, sheet metal	1942-1944 (WWII)	In Project
SMB-H-236	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-P-237	Lithic scatter	Lithic reduction	flakes, flake cores, biface fragment, hammerstones	Prehistoric	Buffer
SMB-P-238	Lithic scatter	Lithic reduction	flakes, flake core, hammerstones	Prehistoric	In Project
SMB-P-241	Lithic scatter and cairn	Lithic reduction	flakes, flake cores, hammerstone, cairn	Prehistoric	In Project
SMB-P-242	Lithic scatter	Lithic reduction	flakes, hammerstone, flake core	Prehistoric	Buffer
SMB-H-243	Historic debris scatter and hearth	DTC/C-AMA	military ration cans, crown-top beer can, metal wire, hearth	1942-1944 (WWII)	In Project
SMB-P-244	Lithic scatter	Lithic reduction	flakes, hammerstone, flake core	Prehistoric	In Project
SMB-H-245	Historic debris scatter and rock features	DTC/C-AMA	military ration cans, hearth, rock features	1942-1944 (WWII)	In Project
SMB-H-246	Historic debris scatter	DTC/C-AMA	fuel cans, other food cans, glass jar	1942-1944 (WWII)	In Project
SMB-H-247	Historic cleared areas and cairn	Mining	metal wire, wooden stakes, tent pads, toppled cairn	Early 20th century	In Project
SMB-H-248	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-P-249	Lithic scatter	Lithic reduction	flakes, hammerstone	Prehistoric	In Project
SMB-H-250	Historic geoglyph	Historic use of the Palo Verde Mesa	historical geoglyph	20th century	In Project
SMB-H-251	Historic cleared areas	Historic use of the Palo Verde Mesa	historical cleared areas	20th century	In Project
SMB-P-252	Lithic scatter	Lithic reduction	flakes, hammerstones, flake cores	Prehistoric	In Project
SMB-H-283	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, glass bottle	20th century	In Project
SMB-H-253	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Out of Project
SMB-H-254	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Out of Project
SMB-H-255	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Out of Project
SMB-H-256	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Out of Project
SMB-H-257	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Out of Project
SMB-H-258	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, glass bottle	20th century	Out of Project

Temporary Number	Site Type/	Cultural Context	Cultural Constituents	Chronological Assessment	Location
SMB-H-259	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Out of Project
SMB-H-260	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Out of Project
SMB-H-261	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, machine parts	20th century	Out of Project
SMB-H-262	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, glass bottle, ceramic fragments	20th century	Out of Project
SMB-H-263	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Out of Project
SMB-H-265	Historic debris scatter	Historic use of the Palo Verde Mesa	can dump	20th century	Out of Project
SMB-H-266	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Out of Project
SMB-H-267	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Out of Project
SMB-H-268	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Out of Project
SMB-H-269	Historic debris scatter	Historic use of the Palo Verde Mesa	can dump	20th century	Out of Project
SMB-M-270	Historic debris scatter and lithic scatter	Historic use of the Palo Verde Mesa and Lithic reduction	cans, miscellaneous metal, glass bottles, brick, flaked stone debitage	20th century and Prehistoric	Out of Project
SMB-P-272	Lithic scatter	Lithic reduction	flakes, tested cobbles, cairns	Prehistoric	Out of Project
SMB-M-274	Historic debris scatter and lithic scatter	Historic use of the Palo Verde Mesa and Lithic reduction	cans, car parts, tested cobbles, flakes	20th century and Prehistoric	Out of Project
SMB-H-276	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, metal strap	20th century	Out of Project
SMB-H-279	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Out of Project
SMB-H-282	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, glass bottle	20th century	Out of Project
SMB-H-284	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-285	Fortified positions	DTC/C-AMA	fortified position	1942-1944 (WWII)	In Project
SMB-H-286	Fortified positions	DTC/C-AMA	can, fortified position	1942-1944 (WWII)	In Project
SMB-H-287	Historic debris scatter	Historic use of the Palo Verde Mesa	car parts, glass fragments	20th century	In Project
SMB-H-288	Historic debris scatter	Historic settlement of the Palo Verde Mesa	car parts, clock parts, gasket	Early 20th century	In Project
SMB-H-290	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-H-291	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Buffer

Temporary Number	Site Type/	Cultural Context	Cultural Constituents	Chronological Assessment	Location
SMB-H-401	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-H-402	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-403	Historic debris scatter	DTC/C-AMA	oil can dump	1942-1944 (WWII)	In Project
SMB-H-404	Historic ranch	Historic settlement of the Palo Verde Mesa and DTC/C-AMA	stone and concrete structures, watering trough, sheet metal, metal pipes, vehicle parts, metal chicken wire, cans, milled lumber, glass fragments, miscellaneous debris, aluminum-top pull-tab beer cans; also military materials: smoke land mine, munitions casings and clips, military ration cans	Early 20th century and 1942-1944 (WWII)	In Project
SMB-H-406	Historic debris scatter	DTC/C-AMA and Mining	sanitary cans, key-wind meat can, tobacco can with hinged lid, wood pile, cluster of quartz rocks	1942-1944 (WWII) and Early 20th century	In Project
SMB-M-407	Historic debris scatter with lithic flake	Historic and Prehistoric use of the Palo Verde Mesa	church-key-opened beer can, milled lumber, lithic flake	Early 20th century and Prehistoric	In Project
SMB-H-408	Historic debris scatter and hearth	Historic use of the Palo Verde Mesa	food cans, saw-cut faunal bone, possible hearth	20th century	In Project
SMB-H-409	Historic debris scatter	Mining	sanitary cans, tobacco can with hinged lid, glass soda bottle (embossed with 1938 date)	Early 20th century	In Project
SMB-P-410	Prehistoric trail	Prehistoric Trails	north-south running trail segment (200 meters long)	Prehistoric	In Project
SMB-H-411	Historic geoglyph	DTC/C-AMA	historical geoglyph (possible aerial marker)	1942-1944 (WWII)	In Project
SMB-H-413	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, glass jars, glass fragment	Early 20th century	In Project
SMB-H-414	Historic debris scatter	Mining	key-wind meat can, metal wire, wood pile	Early 20th century	In Project
SMB-H-415	Historic debris scatter	Mining	sanitary cans, hole-in-cap cans, sun-colored amethyst bottle glass fragments	Late 19th to Early 20th century	In Project
SMB-H-416	Historic debris scatter	DTC/C-AMA	military ration cans, wooden ramp	1942-1944 (WWII)	In Project
SMB-H-417	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-M-418	Historic debris scatter with prehistoric cobble	Mining and Lithic reduction	tobacco can with hinged lid, glass bottle, hearth containing one tested cobble	Early 20th century and Prehistoric	In Project
SMB-H-419	Historic debris scatter	DTC/C-AMA	military ration cans, glass fragments, metal wire, metal nail and sundry hardware, bullet clips, wooden ramp	1942-1944 (WWII)	In Project

Temporary Number	Site Type/	Cultural Context	Cultural Constituents	Chronological Assessment	Location
SMB-H-420	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, milled lumber	20th century	In Project
SMB-H-423	Airplane crash site	DTC/C-AMA	aircraft parts, military ration cans	1942-1944 (WWII)	In Project
SMB-H-424	Historic debris scatter	Historic use of the Palo Verde Mesa	cans, glass jar, lathe	20th century	In Project
SMB-H-426	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-H-427	Historic debris scatter	DTC/C-AMA	military ration can dump	1942-1944 (WWII)	In Project
SMB-H-430	Historic debris scatter	Historic use of the Palo Verde Mesa (possible Mining)	can dump, church-key-opened beer cans, glass bottles, glass jug, glass fragments, metal bands	Late 19th to Early 20th century	Buffer
SMB-P-431	Lithic scatter	Lithic reduction	flakes	Prehistoric	In Project
SMB-H-432	Historic structure foundation	Historic settlement of the Palo Verde Mesa	can, structure foundation	20th century	In Project
SMB-P-434	Prehistoric cobble feature	Prehistoric use of the Palo Verde Mesa	concentrations of fire-affected cobbles	Prehistoric	In Project
SMB-P-435	Prehistoric cobble feature	Prehistoric use of the Palo Verde Mesa	concentrations of fire-affected cobbles	Prehistoric	Buffer
SMB-P-436	Prehistoric cobble feature	Prehistoric use of the Palo Verde Mesa	concentrations of fire-affected cobbles	Prehistoric	In Project
SMB-P-437	Prehistoric cobble feature	Prehistoric use of the Palo Verde Mesa	concentrations of fire-affected cobbles	Prehistoric	In Project
SMB-P-438	Prehistoric cobble feature	Prehistoric use of the Palo Verde Mesa	concentrations of fire-affected cobbles	Prehistoric	In Project
SMB-H-439	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-P-440	Prehistoric cobble feature	Prehistoric use of the Palo Verde Mesa	concentration of fire-affected cobbles	Prehistoric	In Project
SMB-P-441	Prehistoric cobble feature	Prehistoric use of the Palo Verde Mesa	concentrations of fire-affected cobbles	Prehistoric	In Project
SMB-H-442	Historic debris scatter	DTC/C-AMA and Mining	military ration cans, tobacco can with hinged lid, glass bottles	1942-1944 (WWII) and Early 20th century	In Project
SMB-H-444	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	In Project
SMB-P-445	Lithic scatter and cobble feature	Prehistoric use of the Palo Verde Mesa	flakes, flake cores, tested cobbles, concentration of fire-affected cobbles	Prehistoric	In Project
SMB-H-447	Historic debris scatter	Historic use of the Palo Verde Mesa	Coors beer can, other food cans	20th century	In Project
SMB-P-448	Prehistoric cobble feature	Prehistoric use of the Palo Verde Mesa	concentration of fire-affected cobbles	Prehistoric	In Project
SMB-H-450	Historic debris scatter	DTC/C-AMA	military ration cans, glass jar	1942-1944 (WWII)	In Project

Temporary Number	Site Type/	Cultural Context	Cultural Constituents	Chronological Assessment	Location
SMB-H-452	Historic debris scatter and hearth	DTC/C-AMA	military ration cans, possible hearth	1942-1944 (WWII)	In Project
SMB-P-453	Lithic scatter	Prehistoric use of the Palo Verde Mesa	flakes, flake cores, hammerstones, tested cobbles	Prehistoric	In Project
SMB-P-454	Lithic scatter and hearth	Prehistoric use of the Palo Verde Mesa	flakes, pottery sherds, faunal bone fragments, concentration of fire-affected cobbles	Prehistoric	In Project
SMB-H-460	Historic debris scatter	DTC/C-AMA	military ration cans	Early 20th century	In Project
SMB-H-505	Historic debris scatter	Mining	church-key-opened beer can, key-wind meat can, tobacco can with hinged lid, glass jar, glass bottles, ceramic fragment	Late 19th to Early 20th century	In Project
SMB-H-507	Historic debris scatter	Possible Desert Strike	aluminum-top pull-tab beer cans	Late 20th century	In Project
SMB-H-508	Historic debris scatter	Possible Desert Strike	aluminum-top pull-tab beer cans	Late 20th century	In Project
SMB-H-509	Historic debris scatter	DTC/C-AMA	military ration cans, glass jar	1942-1944 (WWII)	In Project
SMB-M-511	Lithic scatter with historic debris	DTC/C-AMA and Prehistoric use of the Palo Verde Mesa	military ration cans, lithic flakes, flake cores, tested cobbles	1942-1944 (WWII) and Prehistoric	In Project
SMB-M-512	Historic debris scatter with lithic scatter	Historic and Prehistoric use of the Palo Verde Mesa	food cans, lithic flakes, flake cores, tested cobbles	20th century and Prehistoric	Buffer
SMB-H-513	Historic debris scatter	Historic use of the Palo Verde Mesa	key-wind meat can, aluminum-top pull-tab beer can	Early to Late 20th century	In Project
SMB-H-514	Historic structure remnants	Historic settlement of the Palo Verde Mesa	sanitary cans, milled lumber, metal wire and nails, cinder blocks, wooden-frame structure, rock feature	Early 20th century	In Project
SMB-H-515	Historic debris scatter	DTC/C-AMA	military ration cans, glass jug	1942-1944 (WWII)	In Project
SMB-H-516	Historic debris scatter	DTC/C-AMA and modern	military ration cans, modern beer bottle	1942-1944 (WWII) and Late 20th century	In Project
SMB-H-517	Historic debris scatter	DTC/C-AMA	military ration cans, glass fragments	1942-1944 (WWII)	In Project
SMB-H-518	Historic debris scatter	Historic settlement of the Palo Verde Mesa	cans, metal wire and nails, miscellaneous metal hardware, bullet casing, concrete fragments, glass fragments, coin dated 1940	Early 20th century	Out of Project
SMB-H-519	Historic debris scatter	Historic settlement of the Palo Verde Mesa	cans, ceramic fragments, milled lumber, metal wire, mesh screen, sheet metal, metal bottle cap	Early 20th century	Out of Project
SMB-H-520	Historic debris scatter	Historic use of the Palo Verde Mesa	aerosol can, other cans, metal band, milled lumber	20th century	Out of Project
SMB-H-522	Historic debris scatter	Historic use of the Palo Verde Mesa	cans	20th century	Out of Project
SMB-H-525	Historic debris scatter	Historic use of the Palo Verde Mesa	can dump	20th century	Out of Project

Temporary Number	Site Type/	Cultural Context	Cultural Constituents	Chronological Assessment	Location
SMB-H-527	Historic debris scatter	DTC/C-AMA (possible Desert Strike)	military ration cans, church-key-opened beer can, aluminum-top pull-tab beer can	1942-1944 (WWII) and Late 20th century	In Project
SMB-H-528	Historic debris scatter	DTC/C-AMA	military ration cans	1942-1944 (WWII)	In Project
SMB-H-529	Historic debris scatter	DTC/C-AMA	military ration cans, milled lumber	1942-1944 (WWII)	In Project
SMB-P-530	Lithic scatter	Lithic reduction	quartz flakes and flake cores	Prehistoric	In Project
SMB-P-531	Lithic scatter	Lithic reduction	quartz flakes and flake cores	Prehistoric	In Project
SMB-P-532	Lithic scatter	Lithic reduction	quartz flakes and flake cores	Prehistoric	In Project
SMB-H-600	Historic road	Transportation	dirt two-track road running roughly north-south from I-10 to Arlington Mine Road, metal pipeline running in and parallel to the road	Late 19th to Early 20th century	In Project
SMB-H-601	Historic road	Transportation	dirt two-track road running north-south along a 1917 USGS survey section line from I-10 to an unnamed road south of the McCoy Wash	Early 20th century	In Project
<i>Archaeological Sites: Previously Recorded</i>					
RIV-1136	Pot drop (not relocated)	Prehistoric use of the Palo Verde Mesa	13 ceramic sherds of Colorado Buff ware, likely all from the same vessel	Prehistoric	In Project
RIV-1464	Trail	Historic use of the Palo Verde Mesa	path through desert pavement running east-west for 700 meters; 90-degree turn to south at west end – probable modern feature associated with private property boundary	Late 20th century	In Project
RIV-2846	Quarry	Lithic reduction	sparse, extensive flaked stone scatters and other features across Pleistocene pebble terrace	Prehistoric	In Project
RIV-3419	Quarry	Lithic reduction	sparse, extensive flaked stone scatters and other features across Pleistocene pebble terrace	Prehistoric	In Project

Site Discussion and Significance Assessments

Most of the site artifacts are historical in age, and consist predominantly of metal cans, with smaller quantities of glass bottles and jars, milled lumber, broken ceramics, and sundry metal items. Historical features include survey markers, rock features, prospectors' test pits, stone and wooden structures, and a foundation, as well as cleared areas, fortified positions, can and trash scatters, aircraft parts, smoke land mines, and tank tracks associated with the use of the Project vicinity during WWII as part of the DTC/C-AMA. Prehistoric cultural materials include flaked stone tools and debitage, groundstone items, tested cobbles, and ceramic sherds. Table 9, above, lists the archaeological sites inventoried during the Class III survey of the originally proposed BSPP.

Most of the historical sites date to the 20th century, and many can be associated with the WWII-era use of the area for military training as part of the DTC/C-AMA. A large number of the

remaining sites, including trash scatters and structural features, date to the early twentieth century use of the Palo Verde Mesa by homesteaders and miners. Relatively few post-war, late twentieth century materials are present in the Project. Some of the sites that contain late twentieth century components may be associated with the brief use of the area for a joint Army–US Air Force exercise, code named “Desert Strike,” which was conducted May 1964.

The prehistoric sites consist of low-density flaked stone scatters, thermal cobble features, and a trail segment of probable prehistoric age. The trail segment (SMB-P-410) runs roughly north-south and, looking south from the Project, appears to point to Black Rock, a prominent rock outcrop at the southern edge of the McCoy Mountains, just north of Interstate 10. Survey crews also identified a distinctive set of thermal cobble features adjacent to the previously recorded site CA-RIV-2846. These features are circular to oval concentrations of fire-affected cobbles, some of which have some subsurface extension. The thermal cobble features appear to be deflated roasting pits, or possibly the “clean-out” remains of nearby roasting pits. Rock-lined earth ovens, or roasting pits, were commonly used prehistorically to roast various plant foods, including mesquite and saltbush, both of which grow on the Palo Verde Mesa.

During the Class III archaeological survey, crews revisited the locations of the four previously recorded sites within the BSPP. Of those, one site (CA-RIV-1136), a scatter of approximately 13 ceramic Colorado Buff ware sherds recorded in 1976, could not be relocated. The remaining three sites were relocated and visually inspected by survey personnel. Sites CA-RIV-2846 and CA-RIV-3419, the two large pebble terraces with dispersed flaked stone quarrying and production debris, were revisited and found to be essentially unchanged since they were most recently recorded in 2003 and 2008, respectively. The northern pebble terrace site, CA-RIV-2846, though, was associated with several previously undocumented prehistoric sites within the Project cultural resources survey area. As part of the recording of those sites, survey members recorded in greater detail the portion of CA-RIV-2846 that falls within and adjacent to the Project’s eastern boundary.

Survey crew members also relocated site CA-RIV-1464, originally identified as a prehistoric trail segment, but found a more recent linear feature associated with a private property boundary. According to the original CA-RIV-1464 site record from 1978, the site was a path running east-west for roughly 700 meters with an abrupt 90-degree turn toward the south at the western end of the path. Upon mapping CA-RIV-1464 on Project base maps, it became apparent that the path, previously identified as a prehistoric trail, exactly matches the northern boundary of a large private property holding within BLM land (and not included in the BSPP). The abrupt turn at the western end of the path directly aligns with the northwest corner of the private property tract. The path is now a graded road marking the northern edge of the property. In 1978, when the site was originally recorded, the property boundary may have been more ephemeral, appearing more like a prehistoric landscape feature. It appears that site CA-RIV-1464 is not a prehistoric trail, but rather a more recent feature associated with the survey and boundary maintenance of the existing private property tract.

Site Descriptions

<< to be provided >>

Isolated Finds

A total of 1,214 isolated finds of four or fewer artifacts were identified during the Class III survey. Isolates identified at the BSPP are listed in Table 10 below. Note that individual historic artifacts are listed on separate lines. Due to changes in the project area subsequent to field surveys, 65 of these isolates are now outside of both the Project APE and 200-ft buffer. A majority of isolated finds are historical items, and most are individual metal cans dating to the early to mid-20th century.

Table 10. Isolated Artifacts Identified at the BSPP

Isolate Number (SMB-I-)	Description
1001	1 sanitary can, knife cut
1002	1 sanitary can, church key opened
1003	1 sanitary can, church key opened
1004	1 sanitary can
1004	1 can
1005	1 can, knife cut
	1 can, turn key
	1 can, knife cut
1006	1 can, church key opened
	1 can
1007	1 can, knife cut
1008	1 can, knife cut
1009	1 sanitary can
	1 oval sardine can, circle sliced
	1 can, circle sliced
1010	1 sanitary can, church key opened
1011	1 sanitary can, knife cut
1012	1 sanitary can
1013	1 sanitary can, circle sliced
	1 sanitary can, circle sliced
1014	1 sanitary can, knife cut
1015	1 can
1016	1 wire
1017	1 can
1018	1 sanitary can, knife cut
1019	1 can
1020	1 can, circle sliced
1021	1 solder dot can
	1 square lid
1022	1 can
1023	1 sanitary can
1024	1 can
1025	1 sanitary can, circle sliced
1026	1 condiment bottle, MARK: "Guldens Mustard / Rec US PAT. OFF / 2 [Owens Mark] 3/ Bottle / 5]
1027	1 sanitary can
	1 sanitary can, church key opened

**Isolate Number
(SMB-I-)****Description**

1028	1 can
1029	1 mining claim stake
1030	1 two cans 1 two cans
1031	1 can
1032	1 can, church key opened
1033	1 flat can, key wind, MARK: "Industria Argentina Esta 86 INS [Poss for P] 1 Mason jar
1034	1 mining claim stake 1 mining claim stake
1035	1 mining claim stake
1036	1 deflated cairn
1037	1 mining claim stake
1038	1 mining claim stake
1039	1 cairn
1040	1 cairn
1041	1 aluminum top pull tab can
1042	1 sanitary can, punctured
1043	1 can, church key opened 1 can, church key opened
1044	1 sanitary can
1045	1 sanitary can, circle sliced
1046	1 can
1047	1 twisted metal cable
1048	1 can, church key opened
1049	1 can, circle sliced
1050	1 can 1 can
1051	1 oval sardine can
1052	1 mining claim stake
1053	1 solder dot can, knife cut
1054	1 solder dot can, circle sliced
1055	1 soluble coffee can, external friction lid, MARK: Barrington Half/ Pure / Soluble / Coffee
1056	1 can, top cut off below top rim
1057	1 can
1058	1 can, church key opened
1059	1 can, key wind 1 can, key wind
1060	1 soluble coffee can, external friction lid, MARK: KEEP / TIGHTLY / CLOSED 1 can, circle sliced
1060	1 soluble coffee can, external friction lid
1061	1 can, church key opened
1062	1 can, church key opened
1063	1 can, church key opened
1064	1 can, church key opened
1065	1 solder dot can 1 can, church key opened 1 buried can
1066	1 brown glass bottle (Clorox?), MARK: 692B / [circle with LM] / 20
1067	1 can, church key opened

**Isolate Number
(SMB-I-)****Description**

	1 can, church key opened
1068	1 twisted metal cable
1069	1 can
	1 interlocking side seam can, church key opened
1070	1 embedded can
1071	1 can, church key opened
1072	1 can, circle sliced
	1 can, top cut off
1073	1 can, knife cut
	1 can, top cut off
1074	1 can, church key opened
1075	1 can and lid
1076	1 can
1077	1 can
	1 can
	1 can
1078	1 can, MARK: SANITARY
1079	1 clear glass bottle, 1 gallon, MARK: HA / 7387 / P 2 ; on base = ONE GALLON
1080	1 unopened can
1081	1 aluminium lid; crimped / rip top, rip top
	1 can, church key opened
1082	1 can, church key opened
1083	1 can, circle sliced
1084	1 sardine can
1085	1 brown glass bottle, automatic
	1 can
1086	1 solder dot can
1087	1 embedded can
	1 glass bottle, automatic bottle machine, threaded screw top
1088	1 can, church key opened
1089	1 can, circle sliced
1090	1 solder dot can
1091	1 can with top cut off
1092	1 aluminum top pull tab can, pull tab
1093	1 can
1094	1 deflated cairn
1095	1 mining claim stake
1096	1 can, circle sliced
	1 sardine can, key wind
1097	1 aluminum top pull tab can, pull tab
	1 can, knife cut, puncture, MARK: AN / J
	1 Coors aluminium beer can
	1 solder dot can, knife cut, puncture
1098	1 solder dot can, knife cut, puncture
	1 can
	1 embedded can
1099	1 embedded can
1100	1 unopened can
1101	1 embossed can
	1 aluminum top pull tab can, pull tab
1102	1 can, key wind, MARK: top off by twist key?

**Isolate Number
(SMB-I-)****Description**

1103	1 one can and one metal bucket bucket, church key opened 1 sardine can, knife cut
1104	1 can, church key opened 1 can, key wind, MARK: NBCCH / 4 1 Mason jar, MARK: 6 [makers mark ... illegible ... with H overlay] 5 / 3900
1105	1 can, key wind
1106	1 can
1107	1 can
1108	1 can, key wind
1109	1 oil can, U-shaped puncture, MARK: SAE 30
1110	1 can, circle sliced
1111	1 can, key wind
1112	1 fuel can, screw top spout, MARK: MAUFACTURED BY / THE TEXAS COMPANY / U.S.A [star embossed]
1113	1 sanitary can, knife cut, puncture 1 can, key wind
1114	1 embedded can
1115	1 can 1 coffee can, key wind
1116	1 can, key wind 1 can, key wind
1117	1 can, key wind
1118	1 embedded can
1119	1 can, key wind
1120	1 glass bottle, MARK: Duraglas, OWENS / 13 [maker's mark] 3
1121	1 can, key wind 1 solder dot can
1122	1 can, key wind
1123	1 can, key wind
1124	1 can, knife cut
1125	1 embedded can 1 aluminum top pull tab can
1126	1 embedded can
1127	1 can, key wind
1128	1 paint-can style lid
1129	1 bottle, MARK: [break] ORO? [break] above shoulder?
1130	1 brown bottle fragment (Clorox?), MARK: [break] DES. P [break] on base
1131	1 glass bottle, 1 gallon, MARK: S [maker's mark CS] 2 / 3456 / 8
1132	1 can, key wind
1133	1 can, key wind
1134	1 can, circle sliced
1135	1 can, key wind
1136	1 can, key wind
1137	1 clear glass jar, MARK: 65 24 / 2 / [maker's mark - Ball] on base
1138	1 can, knife cut
1139	1 can, key wind
1140	1 can, key wind 1 can, key wind
1141	1 can
1142	1 can 1 embedded can, key wind

Isolate Number (SMB-I-)	Description
1143	1 can, key wind
1144	1 can, key wind 1 can, key wind
1145	1 can, knife cut, puncture
1146	1 external friction lid can, external friction lid 1 can, key wind
1147	1 solder dot can
1148	1 can 1 Mason jar, MARK: 0-7 134 / [maker's mark H with ? Underneath] / 9
1149	1 can 1 Mason jar, MARK: DURAGLASS / 20 [maker's mark Owens] 2 / 12 / 3727-0 [on base]
1150	1 can, key wind
1151	1 oval sardine can, knife cut
1152	1 can, key wind
1153	1 sanitary can, knife cut 1 can, key wind
1154	1 5 gallon can lid 1 can, key wind
1155	1 glass bottle fragments, MARK: Coca Cola / TRADEMARK REGISTERED / MIN. CONTENTS 6-FL. OZS. [on body] // BAKERSFIELD / CALIF [on base]
1156	1 can, key wind
1157	1 can, key wind
1158	1 can, circle sliced, MARK: EXTRA COATED TIN
1159	1 hole-in-cap can
1160	1 sanitary can 1 sanitary can
1161	1 can, key wind
1162	1 can, knife cut, puncture 1 can, church key opened
1163	1 can
1164	1 can, church key opened
1164	1 can, church key opened
1165	1 can, circle sliced
1166	1 buried can
1167	1 can, punctured
1168	1 embedded can 1 can, key wind 1 embedded can, threaded cap
1169	1 embedded can
1170	1 can, key wind 1 embedded can
1171	1 can, key wind
1172	1 embedded can
1173	1 sanitary can
1174	1 solder dot can, punctured
1175	1 paint-can style lid
1176	1 can, rotary opened
1177	1 external friction lid can, external friction lid
1178	1 can, key wind
1179	1 can, circle sliced
1180	1 crimped crown cap with soldered handle, crown top

**Isolate Number
(SMB-I-)****Description**

1181	1 rectangular can
1182	1 can, rotary opened
1183	1 can, rotary opened
1184	1 oil can, 1 quart, church key opened
1185	1 can, MARK: PACKED IN VACUUM / CALIFORNIA 1 banded can, punctured
1186	1 can
1187	1 sanitary can, knife cut, puncture 1 hole-in-cap, solder dot can, knife cut, puncture
1188	1 can, key wind
1189	1 can, key wind
1190	1 sanitary can, rotary opened
1191	1 can, knife cut, puncture
1192	1 can, circle sliced
1193	1 Canada Dry glass bottle, MARK: 23 [maker's mark letter "I" within oval] 57 / A1 2 / DURAGLAS / 2902-6
1194	1 embedded can
1195	1 glass bottle, 1 gallon, MARK: DURAGLAS / 20 [maker's mark Owens Illinois] 52 / 5C / 1512-W
1196	1 fragmentary can
1197	1 jar, MARK: [maker's mark GC] 4 / 3508
1198	1 sanitary can, rotary opened
1199	1 can, key wind
1200	1 oval sardine can, MARK: PACKED IN VACUUM / CALIFORNIA U.S.A
1201	1 can, key wind
1202	1 oval sardine can
1203	1 sanitary can
1204	1 can, church key opened 1 oval sardine can
1205	1 can, key wind 1 can, circle sliced
1206	1 oval sardine can, MARK: PACKED IN VACUUM / CALIFORNIA U.S.A
1207	1 can, church key opened
1208	1 sanitary can, circle sliced
1209	1 embedded banded can
1210	1 embedded can
1211	1 can, rotary opened
1212	1 aluminum top pull tab can and sanitary can 1 solder dot, matchstick filler can 1 aluminum top pull tab can, pull tab
1213	1 can, knife cut, puncture 1 sanitary can, rotary opened
1214	1 can, key wind 1 can, circle sliced
1215	1 bottle, MARK: 20 [Owens Illinois mark] 0 / 1A / 1602-E [on base] // DURAGLAS [insu (illegible)]
1216	1 solder dot can, knife cut, puncture
1217	1 can, circle sliced
1218	1 metate
1219	1 sanitary can
1220	1 hole-in-cap can, knife cut 1 lard bucket 1 can, rotary opened

**Isolate Number
(SMB-I-)****Description**

1221	1 sanitary can, knife cut, puncture 1 can, knife cut, puncture
1222	1 can, knife cut, puncture
1223	1 can, church key opened
1224	1 can, circle sliced
1225	1 sanitary can, circle sliced
1226	1 sanitary can, knife cut, X shape
1227	1 can, knife cut, puncture
1228	1 oval sardine can
1229	1 fuel can, spout 1 can, circle sliced
1230	1 can, rotary opened, MARK: AG 13 / J(?) 51 1 glass jar, metal screw cap, MARK: [maker's mark Hazel Atlas "H" over "A"] / 6752 / 17
1231	1 can, external screw top
1232	1 glass wine bottle, MARK: E & J GALLOWINERY / 2A 5S / REFILLING / PROHIBITED / 4759 / MODESTO, CALIF. [on base] // 1/2 GALLON [insuep]
1233	1 spoon, military issue, MARK: U.S. [front surface at handle] // SILCO [back of handle]
1234	1 solder dot can, knife cut, puncture
1235	1 can, ice pick punctures
1236	1 can, circle sliced 1 buried can
1237	1 can, circle sliced
1238	1 oval sardine can
1239	1 can, key wind 1 can, key wind
1240	1 can, key wind 1 can, key wind
1241	1 clear glass bottle (automatic bottle machine), external screw top, MARK: 1143 / 4 [on base]
1242	1 can, church key opened 1 sanitary can, rotary opened
1243	1 jar, external screw top, MARK: 20 [maker's mark Owens Illinois] ? / 2 / 0927-0 [on base] // DURAGLAS
1244	1 sanitary can, rotary opened
1245	1 , key wind 1 buried can
1246	1 can, circle sliced 1 jar, MARK: 165-15 / 7 / BALL [on base] ABM
1247	1 pull tab can, pull tab
1248	1 jar, MARK: 11 / [maker's mark "H" over "A" - on base]
1249	1 can, rotary opened 1 external friction lid can, external friction lid, MARK: tobacco or coffee?
1250	1 can, knife cut
1251	1 sanitary can, knife cut
1252	1 can, key wind
1253	1 can, key wind
1254	1 can, rotary opened
1255	1 boot sole
1256	1 can
1257	1 sanitary can, rotary opened
1258	1 can, key wind 1 can, circle sliced
1259	1 can, key wind

Isolate Number (SMB-I-)	Description
1260	1 can, church key opened
1261	1 can, church key opened
1262	1 can 1 can
1263	1 embedded can
1264	1 sanitary can, church key opened, MARK: 7 / (3 or 8?) 9LT [on lid]
1265	1 can, rotary opened
1266	1 can, circle sliced
1267	1 can, circle sliced
1268	1 can, knife cut, puncture
1269	1 buried can 1 can, circle sliced 1 can, circle sliced
1270	1 can, rotary opened
1271	1 can, knife cut
1272	1 glass soda bottle, MARK: Coca Cola 66 [maker's mark Owens Illinois] 42 [on body] // El Centro 1942
1273	1 can 1 jar, external screw top
1274	1 can, circle sliced 1 can, knife cut 1 buried can
1275	1 can, knife cut
1276	1 can, church key opened
1277	1 can, church key opened 1 can, key wind
1278	1 oil can, ice pick punctures, MARK: SAE / 10 / 10W [on base]
1279	1 can, key wind
1280	1 talcum powder canister?, metal screw cap
1281	1 embedded rectangular can
1282	1 sanitary can, rotary opened 1 solder dot, hole-in-top can
1283	1 glass soda bottle, MARK: Coca Cola 6 oz BAKERSFIELD, 1941 1 can, knife cut
1284	1 buried can 1 can, knife cut
1285	1 can, knife cut 1 can, circle sliced 1 can, church key opened
1286	1 external friction lid can, external friction lid
1287	1 can, rotary opened
1288	1 oval sardine can, knife cut, MARK: PACKED IN VACUUM / CALIFORNIA U.S.A
1289	1 can, key wind, MARK: I 1242 / I 704 [on base]
1290	1 can, circle sliced
1291	1 sun-colored amethyst glass jar, external screw top, MARK: SNIDERS [lid top] 1 can, knife cut, puncture
1292	1 aluminum top pull tab can, pull tab
1293	1 square can, key wind, MARK: EST. 19 [on base] 1 can, key wind 1 sanitary can, MARK: TI 623 / I 27 [on base]
1294	1 can, key wind

**Isolate Number
(SMB-I-)****Description**

	1 can, circle sliced
1295	1 embedded can, rotary opened
1296	1 can, key wind
	1 oil can, U-shaped puncture, MARK: CANCO [on base] // SAE 30 [on top]
1297	1 embedded can, key wind
	1 can, key wind
1298	1 can, key wind
1299	1 can, metal screw cap, MARK: 1058 [on base]
1300	1 can, circle sliced, MARK: 1043 [on top]
1301	1 metal hardware
1302	1 can, circle sliced, MARK: 77-AEBZL(?) [on base]
1303	1 embedded can
1304	1 external friction lid can, external friction lid
	1 can, key wind
1305	1 external friction lid can, external friction lid
1306	1 can, circle sliced
	1 wire cable and metal pipe
1307	1 can, circle sliced
	1 can, key wind
1308	1 can, key wind
	1 can, rotary opened
	1 oil can, MARK: CANCO [on base] SAE 30 [on top]
1309	1 brown glass bottle, external screw top, MARK: CGD / 3 81 / A-10 [on base]
	1 can, key wind
1310	1 can, church key opened
1311	1 oval sardine can, circle sliced, MARK: PACKED IN VACUUM / CALIFORNIA U.S.A
1312	1 can, flip top, MARK: TWIN OAKS
1313	1 crown finish bottle, MARK: Hazel Atlas
1314	1 can, church key opened
	1 can, church key opened
	1 aluminum top pull tab can, pull tab, MARK: BUDWEISER 31R[on lid]
1315	1 can, church key opened
1316	1 can, church key opened
1317	1 aluminum top pull tab can, pull tab
1318	1 can, circle sliced
1319	1 oval sardine can
1320	1 CCS flake
1321	1 can, rotary opened
1322	1 smashed can
1323	1 deteriorated can
1324	1 can, circle sliced
1325	1 can, circle sliced
1326	1 can, key wind
1327	1 solder dot, hole-in-cap can
1328	1 can, rotary opened
1329	1 can, rotary opened
1330	1 oval sardine can
1331	1 can, church key opened
	1 can, church key opened
	1 metal sheet
1332	1 glass bottle, external screw top, MARK: Hazel Atlas

**Isolate Number
(SMB-I-)****Description**

	1 hole-in-cap can, key wind
1333	1 metal box, MARK: large metal box
1334	1 deteriorated can
1335	1 sanitary can, rotary opened
1336	1 irrigation hardware?, MARK: FRESNO IRRIGATION / APPLIANCES / 8 ? / FRESNO, CALIF [on top]
1337	1 brown glass bottle, external screw top, MARK: Illinois maker's mark
	1 can, church key opened
1338	1 can, knife cut
1339	1 glass soda bottle, MARK: Pepsi Cola 16 fl. Oz. / NO REFILL DISPOSE OF PROPERLY
1340	1 can
1341	1 can
1342	1 jar, external screw top, MARK: BEST FOODS
1343	1 fragmentary can
	1 can, rotary opened
	1 aluminum top pull tab can, pull tab
1344	1 white ware plate fragment, MARK: [break[DERWOOD [break] W.S. George [break] 412 A [on base]
1345	1 bucket lid
1346	1 sanitary can, rotary opened, MARK: 622 (5 or 6) on lid
	1 can, knife cut
	1 sanitary can, rotary opened
1347	1 fragmentary can, knife cut, puncture
1348	1 can, church key opened
1349	1 can, rotary opened
1350	1 can, knife cut, puncture
	1 embedded can, circle sliced
1351	1 wire cable and metal pipe
1352	1 can, knife cut
1353	1 embedded can
1354	1 tool
1355	1 sanitary can, knife cut
	1 sanitary can, knife cut
1356	1 solder dot can, knife cut, MARK: 6V [on top]
1357	1 fragmentary can, knife cut, puncture
1358	1 can, knife cut
1359	1 matchstick filler, hole-in-cap can, knife cut, puncture
	1 sanitary can
	1 flattened can
1360	1 can, rotary opened
	1 smashed can, church key opened
	1 can, circle sliced
1361	1 can, church key opened
	1 aluminum top pull tab can, pull tab
1362	1 pull tab can, pull tab
	1 can, key wind
1363	1 can
	1 can
1364	1 can, circle sliced
	1 can, knife cut
1365	1 sanitary can, knife cut
	1 can, key wind

Isolate Number (SMB-I-)	Description
1366	1 fuel can, 1 1/2" screw top spout, MARK: MANUFACTURED BY THE TEXAS COMPANY [on top]
1367	1 sanitary can, knife cut
1368	1 can, rotary opened
1369	1 can, circle sliced 1 can, MARK: M (B or 8) C [on top] 1 smashed bucket
1370	1 can, punctured
1380	1 can, church key opened
1381	1 can, rotary opened 1 sanitary can, knife cut
1383	1 fuel can 1 sanitary can 1 sanitary can
1384	1 can, key wind
1385	1 aluminum top pull tab can, pull tab
1386	1 aluminum top pull tab can, pull tab
1387	1 smashed can, church key opened
1388	1 can, knife cut, puncture, MARK: ANI 13 [top]
1389	1 can, circle sliced
1390	1 can, circle sliced
1400	1 aluminum top pull tab can, pull tab, MARK: LIFT RING PULL 1 can
1401	1 deteriorated can
1402	1 can, knife cut, puncture 1 can, church key opened
1403	1 can, rotary opened
1404	1 fuel can, 1 1/2" screw top spout, MARK: MANUFACTURED BY THE TEXAS COMPANY U.S.A. [on top]
1405	1 embedded can
1406	1 can 1 can, circle sliced
1407	1 fuel can, spout 1 1/2", MARK: MANUFACTURED BY THE TEXAS COMPANY U.S.A. [on top] 1 crushed can 1 banded can
1408	1 can, circle sliced, MARK: 1700 / 28 4 [on base]
1409	1 can, circle sliced
1411	1 can, circle sliced
1412	1 can, circle sliced
1413	1 can, circle sliced
1414	1 can, church key opened 1 aluminum top pull tab can, pull tab, MARK: OLYMPIA WASHINGTON BREWED AND ??? BY OLYMPIA
1415	1 wooden peg
1416	1 fragmentary can, top cut off 1 banded can, rotary opened
1417	1 can, key wind
1418	1 clear glass jar, threaded, metal lid, MARK: 20 [Owens Illinois maker's mark] 3 / 3B / 34I-C [on base] // DURAGLAS
1419	1 aluminum top pull tab can, church key opened 1 can, internal friction lid
1420	1 can, rotary opened
1421	1 bottle, external screw top, MARK: OM [on base]
1422	1 can, rotary opened
1423	1 solder dot can, circle sliced, MARK: V2026 [on base]

**Isolate Number
(SMB-I-)****Description**

1424	1 can, knife cut
1424	1 aluminum top pull tab can, pull tab
1425	1 aluminum top pull tab can, pull tab, MARK: PLEASE DO NOT LITTER / DISPOSE OF PROPERLY [on top]
1426	1 can, church key opened
1427	1 can, knife cut
1428	1 can, rotary opened
1429	1 can, unopened
1430	1 cairn
1431	1 rock alignment parallel to 2-track road
1432	1 tested cobble
1433	1 external friction lid can, external friction lid, MARK: BARRINGTON HALL / SOLUBLE COFFEE
1434	1 can, rotary opened
1435	1 can, knife cut
1436	1 sanitary can, rotary opened
1437	1 can, circle sliced
1438	1 aluminum top pull tab can, pull tab
1439	1 can, church key opened
1440	1 aluminum top pull tab can, top cut off
1440	1 soda can, pull tab, MARK: PEPSI
	1 external friction lid can, external friction lid
1441	1 CCS flake
1442	1 can, circle sliced
	1 interlocking side seam can, knife cut, puncture, MARK: BIG BEAR SPARKLING BEVERAGE IMITATI [illegible]
1443	1 pull tab can, pull tab
1444	1 bottle, key wind
	1 fragmentary can
1446	1 fuel can, 1" screw top spout
	1 aluminum top pull tab can
	1 can, key wind
1447	1 can, knife cut, puncture
1448	1 oil can, U-shaped puncture, MARK: SHELL [on top]
1449	1 can, key wind
1450	1 can, knife cut, puncture
	1 oil can, MARK: AE 10 10W [on lid]
	1 sheet metal
1451	1 CCS flake
1452	1 oil can, U-shaped puncture, MARK: PENNZIOL [on base and lid]
1453	1 mining claim stake
1454	1 metal strapping
1455	1 smashed can, knife cut
1456	1 smashed can, rotary opened
1457	1 oil can, U-shaped puncture, MARK: PENNZOIL / SAE 20 / 20W [on lid]
1458	1 can, knife cut, puncture, MARK: AG 13 / AS [on lid]
1459	1 oval sardine can, circle sliced, MARK: PACKED IN VACUUM [on lid]
1460	1 oil can, U-shaped puncture, MARK: SAE 30 [on top]
	1 oil can, U-shaped puncture, MARK: SAE 20 20W [on top]
1461	1 bolt, MARK: SBC
	1 metal hardware
1462	1 oil can, U-shaped puncture, MARK: SAE 30 [on top]
1463	1 CCS flake

**Isolate Number
(SMB-I-)** **Description**

1464	1 oil can, U-shaped puncture, MARK: SAE 40
1465	1 muffler pipe
1466	1 oil can
1467	1 can, rotary opened
1468	1 can, knife cut
1469	1 internal friction lid can, internal friction lid
	1 can
1470	1 can
1471	1 glass
1472	1 cairn
1473	1 glass
1474	1 can
1475	1 metal
1476	1 feature
1477	1 metal
1478	1 cairn
1479	1 can
1480	1 flake
1481	1 glass
1482	1 can
	1 can
	1 can
1483	1 can
	1 can
	1 can
1484	1 can
	1 can
1485	1 can
	1 can
	1 can
1486	1 can
	1 can
1487	1 can
1488	1 can
	1 flake
1489	1 can
	1 can
1490	1 can
	1 can
1491	1 glass
1492	1 metal
1493	1 can
	1 can
	1 can
1494	1 can
	1 can
1495	1 can
1496	1 can
1497	1 can
1498	1 can
1499	1 can

**Isolate Number
(SMB-I-)** **Description**

1500	1 can
1501	1 can
1502	1 can
1503	1 can
1504	1 cairn
1505	1 metal
1506	1 can
1507	1 can
1508	1 can
1509	1 can
1510	1 can
1511	1 can
1512	1 can
1513	1 feature
1514	1 can
1515	1 can
1516	1 feature
1517	1 can
1518	1 can
1519	1 can/glass
1520	1 can
1521	1 can
1522	1 can
1523	1 metal
1524	1 can
1525	1 cairn
1526	1 metal
1527	1 can
1528	1 can
1529	1 can
1530	1 can/metal
1531	1 can
1532	1 can
1533	1 flake
1534	1 metal
1535	1 can
1536	1 flake
1537	1 post
1538	1 can
1539	1 can
1540	1 can
1541	1 can
1542	1 can
1543	1 can
1544	1 can
1545	1 can
1546	1 can
1547	1 can
1548	1 can
1549	1 can

**Isolate Number
(SMB-I-)** **Description**

1550	1 can
1551	1 can
1552	1 can
1553	1 can
1554	1 can
1555	1 milled lumber
1556	1 can
1557	1 can
1558	1 can
1559	1 can
1560	1 can
1561	1 can
1562	1 can
1563	1 can
1564	1 can
1565	1 can
1566	1 core, debitage
1567	1 can
1568	1 can
1569	1 can
1570	1 can
1571	1 can
1572	1 cairn
1573	1 core frag
1574	1 debitage
1575	1 debitage
1576	1 barrel hoop
1577	1 core, debitage
1578	1 debitage
1579	1 can
1580	1 core
1580	1 debitage
1581	1 rock, soil mounds
1582	1 rock feature, cleared pav
1583	1 core, debitage
1584	1 can
1585	1 core, debitage
1586	1 can
1587	1 can
1588	1 core, debitage
1589	1 can
1590	1 can
1591	1 core, debitage
1592	1 core
1593	1 can
1594	1 can
1595	1 cairn
1596	1 debitage
1597	1 bladed disturbance
1598	1 wood post
1599	1 wood post

**Isolate Number
(SMB-I-)** **Description**

1600	1 wood post
1601	1 cleared area
1602	1 wood post
1603	1 can
1604	1 wood post
1605	1 wood post
1606	1 can
1607	1 wood post
1608	1 can
1609	1 wood post
1610	1 can
1611	1 wood post
1612	1 can
1613	1 wood post
1614	1 wood post
1615	1 debitage
1616	1 wood post
1617	1 wood post
1618	1 debitage
1619	1 can
1620	1 can
1621	1 can
1622	1 can
1623	1 can
1624	1 can
1625	1 can
1626	1 can
1627	1 bottle
1628	1 cairn
1629	1 can
1630	1 can
1631	1 can
1632	1 can
1633	1 can
1634	1 can
1635	1 can
1636	1 can
1637	1 can
1638	1 can
1639	1 can
1640	1 can
1641	1 can
1642	1 can
1643	1 can
1644	1 can
1645	1 debitage
1646	1 tested cobble
1647	1 can
1648	1 sheet metal
1649	1 can

Isolate Number (SMB-I-)	Description
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1650	1 can
1651	1 hearth
1652	1 can
1653	1 debitage
1654	1 tested cobble
1655	1 can
1656	1 can
1657	1 can
1658	1 can
1659	1 can
1660	1 can
1661	1 can
1662	1 tested cobble
1663	1 can
1664	1 can
1665	1 can
1666	1 can
1667	1 can
1668	1 can
1669	1 can
1670	1 core, debitage
1671	1 metal flash suppresser
1672	1 core, debitage
1673	1 core, debitage
1801	1 can
1802	1 jar frag
1803	1 can
1804	1 can
1805	1 can, jar, boot sole frag
1806	1 debitage
1807	1 can
1808	1 can
1809	1 jar
1809	1 metal lid
1810	1 can
1811	1 can
1812	1 can
1813	1 can
1814	1 can
1815	1 wood w/metal brackets
1816	1 can
1817	1 jar w/metal lid
1818	1 can
1819	1 can
1820	1 can
1821	1 can
1822	1 can
1823	1 wood, nails, metal strapp
1824	1 debitage
1825	1 can, lid
1826	1 lithic scatter

Isolate Number (SMB-I-)	Description
1827	1 can
1828	1 can
1829	1 can
1830	1 can
1831	1 can
1832	1 can
1833	1 can
1834	1 can
1835	1 can
1836	1 can
1837	1 can
1838	1 can
1839	1 can
1840	1 can
1841	1 can
2001	1 can, key wind
2002	1 cotter pin
2003	1 military ration can, key wind
2004	1 external friction lid can, external friction lid
2006	1 military ration cans, key wind
2007	1 military ration can, key wind
2008	1 peanut butter can, and other can
2009	1 embedded can
2010	1 embedded can
2011	1 tall cylindrical can, rotary opened
2012	1 knife-opened keywind can, key wind 1 knife-opened keywind can, key wind
2013	1 soup can, rotary opened 1 military ration can, key wind
2014	1 can, knife cut, puncture
2015	1 hole-in-cap can
2016	1 juice can, knife cut, puncture
2017	1 can, rotary opened
2018	1 glass jar, steel threaded cap, MARK: Hazelton Atlas
2019	1 cylindrical can, rocker opened, MARK: oval embossing, no lettering
2020	1 can, church key opened
2021	1 can, rocker opened
2022	1 sanitary can 1 fuel can, rectangular
2023	1 can, rocker opened
2024	1 embedded can
2025	1 can, rocker opened
2026	1 military ration can, key wind 1 military ration can, key wind
2027	1 glass bottle
2028	1 tin beer can, church key opened
2029	1 smashed can
2030	1 oval sardine can, rotary opened 1 can with oval embossed on base
2031	1 smashed can

**Isolate Number
(SMB-I-)** **Description**

2032	1 sanitary can
2032	1 sanitary can
	1 sanitary can
2033	1 embedded can
2034	1 Duraglas jar fragment
2035	1 rectangular food can, key wind
2036	1 can, rotary opened
2037	1 can, knife cut
2038	1 can
	1 large coffee can
2039	1 can, knife cut
	1 can, knife cut
2040	1 military ration can, key wind
	1 can
2041	1 beverage can, church key opened
4001	1 square tin, cut top
4002	1 square tin, cut top
4005	1 stone pipe fragment
4006	1 embedded can
4007	1 military ration can, key wind
4008	1 oval sardine can
4009	1 7 oz soda bottle, crown top, MARK: Owens Illinois maker's mark
4010	1 2 military ration cans, P-38 opened
4011	1 military ration can, P-38 opened
4012	1 embedded can
4013	1 can, church key opened
4014	1 military ration can, key wind
4015	1 military ration can, key wind
4016	1 military ration can, key wind
4017	1 evaporated milk can, unopened
4018	1 oil can, U-shaped puncture
	1 1 gallon can
4019	1 oil cans, U-shaped puncture
4020	1 oil can, U-shaped puncture
4021	1 12 oz beverage can, knife cut
4022	1 oil can, U-shaped puncture
4023	1 bottle, MARK: late mark
4024	1 embedded can, knife cut, puncture
4025	1 dubbing can and one embedded can, internal friction lid, paint lid type
4026	1 oil can, U-shaped puncture
	1 2 oil cans, U-shaped puncture
	1 beverage can, church key opened
4027	1 oil can, U-shaped puncture
4028	1 3 oil cans, U-shaped puncture
4029	1 2 oil cans, U-shaped puncture
4030	1 oil can, U-shaped puncture
4031	1 oil can, U-shaped puncture
4032	1 oil can, U-shaped puncture
4033	1 oil can, U-shaped puncture
4034	1 oil can, U-shaped puncture
4035	1 oil can, U-shaped puncture

Isolate Number (SMB-I-)	Description
4036	1 oil can, U-shaped puncture
4037	1 oil can, U-shaped puncture
4038	1 oil can, U-shaped puncture
4039	1 oil can, U-shaped puncture
4040	1 oil can, U-shaped puncture
4041	1 pot drop
4042	1 oil can, U-shaped puncture
4043	1 oil can, U-shaped puncture
4044	1 oil can, U-shaped puncture
4045	1 can, rocker opened
4046	1 can, knife cut, "church key" style
4047	1 tobacco tin, external friction lid
4048	1 military ration can, key wind
4049	1 galvanized steel piece
4050	1 galvanized steel piece
4051	1 rusted metal pieces
4052	1 "drum" style can with internal friction lid, internal friction lid
4053	1 pail, external screw top
4056	1 galvanized steel piece
4057	1 beverage can, church key opened
4058	1 evaporated milk can, ice pick punctures
4059	1 12 oz beverage can
4060	1 galvanized metal bucket
4061	1 baking powder tin?, external screw top, MARK: KEEP TIGHTLY CLOSED [on lid] EUS [on base]
4062	1 CCS flake
4063	1 brown glass bottle, 1 quart, external screw top, MARK: FEDERAL LAW FORBIDS SALE OR RE-USE OF THIS BOTTLE [front body] // CALVERT RESERVE [side body] // ONE QUART etc.
4064	1 can, knife cut, puncture
4065	1 chopper and 3 flakes
4066	1 sanitary can, knife cut, puncture
4067	1 vent hole-in-cap 1", punctured
4068	1 hole-in-cap can, punctured
4069	1 external friction lid can, external friction lid
4069	1 hole-in-cap can, cap 1 5/8
4070	1 fuel can, threaded spout 1 1/8"
4071	1 sanitary can, circle sliced
4072	1 hole-in-cap can, knife cut 1 mining claim stake
4073	1 hole-in-cap can, circle sliced
4074	1 oval sardine can, knife cut, MARK: PACKED IN VACUUM / CALIFORNIA U.S.A. [on lid]
4075	1 CCS flake
4076	1 pail, with handle, external friction lid
4077	1 external friction lid can, external friction lid
4078	1 pail
4079	1 sanitary can, rotary opened
4080	1 17 ceramic sherds
4081	1 fuel can, spout 1 1/2"
4082	1 sanitary can, circle sliced
4083	1 can, key wind
4084	1 banded can, rotary opened

**Isolate Number
(SMB-I-)****Description**

4085	1 banded can, knife cut
4086	1 can and metal bucket
4087	1 2 cans, rocker opened
4088	1 solder dot, evaporated milk can, knife cut
4089	1 juice can, rotary opened
4090	1 metal drum
4091	1 soluble coffee can, external friction lid
4092	1 solder dot, evaporated milk can, knife cut
4093	1 can, rotary opened
4094	1 glass bottle with 1931 date 1 solder dot can 1 sanitary can, rocker opened
4095	1 oval sardine can
4096	1 can, external screw top
4097	1 6 oz juice can, ice pick punctures
4098	1 rectangular metal box and milled wood
4099	1 tobacco tin, external friction lid, hinged
4100	1 military ration can, key wind
4101	1 military ration can, key wind
4102	1 sanitary can, rocker opened 1 external friction lid can, external friction lid
4103	1 3 evaporated milk cans
4104	1 oil can, U-shaped puncture
4105	1 buried can
4106	1 military ration can, key wind
4107	1 evaporated milk can, knife cut, puncture
4108	1 CCS flake
4109	1 CCS flake
4110	1 military ration can, P-38 opened
4111	1 miscellaneous metal and gate hinges
4112	1 military ration can, key wind
4113	1 wire
4114	1 embedded can
4115	1 cracker tin 1 glass jar
4116	1 can, circle sliced 1 can, circle sliced 1 glass jar, screw top
4117	1 2 military ration cans, key wind
4118	1 military ration can, key wind 1 military ration can, P-38 opened 1 military ration can, key wind
4119	1 3 military ration cans, key wind
4120	1 can, circle sliced
4121	1 7 oz bottle with crown finish., MARK: Stamped "No Deposit, No Return" 1 military ration can, key wind
4122	1 military ration can, key wind
4123	1 embedded can
4124	1 coffee can, external friction lid
4125	1 military ration can, key wind
4126	1 CCS flake

**Isolate Number
(SMB-I-)** **Description**

4127	1 buried can
4128	1 lumber, military
4129	1 lumber, military
4130	1 buried can
4131	1 military ration can, key wind
4132	1 lumber, military
4133	1 military ration can, key wind
4134	1 soluble coffee can, external friction lid
4135	1 solder dot, evaporated milk can, ice pick punctures
4136	1 smashed can
4137	1 can, rotary opened
4138	1 car parts
4139	1 juice can, knife cut
	1 juice can, knife cut
	1 military ration can, key wind
4140	1 soluble coffee can, external friction lid
4141	1 military ration cans, key wind
4142	1 military ration can, key wind
	1 oval sardine can
4143	1 oval sardine can
4144	1 can, knife cut
4145	1 galvanized washtub
4146	1 can, rotary opened
4147	1 CCS flake
4148	1 evaporated milk can, knife cut
4149	1 soda can, church key opened
4150	1 buried can
4151	1 evaporated milk can, knife cut
4152	1 beverage can, unopened
4153	1 military ration can, key wind
4154	1 oval sardine can
4155	1 can, rotary opened
4156	1 military ration can, key wind
4157	1 oval sardine can and one smashed can
4158	1 can, knife cut
4159	1 evaporated milk can, knife cut
4160	1 military ration can, key wind
	1 solder dot can, knife cut
	1 military ration can, key wind
4161	1 evaporated milk can
4162	1 can
4163	1 can
4164	1 can
4165	1 can
4166	1 can
4167	1 can
4168	1 metal
4169	1 can
4170	1 can
4171	1 can

Isolate Number
(SMB-I-) **Description**

4172	1 can
4173	1 can
4174	1 can
	1 can
4175	1 can
4176	1 can
4177	1 can
4178	1 can
4179	1 can
4180	1 metal/glass
4181	1 can
4182	1 can
4183	1 can
4184	1 can
4185	1 can
4186	1 can
4187	1 can
4188	1 can
4189	1 can
4190	1 can
4191	1 can
4192	1 can
4193	1 can
4194	1 can
4195	1 can
4196	1 can
4197	1 can
4198	1 glass
4199	1 can
4200	1 can
4201	1 flake
4202	1 can
4203	1 bone
4204	1 can
4205	1 can
4206	1 can
4207	1 can
4208	1 can
4209	1 can
4210	1 can
4211	1 metal
4212	1 can
4213	1 glass
4214	1 can
4215	1 can
4216	1 can
4217	1 can
4218	1 can
4219	1 metal
4220	1 can
4221	1 CCS flake

**Isolate Number
(SMB-I-)** **Description**

4222	1 metal
4223	1 metal
4224	1 can
4225	1 can
4226	1 glass
4227	1 bone
4228	1 can
4229	1 can
4230	1 metal
4231	1 metal
4232	1 metal/can
4233	1 can
4234	1 can
4235	1 can
4236	1 flake
4237	1 ceramic sherds
4238	1 fuel can 1 flake
4239	1 military ration can, key wind 1 flake
4240	1 can
4241	1 can
4242	1 can
4243	1 can
4244	1 can
4245	1 can
4246	1 can
4247	1 can
4248	1 can
4249	1 can
4250	1 metal
4251	1 can
4252	1 can
4253	1 can
4254	1 can
4255	1 flake
4256	1 metal
4257	1 can
4258	1 can
4259	1 can
4260	1 can
4261	1 can
4262	1 can
4263	1 can
4264	1 can
4265	1 can
4266	1 can
4267	1 metal
4268	1 metal
4269	1 can

**Isolate Number
(SMB-I-)** **Description**

4270	1 glass
4271	1 metal
4272	1 can
4273	1 metal
4274	1 can
4275	1 metal
4276	1 can
4277	1 can
4278	1 can
4279	1 can
4280	1 can
4281	1 can
4282	1 can
4283	1 can
4284	1 bone
4285	1 can
4286	1 can
4287	1 flake
4288	1 can
4289	1 can
4290	1 can
4291	1 can
4292	1 can
4293	1 can
4294	1 can
4295	1 can
4296	1 can
4297	1 can
4298	1 can
4299	1 can
4300	1 can
4301	1 can
4302	1 can
4303	1 can
4304	1 can
4305	1 can
4306	1 debitage
4307	1 flake
4308	1 can
4309	1 debitage
4310	1 can
	1 tested cobble
	1 oil filter

**Isolate Number
(SMB-I-)** **Description**

4311	1debitage 1 flake
4312	1 can 1 can, bone
4313	1 can 1 can
4314	1 can
4315	1 can 1 can
4317	1 can
4318	1 can
4319	1 can
4320	1 flake
4321	1 flake
4322	1 can
4323	1 can
4324	1 can
4325	1 glass
4326	1 flake
4327	1 flake
4328	1 can
4329	1 can
4330	1 can
4331	1 can
4332	1 flake
4333	1 can
4334	1 can
4335	1 flake
4336	1 can
4337	1 can
4338	1 can
4339	1 can
4340	1 can
4341	1 can
4342	1 can
4343	1 can
4344	1 can
4345	1 can
4346	1 can
4347	1 ceramic sherds
4348	1 can
4349	1 can
4350	1 can
4351	1 can
4358	1 can
4359	1 can
4360	1 can
4361	1 flake
4362	1 can
4601	1 can

**Isolate Number
(SMB-I-)** **Description**

4901	1 jar
4902	1 hammerstone
4903	1 condensed milk can
4904	1 jar
4905	1 flakes
5001	1 military ration can, key wind
5002	1 lard bucket
5003	1 oval sardine can
	1 military ration can, key wind
	1 military ration can, key wind
5004	1 military ration can, key wind
	1 aluminum top pull tab can, pull tab
5005	1 military ration can, key wind
5006	1 can, knife cut
5007	1 sanitary can, knife cut
	1 military ration can, key wind
5008	1 sanitary can, knife cut
5009	1 oil can
	1 can, knife cut
5010	1 can
5011	1 can
5012	1 can
5013	1 bottle
5014	1 can
5015	1 can
5016	1 debitage
5017	1 can
5018	1 can
5019	1 can
5020	1 can
5021	1 can, bottle, cairn
5022	1 can
5023	1 can
5024	1 jar
5025	1 can
5026	1 can
5027	1 can
5028	1 can
5029	1 bottle
5030	1 can
5031	1 jar
5032	1 cone top can
	1 military ration can
5033	1 can
5034	1 evaporated milk can, solder dot, ice pick punctures
	1 military ration can
5035	1 can
5036	1 abrader
5037	1 can
5038	1 can
5039	1 can

**Isolate Number
(SMB-I-)** **Description**

5040	1 can
5041	1 can
5042	1 can
5043	1 can
5044	1 can
5045	1 can
5046	1 can
5047	1 can
5048	1 can
5049	1 military ration can 1 lithic flake
5050	1 can
5051	1 can
5052	1 can
5053	1 can
5054	1 military ration can, key wind 1 tested cobble
5055	1 debitage
5056	1 scraper
5057	1 can
5058	1 can
5059	1 can
5060	1 can
5061	1 can
5062	1 can
5063	1 can
5064	1 can
5065	1 can
5066	1 oil can
5067	1 can
5068	1 can
5069	1 can
5070	1 can
5071	1 sardine can
5072	1 can
5073	1 can
5074	1 military ration can, key wind
5075	1 evaporated milk can, solder dot, knife cut 1 military ration can, key wind 1 milled lumber and wire-cut nails
5076	1 fuel can, MARK: Texas Fuel Co. 1 lithic flake
5077	1 aircraft window
5078	1 can
5079	1 can
5080	1 can
5081	1 can
5082	1 can
5083	1 plane parts
5084	1 flakes

**Isolate Number
(SMB-I-)** **Description**

5085	1 tested cobble
5086	1 can
5087	1 can
5088	1 can
5089	1 can
5090	1 can
5091	1 can
5092	1 debitage
5093	1 can
5094	1 can
5095	1 sheet metal
5096	1 can
5097	1 debitage
5098	1 lumber, metal
5099	1 can
5100	1 can
5101	1 can
5102	1 can
5103	1 can
5104	1 can
5105	1 can
5106	1 can
5107	1 can
5108	1 can
5109	1 can
5110	1 can
5111	1 can
5112	1 can
5113	1 can
5114	1 can
5115	1 can, bottle
5116	1 can
5117	1 tested cobble
5119	1 pottery shards
5120	1 scraper
5121	1 can
6000	1 hammerstone
6001	1 deflated cairn
6002	1 can
6003	1 bottle

DISCUSSION

<< *to be provided* >>

CHAPTER 6 SUMMARY AND MANAGEMENT RECOMMENDATIONS

SUMMARY

Field investigations identified 227 archaeological sites and 1,214 isolated artifacts. Based on changes to the Project design subsequent to the survey, 27 of the sites (see Table 9, above) and 65 of the isolates (see Table 10, above) are no longer within the Project area or 200-foot buffer. Nine sites are located in the archaeological buffer and are not evaluated (see Table 9, above). None of the isolated finds are considered eligible for listing in the NRHP or CRHR. Based on surface observations, 41 archaeological sites are recommended potentially eligible for inclusion in the CRHR under Criteria 1 or 4 and are unevaluated for the NRHP. Of those, 11 sites appear to qualify for mitigation under an Office of Historic Preservation programmatic treatment plan, known as the *Sparse Lithic Scatter California Archaeological Resource Identification and Data Acquisition Program* (CARIDAP), for NHPA compliance.

Avoidance and preservation of cultural resources is preferred. Through careful design efforts, the Project may avoid some of the identified cultural resources. Sites that are avoided will not require any additional testing or assessment. If avoidance is not possible, then those sites within the APE that may be impacted by the construction and maintenance of the BSPP will require further investigation to determine their eligibility for listing in the CRHR and the NRHP. Potential Project impacts to archaeological sites within the APE are summarized in Table 11.

Table 11. Summary of Impacts to Archaeological Sites in the BSPP APE

Temporary Number	Site Type Historic Context	Chronological Assessment	Significance Potential	Project Impact
SMB-P-160	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	If eligible, impact less than significant with mitigation under CEQA; no historic properties affected if addressed under CARIDAP for NHPA
SMB-H-163	Fortified positions - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-H-171	Historic debris scatter - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties

Temporary Number	Site Type Historic Context	Chronological Assessment	Significance Potential	Project Impact
SMB-H-178	Historic debris scatter and rock feature - DTC/C-AMA and Historic use of the Palo Verde Mesa	1942-1944 (WWII) and 20th century	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-H-207	Fortified positions - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-H-210	Fortified positions - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-M-214	Prehistoric cobble feature with historic debris - Historic and Prehistoric use of the Palo Verde Mesa	20th century and Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-H-222	Historic debris scatter and rock feature - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-H-223	Fortified positions - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-H-224	Historic debris scatter - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-P-228	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	If eligible, impact less than significant with mitigation under CEQA; no historic properties affected if addressed under CARIDAP for NHPA
SMB-P-238	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	If eligible, impact less than significant with mitigation under CEQA; no historic properties affected if addressed under CARIDAP for NHPA
SMB-P-241	Lithic scatter and cairn - Lithic reduction	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties

Temporary Number	Site Type Historic Context	Chronological Assessment	Significance Potential	Project Impact
SMB-P-244	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	If eligible, impact less than significant with mitigation under CEQA; no historic properties affected if addressed under CARIDAP for NHPA
SMB-P-249	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	If eligible, impact less than significant with mitigation under CEQA; no historic properties affected if addressed under CARIDAP for NHPA
SMB-P-252	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	If eligible, impact less than significant with mitigation under CEQA; no historic properties affected if addressed under CARIDAP for NHPA
SMB-H-285	Fortified positions - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-H-286	Fortified positions - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-H-403	Historic debris scatter - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-H-404	Historic ranch - Historic settlement of the Palo Verde Mesa and DTC/C-AMA	Early 20th century and 1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-P-410	Prehistoric trail - Prehistoric Trails	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-H-423	Airplane crash site - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-H-427	Historic debris scatter - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties

Temporary Number	Site Type Historic Context	Chronological Assessment	Significance Potential	Project Impact
SMB-P-431	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	If eligible, impact less than significant with mitigation under CEQA; no historic properties affected if addressed under CARIDAP for NHPA
SMB-P-434	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-P-436	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-P-437	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-P-438	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-P-440	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-P-441	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-P-445	Lithic scatter and cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-P-448	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-P-453	Lithic scatter - Prehistoric use of the Palo Verde Mesa	Prehistoric	Appears to meet requirements for CARIDAP	If eligible, impact less than significant with mitigation under CEQA; no historic properties affected if addressed under CARIDAP for NHPA

Temporary Number	Site Type Historic Context	Chronological Assessment	Significance Potential	Project Impact
SMB-P-454	Lithic scatter and hearth - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-M-511	Lithic scatter with historic debris - DTC/C-AMA and Prehistoric use of the Palo Verde Mesa	1942-1944 (WWII) and Prehistoric	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-H-514	Historic structure remnants - Historic settlement of the Palo Verde Mesa	Early 20th century	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
SMB-P-530	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	If eligible, impact less than significant with mitigation under CEQA; no historic properties affected if addressed under CARIDAP for NHPA
SMB-P-531	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	If eligible, impact less than significant with mitigation under CEQA; no historic properties affected if addressed under CARIDAP for NHPA
SMB-P-532	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	If eligible, impact less than significant with mitigation under CEQA; no historic properties affected if addressed under CARIDAP for NHPA
CA-RIV-2846	Lithic quarry	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties
CA-RIV-3419	Lithic quarry and historic debris scatter	Prehistoric and 20th century	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	If eligible, impact less than significant with mitigation under CEQA; adverse effect under NHPA addressed by consultation between BLM, SHPO, and interested parties

Recommendations for Archaeological Resources

If avoidance is not possible, a testing program is recommended for 30 sites that possess a potential to qualify for the CRHR and are unevaluated for the NRHP and that could be impacted by the Project (Table 12). An additional 11 sites appear to qualify for treatment under CARIDAP, if they are not avoided through Project redesigns (Table 13).

Table 12. Archaeological Sites to be Evaluated through Testing

Temporary Number	Site Type Cultural Context	Chronological Assessment	Significance Potential	Project Component
SMB-H-163	Fortified positions - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-H-171	Historic debris scatter - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-H-178	Historic debris scatter and rock feature - DTC/C-AMA and Historic use of the Palo Verde Mesa	1942-1944 (WWII) and 20th century	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-H-207	Fortified positions - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-H-210	Fortified positions - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-M-214	Prehistoric cobble feature with historic debris - Historic and Prehistoric use of the Palo Verde Mesa	20th century and Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	
SMB-H-222	Historic debris scatter and rock feature - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-H-223	Fortified positions - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-H-224	Historic debris scatter - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-P-241	Lithic scatter and cairn - Lithic reduction	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	
SMB-H-285	Fortified positions - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-H-286	Fortified positions - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-H-403	Historic debris scatter - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-H-404	Historic ranch - Historic settlement of the Palo Verde Mesa and DTC/C-AMA	Early 20th century and 1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-P-410	Prehistoric trail - Prehistoric Trails	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	

Temporary Number	Site Type Cultural Context	Chronological Assessment	Significance Potential	Project Component
SMB-H-423	Airplane crash site - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-H-427	Historic debris scatter - DTC/C-AMA	1942-1944 (WWII)	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-P-434	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	
SMB-P-436	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	
SMB-P-437	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	
SMB-P-438	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	
SMB-P-440	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	
SMB-P-441	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	
SMB-P-445	Lithic scatter and cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	
SMB-P-448	Prehistoric cobble feature - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	
SMB-P-454	Lithic scatter and hearth - Prehistoric use of the Palo Verde Mesa	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	
SMB-M-511	Lithic scatter with historic debris - DTC/C-AMA and Prehistoric use of the Palo Verde Mesa	1942-1944 (WWII) and Prehistoric	Potentially significant and eligible under CRHR Criteria 1 and 4 and unevaluated under NRHP Criteria	
SMB-H-514	Historic structure remnants - Historic settlement of the Palo Verde Mesa	Early 20th century	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	
CA-RIV-2846	Lithic quarry	Prehistoric	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	
CA-RIV-3419	Lithic quarry and historic debris scatter	Prehistoric and 20th century	Potentially significant and eligible under CRHR Criterion 4 and unevaluated under NRHP Criteria	

Table 13. Archaeological Sites to be Addressed through CARIDAP

Temporary Number	Site Type Cultural Context	Chronological Assessment	Significance Potential	Project Component
SMB-P-160	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	
SMB-P-228	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	
SMB-P-238	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	
SMB-P-244	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	
SMB-P-249	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	
SMB-P-252	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	
SMB-P-431	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	
SMB-P-453	Lithic scatter - Prehistoric use of the Palo Verde Mesa	Prehistoric	Appears to meet requirements for CARIDAP	
SMB-P-530	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	
SMB-P-531	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	
SMB-P-532	Lithic scatter - Lithic reduction	Prehistoric	Appears to meet requirements for CARIDAP	

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1989 *Late Quaternary Paleohydrology of the Eastern Mojave River Drainage, Southern California: Quantitative Assessment of the Late Quaternary Hydrologic Cycle in Large Arid Watersheds*. New Mexico Water Resources Institute Report No. 242. Las Cruces, New Mexico.
- Westec Services, Inc.
1982 *Cultural Resource Inventory and National Register Assessment of the Southern California Edison Palo Verde to Devers Transmission Line Corridor (California Portion)*. Report on file at Eastern Information Center, University of California, Riverside.
- Western Regional Climate Center
2005 Southern California Climate Summaries. Electronic document, <http://www.wrcc.dri.edu/summary/climsmsca.html>, accessed March 7, 2005.
- White, Christopher
1974 Lower Colorado River Area: Aboriginal Warfare and Alliance Dynamics. In *'Antap: California Indian Political and Economic Organization*, edited by Lowell J. Bean and Thomas F. King. Ballena Press Anthropological Papers 2. Ramona, California.
- Whitley, David S.
1996 *A Guide to Rock Art Sites: Southern California and Southern Nevada*. Mountain Press Publishing Company. Missoula, Montana.
- Wilke, Philip J.
1978 Late Prehistoric human Ecology as Lake Cahuilla, Coachella Valley, California. Berkeley: Contributions of the University of California Archaeological Research Facility No. 38.

ATTACHMENT 1

RESUMES

REBECCA MCCORKLE APPLE, RPA
Principal/Manager, Cultural Resources Group/
Senior Archaeologist

SUMMARY

Expertise with CEQA/NEPA requirements
Experience with Section 106 compliance and mitigation programs
Over 20 years experience in cultural resource management

EDUCATION

MA, Anthropology, San Diego State University, 1990
BA, Anthropology, San Diego State University, 1978

AFFILIATIONS

Society for American Archaeology
Society for California Archaeology

CERTIFICATIONS

Register of Professional Archaeologists
Certified Archaeology Consultant, County of San Diego

ACADEMIC AWARDS AND SCHOLARSHIPS

Phi Kappa Phi
Phi Beta Kappa
University Scholar, 1987 and 1988

PAPERS AND PUBLICATIONS

Mapping and Managing Pathway to the Past. Paper presented at the 22nd Annual ESRI International User Conference, San Diego, California (2002).

Introduction to Recent Archeological Investigations at the Salton Sea Test Base, Imperial County California. Proceedings of the Society for California Archaeology, Volume 12. Fresno, California (1999).

Introduction to Recent Archaeological Investigations at Salton Sea Test Base, Imperial County, California. Paper presented at the 32nd Annual Meeting for Society for California Archaeology, San Diego (1998).

A Lake Mojave Period Site Near Silver Lake, California (with A. York). Presented at the 26th Annual Meeting of the Society for California Archaeology, Pasadena (1992).

Recent Archaeological Investigations in the North Las Vegas Valley (with J.H. Cleland and M.S. Kelly). In *Crossing the Borders: Quaternary Studies in Eastern California and Southwestern Nevada*. San Bernardino County Museum Association Special Publication (1991).

Preliminary Project Results of the San Diego County Studies for the Southwest Powerlink Transmission Project. Presented at the 17th Annual Meeting of the Society for California Archaeology, San Diego (1983).

Rebecca Apple has over 20 years of experience in cultural resource management and serves as senior archaeologist for EDAW. Her experience includes managing cultural resources compliance efforts for large complex projects. She is knowledgeable in the procedures and guidelines associated with implementation of NHPA and CEQA. She has managed numerous cultural resource projects, including prehistoric, historic, and ethnographic studies. She has directed inventories, evaluations, data recovery efforts, and monitoring programs. She has also prepared management plans and conducted feasibility studies. Her work frequently includes consultation with municipal, state, and federal agencies, as well as Native American representatives and the public. As part of interdisciplinary teams, she has managed cultural resources investigations and authored cultural resource sections for ISs, EAs, EIRs, and EISs. Her experience includes cultural resource investigations for pipelines, transmission lines, power plants, highways, landfills, water resource facilities, military installations, and commercial and residential development.

ENERGY AND TRANSMISSION PROJECTS

CONFIDENTIAL PROJECT

Task Manager

CLIENT: CONFIDENTIAL CLIENT

Responsible for oversight of archaeological and architectural surveys, technical reports, coordination with CEC staff, and preparation of AFC sections for a 2,000-acre solar project.

Yuma Lateral Pipeline Project, Yuma, AZ

Project Manager

CLIENT: North Baja LLC (TransCanada)

Responsible for cultural services, conducting records searches, archival research, Native American consultation, and survey of the preferred alignment. Identified resources included the Yuma Valley Railroad, a National Register-eligible property.

Harper Lake Cultural Resources Constraints Study,

San Bernardino County, CA

Task Manager

CLIENT: ENSR/Harper Lake, LLC

Responsible for field reconnaissance and constraints analysis for a proposed 3,300-acre specific plan area. Potential development included a diary and energy park.

North Baja Pipeline Project, Ehrenberg, Arizona to Mexican Border

Project Manager

CLIENT: Foster Wheeler

Responsible for cultural services, conducting records searches, archival research, Native American consultation, survey of the preferred alignment and alternatives, site evaluation, and data recovery.

DeAnza Pipeline Constraints and Permitting Analysis,

Ehrenberg, AZ to Calexico, CA

Resource Manager

CLIENT: AEP

Responsible for cultural services, providing information on distribution of natural and cultural resources along the proposed pipeline corridor in report

REBECCA MCCORKLE APPLE

format, with accompanying maps showing these resources and other constraints.

SEMPRA On-call Cultural Services, CA

Resource Manager

CLIENT: SEMPRA

Resource manager for cultural resource task orders. Most recent task order dealt with artifact curation for a City project.

Imperial Irrigation District Cultural Survey, Imperial County, CA

Project Manager

CLIENT: Imperial Irrigation District

Responsible for cultural resources component of two transmission line studies. Survey and testing were conducted in conjunction with pole replacement along the R and L transmission lines.

Mead-Adelanto Transmission Line, Clark County, NV,

and San Bernardino County, CA

Resource Manager

CLIENT: Los Angeles Department of Water and Power

Cultural resource survey.

Sycamore Canyon Substation to Rancho Carmel Substation 69-kV

Transmission Line Project, San Diego County, CA

Project Manager

CLIENT: San Diego Gas & Electric

Responsible for cultural resources component of a PEA document for submittal to the CPUC that evaluated the potential environmental impacts of a proposed 69-kV transmission line.

Coso Known Geothermal Resource Area, Inyo County, CA

Resource Manager

CLIENT: Los Angeles Department of Water and Power

Responsible for data recovery investigations at two geothermal well-pads located in the Sugarloaf Mountain Obsidian Source National Register District.

Santa Ynez Unit Development, Santa Barbara County, CA

Field Director

CLIENT: Exxon Corporation

Supervised data recovery excavations of a prehistoric coastal site.

Big Creek Expansion Project Transmission Line, South Central, CA

Data Manager

CLIENT: Southern California Edison

Responsible for cultural resource impact assessment of alternative routes for a proposed transmission line from the Big Creek Hydroelectric Project in the Sierras to the Los Angeles Basin.

Kern River Gas Transmission Project, WY, UT, NV, and CA

Task and Resource Manager

CLIENT: Kern River Gas Transmission Company

Inventory, evaluation, data recovery, and construction monitoring for California portion of this Class I overview.

Argus Cogeneration Expansion, San Bernardino and Inyo Counties, CA
Project Archaeologist

CLIENT: Kerr-McGee

Supervised cultural resource survey and documentation for a water pipeline.

REBECCA MCCORKLE APPLE

Geothermal Public Power Line Project, North Central CA
Resource Manager

CLIENT: Sacramento Municipal Utility District

Responsible for cultural resource surveys for a proposed transmission line from the Geysers Geothermal Area to Sacramento.

Southwest Powerlink 500-kV Transmission Line EIR/EIS,
Imperial and San Diego Counties, CA

Resource Manager

CLIENT: San Diego Gas & Electric

Participated in Section 106 compliance activities, including data recovery, analysis, and report preparation.

MILITARY PROJECTS

Integrated Cultural Resources Management Plan and Cultural Affiliation Study, Chocolate Mountains Aerial Gunnery Range, Marine Corps Air Station Yuma, Riverside, and Imperial Counties, CA
Co-Principal Investigator

CLIENT: U.S. Navy, Naval Facilities Engineering Command, Southwest and MCAS Yuma

Preparing an ICRMP for CMAGR to guide cultural resources compliance efforts to facilitate CMAGR mission. ICRMP will summarize existing inventory and provide a process to streamline the inventory and evaluation process. Components of the ICRMP are a Regional Archaeological Research Design and a Cultural Affiliation Study.

Archaeological Evaluation of Sites on San Clemente Island,
Los Angeles County, CA

Principal Investigator

CLIENT: U.S. Navy Southwest Division and Navy Region Southwest
Responsible for National Register of Historic Places Evaluation of four archaeological sites on San Clemente Island.

Cultural Resources Survey and Evaluation for Spring Hill and Associated Access Roads, Riverside County, CA

Principal Investigator

CLIENT: U.S. Navy, Naval Facilities Engineering Command, Southwest and MCAS Yuma

Directed archaeological resource survey of proposed facility to improve communications for aircraft and vehicles with the Chocolate Mountain Aerial Gunnery Range (CMAGR). Two sites were evaluated for eligibility to the National Register of Historic Places. One site appeared to contain very limited information potential and did not qualify for the NRHP. Site CA-RIV-8236 appeared to possess information relevant to addressing regional research issues and was recommended eligible for the NRHP.

Integrated Cultural Resources Management Plan Naval Base Point Loma, San Diego, CA

Project Manager

CLIENT: U.S. Navy, Naval Facilities Engineering Command and Naval Base Point Loma

Preparing an ICRMP for CMAGR to guide cultural resources compliance efforts to facilitate CMAGR mission. ICRMP will summarize existing inventory and provide a process to streamline the inventory and evaluation process. Components of the ICRMP are a Regional Archaeological Research Design and a Cultural Affiliation Study.

REBECCA MCCORKLE APPLE

Archaeological Survey for the Chocolate Mountains Aerial Gunnery Range Central Training Area, Marine Corps Air Station Yuma, Imperial County, CA

Resource Manager

CLIENT: U.S. Navy, Southwest Division and MCAS Yuma

Responsible for cultural resource survey of proposed central training area on CMAGR. The 1,580-acre survey identified four sites on R-2507S and four on R-2507 N. One of the sites on the South Range (the remains of a ranch complex) and three of the sites on the North Range (rock art, ceramics scatter, and a rock ring) were identified as potentially eligible for the National Register of Historic Places.

Chocolate Mountains Aerial Gunnery Range: Cultural Resources Survey of 12 Targets and Monitoring of 14 Archaeological Sites, Riverside and Imperial Counties, CA

Principal Investigator

CLIENT: U.S. Navy, Southwest Division and MCAS Yuma

Directed cultural resource survey of 1,523 acres and site monitoring program on CMAGR. Inventoried site types were lithic scatters, trail segments, pot-drops, rock features, and a mining area. Monitoring program included lithic scatters, rock art, cleared circles, mining complexes, and a segment of historic road.

Cultural Resources Survey of Six Areas on the Chocolate Mountains Aerial Gunnery Range, Imperial County, CA

Principal Investigator

CLIENT: U.S. Navy, Southwest Division and MCAS Yuma

Directed cultural resource survey of proposed Forward Air Reporting Position, range access, and target areas.

Evaluation of 24 Sites at the Chocolate Mountains Aerial Gunnery Range, Imperial County, CA

Principal Investigator

CLIENT: U.S. Navy, Southwest Division and MCAS Yuma

Responsible for National Register of Historic Places evaluation of 24 sites in the Chocolate Mountains.

Historic and Archaeological Resources Protection Plan, Chocolate Mountain Aerial Gunnery Range, Imperial and Riverside Counties, CA

Project Manager

CLIENT: U.S. Navy, Southwest Division and MCAS Yuma

Directed archival archaeological research and field visit for the Chocolate Mountain Aerial Gunnery Range. Prepared HARP Plan for the installation.

Evaluation of Two Sites, MCAS Yuma, AZ

Project Manager

CLIENT: U.S. Navy, Southwest Division and MCAS Yuma

Evaluation of two archaeological sites near the MCAS Yuma airfield.

San Clemente Island Operations Management Plan EIS, Naval Auxiliary Air Field, San Clemente Island, Los Angeles County, CA

Resource Manager

CLIENT: U.S. Navy, Southwest Division and SRS Technologies

Assessed current cultural resource inventory and supplemented in specific areas. Project involved preparation of technical report documenting inventory efforts, including shipwreck study. Impact analysis conducted for existing and proposed military operations on San Clemente Island.

REBECCA MCCORKLE APPLE

Indefinite Quantity Contract for Cultural Resource Services, CA and AZ
Project Manager

CLIENT: U.S. Navy, Southwest Division

Contract manager for multiple task orders on a variety of projects involving archaeological surveys and archaeological evaluations throughout California and Arizona. Tasks include managing budget, overseeing staff, acting as point of contact, and preparation of final reports.

Archaeological Support for Environmental Assessment of Wind Farm Project, Naval Auxiliary Landing Field, San Clemente Island, Los Angeles County, CA

Resource Manager

CLIENT: U.S. Navy, Southwest Division

Prepared cultural resource portion of the EA and placed protective signs at nine archaeological sites near or adjacent to the Wind Farm construction area.

Special Warfare Training and Range Survey, Naval Auxiliary Landing Field, San Clemente Island, Los Angeles County, CA

Senior Archaeologist

CLIENT: U.S. Navy, Southwest Division

Performed cultural resource survey of proposed training ranges on San Clemente Island. Prepared technical report in support of an EA.

Evaluation of Six Sites near the Missile Impact Range, Naval Auxiliary Landing Field, San Clemente Island, Los Angeles County, CA

Project Manager

CLIENT: U.S. Navy, North Island, Natural Resources Office

Provided technical assistance for the NRHP evaluation of six archaeological sites on the Central Plateau of San Clemente Island.

Historic and Archaeological Resources Protection Plan, MCAS Yuma, AZ

Project Manager

CLIENT: U.S. Navy, Southwest Division and MCAS Yuma

Directed archival archaeological research and building inventory for MCAS Yuma. Lead author on Historic and Archeological Resources Protection Plan for the installation.

Pumped-Hydro Storage Wind/Energy System, Naval Auxiliary Air Field, San Clemente Island, Los Angeles County, CA

Resource Manager

CLIENT: U.S. Navy, Southwest Division

Relocated and recorded 76 archaeological sites in proposed water storage and wind/energy development area. Prepared existing conditions report.

Tactical Aircrew Combat Training System Range Upgrade, MCAS Yuma, AZ

Project Manager

CLIENT: U.S. Navy, Southwest Division

Performed cultural resource survey of proposed transmission line and 17 threat emitter stations. Prepared testing plan.

Cultural Resource Inventory Survey at Salton Sea Test Base, Imperial County, CA

Project Archaeologist

CLIENT: U.S. Navy, Southwest Division

Conducted intensive cultural resource survey for approximately 6,000 acres and evaluation program for 170 sites. Survey and test excavations were conducted in compliance with the NHPA, NAGPRA, and other federal regulations.

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Historic and Archeological Resources Protection Plans, Los Angeles, Imperial, and San Diego Counties, CA
Resource Manager

CLIENT: U.S. Navy, Southwest Division
Prepared HARP Plans for the following six Naval installations: Morris Dam Test Facility, Azusa; Naval Air Facility, El Centro; Naval Shipyard, Long Beach; Point Loma Complex, San Diego; Naval Station, San Diego; and the Naval Radio Receiving Facility, Imperial Beach.

Cultural Resources Technical Studies, MCAS Yuma, Yuma Training Range Complex, AZ and CA
Project Archaeologist

CLIENT: U.S. Navy, Southwest Division
Directed cultural resource sample survey in the Chocolate Mountains Gunnery Range.

Mission Trails Regional Park Explosive Ordnance Demolition Environmental Assessment, San Diego County, CA
Project Manager

CLIENT: U.S. Army Corps of Engineers
Directed cultural resource survey in support of an environmental assessment addressing the removal of ordnance from the former location of Camp Elliott.

Archeological Survey of Sierra I Impact Area, MCB Camp Pendleton, San Diego County, CA
Resource Manager

CLIENT: U.S. Marine Corps
Performed cultural resource survey of approximately 2,500 acres on the northern portion of MCB Camp Pendleton.

WATER PROJECTS

Emergency Storage Project, San Diego County, CA
Resource Manager

CLIENT: San Diego County Water Authority
Responsible for the cultural Resources Evaluation Program and Treatment Program. Assisted SDCWA with Native American consultation, implementation of a programmatic agreement, and coordination with ACOE. Project involved evaluation of over 20 cultural resources including San Vicente Dam. Under a Historic Properties Treatment Plan prepared by EDAW, research designs were prepared and carried out for prehistoric and historic period resources. Treatment measures included data recovery, site stabilization, and preparation of Historic American Engineering Record documentation for San Vicente Dam. Prepared Public Interpretive Plan.

North City Water Treatment Plant, San Diego, CA
Resource Manager

CLIENT: City of San Diego Water Department
Managed cultural resource component of the North City Water Treatment Plant EIR. Project included survey and limited testing.

Balboa Park Wastewater Treatment, San Diego County, CA
Archaeologist

CLIENT: City of San Diego
Participated in cultural resource documentation for a facility siting study.

Mission Valley Water Reclamation Plant, San Diego County, CA
Resource Manager

CLIENT: City of San Diego
Responsible for archaeological testing and monitoring program in an area of potential archaeological sensitivity.

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North Metro Interceptor Sewer, San Diego County, CA
 Resource Manager
 CLIENT: City of San Diego
 Responsible for cultural resource investigations for constraints analysis of proposed sewer alignments.

Freeman Junction, Kern County, CA
 Resource Manager
 CLIENT: Los Angeles Department of Water and Power
 Responsible for the survey of portions of 1st Los Angeles Aqueduct for cap strengthening project.

Eastern Sierra Hydroelectric Relicensing, Mono and Inyo Counties, CA
 Field Director
 CLIENT: Southern California Edison
 Participated in assessment of 22 sites within three hydroelectric project areas.

Pit 3, 4, and 5 Hydroelectric Relicensing Project, Shasta County, CA
 Project Archaeologist
 CLIENT: Pacific Gas and Electric Company
 Directed limited data recovery efforts at six archaeological sites threatened by shoreline erosion prior to stabilization.

Rose Canyon Trunk Sewer EIR, San Diego County, CA
 Archaeologist
 CLIENT: City of San Diego
 Conducted windshield reconnaissance and records search and prepared overview for proposed sewer.

Pamo Dam and Reservoir, San Diego County, CA
 Archaeologist
 CLIENT: San Diego County Water Authority
 Assisted in preparation of research design and conducted archaeological monitoring of geotechnical investigations.

Reservoir 657-2, San Diego County, CA
 Archaeologist
 CLIENT: Otay Water District
 Supervised survey and report preparation of proposed covered reservoir site in Spring Valley.

Mokelumne River Hydroelectric Relicensing, Alpine, Amador, and Calaveras Counties, CA
 Crew Chief
 CLIENT: Pacific Gas and Electric Company
 Participated in archaeological test excavations and NRHP evaluations.

TRANSPORTATION PROJECTS

Southern Nevada Supplemental Airport EIS, Clark County, NV
 Co-Principal Investigator
 CLIENT: ENSR, VHB, and Clark County Department of Aviation
 Responsible for cultural resource inventory of over 17,000 acres for a BLM and transfer. Class III survey also included Radar and Navaid facilities and retention basins. Class I studies for multiple alternatives. Project involved consultation with BLM, USFS, FAA, SHPO, Native American groups, and 106 other interested parties.

REBECCA MCCORKLE APPLE

SR-76 East, San Diego County, CA

Principal Investigator

CLIENT: Caltrans and SANDAG

Responsible for the cultural resource inventory and evaluation program for the SR-76 East widening project. Oversaw the survey of three alternative routes for archaeological and architectural resources, along with Extend Phase I excavations, ASR, HRER, and HPSR.

SR-56, San Diego County, CA

Resource Manager

CLIENT: City of San Diego

Responsible for the cultural resource evaluation program for the SR-56 EIR. Evaluated 16 sites along two alternative freeway alignments.

La Costa Avenue/I-5 Interchange, San Diego County, CA

Project Archaeologist

CLIENT: Caltrans

Directed an archaeological survey of proposed interchange improvements in the City of Carlsbad. The project requires close coordination with City and Caltrans staff.

SA 680/SF 728 Roadway Project Environmental Studies/EIR,
San Diego County, CA

Project Archaeologist

CLIENT: County of San Diego

Directed the test excavation and NRHP evaluation of four sites on the proposed project alignment. These investigations addressed the potential association of the sites with the Harris Site Complex.

SR-79, Riverside County, CA

Resource Manager

CLIENT: Riverside County Transportation Commission

Responsible for cultural resource investigations for widening and realigning two highway segments. Prepared cultural resource sections for ISs and coordinated archaeological survey reports, historic architectural survey reports, and historic study report.

Victorville La Mesa/Nisqually Road Overpass,
San Bernardino County, CA

Project Archaeologist

CLIENT: City of Victorville

Supervised survey and prepared positive archaeological survey report and historic property survey report.

LANDFILL AND WASTE-RELATED PROJECTS

Elsmere Canyon Landfill, Los Angeles County, CA

Project Archaeologist

CLIENT: Elsmere Corporation

Directed cultural resource assessment for the EIR/EIS.

Southwest San Diego Landfill Siting Study, San Diego County, CA
Resource Manager

CLIENT: County of San Diego

Responsible for cultural resource assessments of potential landfill sites throughout the southwestern quadrant of San Diego County. Ranked the relative sensitivity of each potential site.

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LAND DEVELOPMENT PROJECTS

Heber Dunes Off-Highway Vehicle Park, Imperial County, CA
 Cultural Resources Project Manager
 CLIENT: State of California Department of Parks and Recreation Off-Highway Motor Vehicle Recreation Division
 State Parks recently acquired Heber Dunes and is in the process of preparing a General Plan and EIR for the Park. As part of these efforts approximately 350 acres were inventoried for cultural resources.

Laborde Canyon Off-Highway Vehicle Park, Riverside County, CA
 Cultural Resources Project Manager
 CLIENT: State of California Department of Parks and Recreation Off-Highway Motor Vehicle Recreation Division and Riverside County Economic Development Authority
 The areas of the SVRA that would be open to some level of OHV use would cover approximately 1,480 acres within the 2,640-acre Laborde Canyon site. EDAW was contracted to conduct environmental studies for the Laborde Canyon site, including a cultural resource records search and an intensive cultural resources pedestrian survey of the proposed OHV park. Two prehistoric sites and the Lockheed Facility (Beaumont Site No. 2) were recorded within the study area during the survey. A preliminary assessment of the complex at Beaumont Site No. 2 was made to determine eligibility for the California Register of Historical Resources.

Data Recovery for Goat Canyon Retention Basin Border Field State Park, San Diego County, CA
 Cultural Resources Project Manager
 CLIENT: State of California Department of Parks and Recreation
 Conducted data recovery under stringent time constraints based on wildlife issues and construction schedule. Excavation of 50 units at CA-SDI-16,047 Locus B indicated that the site was a buried temporary camp whose occupants exploited littoral, near-shore, and terrestrial subsistence resources. Data recovery investigations successfully collected data important in local and regional prehistory. The identification of a single component locus dating to the Archaic-Late transition is an important contribution.

Fairbanks Country Villas, San Diego, CA
 Project Manager
 CLIENT: Del Mar Land Management Company
 Prepared testing plan and implemented testing program for proposed residential development.

Inmate Reception Center, San Diego County, CA
 Project Manager
 CLIENT: County of San Diego
 Responsible for testing and data recovery of half a city block in downtown San Diego.

343 Sansome Street, San Francisco County, CA
 Project Archaeologist
 CLIENT: Gerald D. Hines Interests
 Participated in archaeological data recovery excavations at a Gold Rush-period site in downtown San Francisco.

North Las Vegas Land Transfer, Clark County, NV
 Project Archaeologist
 CLIENT: City of North Las Vegas
 Directed cultural resource survey of 4,000-acre land transfer from the BLM to the City of North Las Vegas.

REBECCA MCCORKLE APPLE

Apex Industrial Park, Clark County, NV
 Project Archaeologist
 CLIENT: Kerr-McGee
 Conducted archaeological survey and NRHP evaluations for BLM land transfer.

Walnut Hills Subdivision, San Diego County, CA
 Archaeological Monitor
 CLIENT: Fargo Industries
 Conducted archaeological monitoring of site preparation and grading in San Marcos.

Alcoholism Service Center, San Diego County, CA
 Project Archaeologist
 CLIENT: Fellowship Center, Inc.
 Conducted archaeological survey of proposed rehabilitation center adjacent to Mission San Luis Rey in Oceanside.

OTHER PROJECTS

Peñasquitos Park, San Diego County, CA
 Archaeologist
 CLIENT: County of San Diego
 Participated in survey, including documentation of three adobes.

Old Town State Historic Park, San Diego County, CA
 Archaeologist
 CLIENT: California Department of Parks and Recreation/FIR
 Participated in excavation before placement of underground utilities in San Diego.

Rancho Guajome Adobe, San Diego County, CA
 Archaeologist
 CLIENT: County of San Diego
 Participated in excavation, cataloging, and analysis for work conducted before building stabilization efforts.

Anza Borrego Desert State Park, Riverside County, CA
 Archaeologist
 CLIENT: California Department of Parks and Recreation
 Participated in resource inventory survey.

Glamis Imperial Project, Imperial County, CA
 Archaeologist
 CLIENT: Glamis Imperial Corporation
 Conducted cultural resource survey for proposed gold mine.

Fort Cady Boric Acid Mining and Processing Facility,
 San Bernardino County, CA
 Project Archaeologist
 CLIENT: Fort Cady Minerals Corporation
 Directed survey, testing, and evaluation of 24 sites in Newberry Springs.

Rialto-to-El Paso Fiber Optics Cable, San Bernardino and
 Riverside Counties, CA
 Archaeologist
 CLIENT: U.S. Sprint
 Conducted cultural resource survey along western extent of project.

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SELECTED REPORTS

A View Across the Cultural Landscape of the Lower Colorado Desert: Cultural Resource Investigations for the North Baja Pipeline Project (with Jamie Cleland). Prepared for TetraTech and North Baja, LLC. EDAW, Inc., San Diego (2003).

Cultural Resources Evaluation for the North Baja Gas Pipeline (with C. Dolan, J. Underwood, and J.H. Cleland). Prepared for Foster Wheeler Environmental, Inc. EDAW, Inc., San Diego (2001).

Historical and Archeological Resources Protection Plan (HARP) for the Chocolate Mountain Aerial Gunnery Range, Imperial County, California (with J.H. Cleland). Prepared for U.S. Navy Southwest Division, Naval Facilities Engineering Command. EDAW, Inc., San Diego (2001).

Archaeological Resources Evaluation Report State Route 56 Between Coast and Foothill, City of San Diego, California (with J.H. Cleland, A. York, T. Wahoff, and D. James). Prepared for the City of San Diego. KEA Environmental, Inc., San Diego (1997).

Archeological Survey and Evaluation Program for the Salton Sea Test Base, Imperial County, California (with A. York, A. Pignolo, J.H. Cleland, and S. Van Wormer). Prepared for U.S. Navy, Southwest Division, Naval Facilities Engineering Command. KEA Environmental, Inc., San Diego (1997).

Two Sides of the River: Cultural Resources Technical Studies Undertaken as Part of Environmental Documentation for Military Use of the MCAS Yuma Training Range Complex in Arizona and California (with G. Woodall, L. Peterson, and J.S. Bruder). Prepared for the Southwest Division Naval Facilities Engineering Command and MCAS Yuma. Dames & Moore Intermountain Cultural Resource Services Research Paper No. 5, San Diego (1993).

Bank Stabilization at Lake Britton: Limited Data Recovery (with A. MacDougall). Prepared for Pacific Gas and Electric. Dames & Moore, San Diego (1990).

Kern River Pipeline Cultural Resource Survey Report (with J.H. Cleland, A.L. York, and P. Friedman). Submitted to the Federal Energy Regulatory Commission. Dames & Moore, San Diego (1990).

Sugarloaf Mountain in Prehistory: Archaeological Testing and Data Recovery for the Exploratory Drilling Program II and the Unit No. 1 Project (with J.H. Cleland and E. Nilsson). Prepared for the Los Angeles Department of Water and Power. Dames & Moore, San Diego (1990).

An Archaeological Research Design for the Evaluation of Cultural Resources in Pamo Valley, San Diego, California (with J.H. Cleland, J.R. Cook, and J. Schaefer). Wirth Environmental Services, a Division of Dames & Moore, San Diego (1985).

MATTHEW TENNYSON, RPA
Staff Archaeologist

EDUCATION

BA, Archaeology, History (Minor), Boston University

MA, Anthropology, San Diego State University
Thesis Title: "Straight Out of Dixie": An Analysis of the Architecture of the Nate Harrison Cabin

AFFILIATIONS

Society for American Archaeology

Society for Historical Archaeology

Society for California Archaeology

CERTIFICATIONS

Register of Professional Archaeologists (RPA)

HONORS AND AWARDS

Phi Kappa Phi Honors Society, San Diego State University Chapter

Norton Allen Scholarship, San Diego State University Department of Anthropology, Spring 2006

Ethics Bowl – Society for American Archaeology 71st Annual Meeting, San Juan, Puerto Rico

PAPERS AND PRESENTATIONS

Cultural Interaction in the Archaeological Record: A Landscape View of Old Town San Diego. Paper presented at the Society for California Archaeology 2008 Annual Meeting, Burbank, California.

"Straight Out of Dixie": The Architecture of the Nate Harrison Cabin. Presentation at the San Diego Museum of Man.

Old Town San Diego on the San Diego Landscape. Paper presented at the Society for Historical Archaeology 2009 Annual Meeting, Toronto, Canada

Matthew Tennyson has 7 years of archaeological experience in historic and prehistoric archaeology and is currently a staff archaeologist for EDAW's San Diego office. He has spent the last 7 years working in California on archaeological and historical projects across California and Nevada. His experience includes archaeological testing, data recovery, survey, GIS mapping, monitoring, report production, and historic research for private, city, county, state, and federal clients.

Mr. Tennyson also has experience teaching archaeology and anthropology at the university level, teaching introductory-level classes as well as instructing students in archaeological field schools. He also has experience in laboratory analysis and artifact curation of archaeological collections.

Mr. Tennyson has made public presentations regarding his archaeological work. He has authored or co-authored several articles and reports based on his work in both the academic and public sectors. He currently specializes in historical resources, including the assessment and recordation of historic archaeological sites and historic structures.

PROJECT EXPERIENCE

Niland Solar Cultural Resources Evaluation

Principal Investigator

CLIENT: LADWP/ County of Imperial

Principal investigator and field director for cultural resources surveys and evaluations of approximately 1,000 acres near Niland, California. The project included archaeological and architectural surveys, the identification and evaluation of newly and previously recorded archaeological sites, Native American consultation, and production of an evaluation report submitted to the LADWP and the County of Imperial.

Tulare Lakes Drainage District Cultural Resources Survey

Principal Investigator

CLIENT: Municipal Water District/ Tulare Lakes Drainage District

Principal investigator and field director responsible for archaeological survey of a proposed pipeline and water treatment plant in the San Joaquin Valley. The project included archaeological survey of a proposed water drainage pipeline and water treatment facility, research and recordation of historic irrigation canals, and preparation of a cultural resources report.

SR-76 Mission to I-15 CEQA and NEPA Studies

Principal Investigator

CLIENT: Caltrans

Principal investigator for a cultural resources study of two proposed alternatives for the expansion of State Route 76. The project included leading cultural resources surveys, identifying impacts to cultural resources within project area, coordinating with project engineers to avoid negative impacts to cultural resources, and conducting preliminary testing of archaeological sites within the project area. Additional duties included updating archaeological sites, authorship of an Archaeological Survey Report, and coordination with Native American tribes.

San Clemente Island SWAT 1/TAR 4 Area Archaeological Testing

Staff Archaeologist

CLIENT: US Department of the Navy, Southwest

Staff archaeologist assisting in the testing and evaluation of nine archaeological sites on San Clemente Island, California. The project included

MATTHEW TENNYSON

auger probing of archaeological sites, test unit excavation, and GIS mapping of cultural layers using an electronic total station.

Southern Nevada Supplemental Airport EIS, Jean, NV

Staff Archaeologist

CLIENT: ENSR

Staff archaeologist for a cultural resources survey of a proposed airport in southern Nevada. The project included surveying and recording prehistoric and historic archaeological sites in the Ivanpah Valley region of southern Nevada. Additional duties included authorship of report sections and historic research related to early European and American exploration, early roads, the development of railroads, and the history of mining in the area.

CONFIDENTIAL PROJECT

Staff Archaeologist/Historian

CLIENT: CONFIDENTIAL CLIENT

Archaeologist and historian for proposed solar power plant near California City, CA. Project duties included survey of pipeline alignments in order to assess potential impacts to historic structures in the area, historic research related to early exploration and the development of various social and economic activities in the Mojave Desert region, and assistance in the production of historical architecture and archaeological resources reports.

Yuma Lateral Pipeline Project

Staff Archaeologist

CLIENT: North Baja Pipeline, LLC

Archaeologist and field director for additional survey areas and addendum report for North Baja Pipeline project in Yuma, Arizona

Collwood Pines Apartments

Principal Investigator

CLIENT: The Dinnerstein Companies

Principal investigator responsible for cultural resources on a private development of apartments in San Diego, California. The project included research into the project area and surrounding area to assess the likelihood of discovering cultural resources during the construction phase of the project.

Valley Center Road Bridge Replacement Mitigation

Staff Archaeologist

CLIENT: County of San Diego

Staff archaeologist responsible for Native American contacts and assisting in report preparation for a bridge replacement near Pauma Reservation in San Diego County, California

Main Street Bridge Replacement HPSR

Staff Archaeologist

CLIENT: **Caltrans**

Staff archaeologist responsible for assisting in production of HPSR for a bridge replacement near Temecula, California

Lost Horse DMND

Staff Archaeologist

CLIENT: Indio Water Agency

Project archaeologist responsible for historical research, cultural resources survey, and report for proposed water tank and pipeline near the City of Indio.

SR-125 Johnson Canyon Project

Staff Archaeologist

CLIENT: Caltrans

Conducted archaeological surveys of sites impacted by brush clearing at Johnson Canyon. Duties included investigating sites to determine whether significant impacts had occurred and reporting findings to Caltrans District 11.

MATTHEW TENNYSON

Jolly Boy Tavern Data Recovery, Old Town, San Diego, CA
Staff Archaeologist

CLIENT: California Department of State Parks

Staff archaeologist for excavation of early 19th century adobes located at the Jolly Boy Tavern in Old Town San Diego. Project duties included the excavation of trenches to uncover the historic foundations of adobes, on site interpretations, and coordination with State Parks archaeologists.

Williams Communication Archaeological Services Project Williams,
Elko, NV

Archaeologist

CLIENT: Williams Communications

Archaeological technician responsible for the testing of sites along a communications line outside Elko, Nevada. Project duties included survey, relocation, testing, and recordation of sites along Highway 80. Work was performed prior to joining EDAW.

Mojave River Pipeline Reaches 4A and 4B, Daggett, CA

Archaeologist

CLIENT: Mojave Water Agency

Archaeological technician for a water pipeline in Daggett, CA. Project duties included survey of the proposed alignment, recordation of historic resources, historical research, archaeological monitoring for prehistoric and historic resources, laboratory analysis, cataloging and curation, and report production. Work was performed prior to joining EDAW.

El Cajon Animal Shelter Survey and Testing, El Cajon, CA

Archaeologist

CLIENT: City of El Cajon

Staff archaeologist for the survey and testing of milling features located near the El Cajon Animal Shelter. Project duties included locating and recording bedrock milling features and test excavation units to determine the depths of cultural materials at the site. Work was performed prior to joining EDAW.

Testing of Lithic Quarry at CA-SDI-13655, Camp Pendleton, CA

Archaeologist

CLIENT: U.S. Navy, NAVFAC SW, San Diego

Staff archaeologist for the testing of a quarry site located on Camp Pendleton USMC Base. Additional duties included laboratory analysis of lithic materials, artifact cataloging and curation, and assistance in report production. Work was performed prior to joining EDAW.

Tijuana River Valley, San Diego, San Diego County, CA

Archaeologist

CLIENT: San Diego County Department of Parks and Recreation

Staff archaeologist for proposed trail alignments in the Tijuana River Valley Regional Park, San Diego, CA. Project duties included the identification and recordation of historic and prehistoric cultural resources. Work was performed prior to joining EDAW.

Market Street Village, San Diego, CA

Archaeologist

CLIENT: Market Street Village Developers

Laboratory technician and curation coordinator for late-19th and early-20th century artifacts recovered during archaeological monitoring for a condominium in downtown San Diego. Project duties included cataloging and curating recovered archaeological resources, artifact quantification and analysis, and assistance in report productions. Work was performed prior to joining EDAW.

MATTHEW TENNYSON

Talega Community Development Project, San Clemente, CA
Archaeologist

CLIENT: Talega Associates

Archaeological technician for various sites at the Talega master-planned community. Project duties included archaeological excavation of CA-ORA-907, archaeological and paleontological monitoring of construction activities, laboratory analysis of cultural materials, and the design and installation of cultural resources display at the Vista Del Mar Elementary School. Work was performed prior to joining EDAW.

Lassen National Park Field Treatment, Lassen County/
Plumas County, CA

Archaeologist

CLIENT: National Park Service

Archaeological technician for pre-burn survey to relocate and record new cultural resources as well as updates for previously recorded cultural resources. Project duties included survey of hiking trails and open areas in Lassen Volcanic National Park and coordination of field crews. Work was performed prior to joining EDAW.

Armstrong Ranch Development Project, Santa Ana, CA

Archaeologist

CLIENT: Shea Homes

Archaeological monitor for proposed townhome development at the Armstrong Ranch in Santa Ana, CA. Work was performed prior to joining EDAW.

Orange County Water District West End, Orange County, CA

Archaeologist

CLIENT: Orange County Water District

Archaeological monitor for the installation of new water pipeline running from Orange, CA to Huntington Beach, CA. Work was performed prior to joining EDAW.

Encino Water Quality Improvement Project, Los Angeles County, CA

Archaeologist

CLIENT: Los Angeles County Department of Public Works

Archaeological monitor at the Encino Reservoir during construction activities in association with improvements to the reservoir. Work was performed prior to joining EDAW.

Tustin Field 1 (Tustin PA 20) Development Project, Tustin, CA

Archaeologist

CLIENT: John Laing Homes

Archaeological monitor for historic and prehistoric cultural materials encountered during grading activities. Duties included construction monitoring and recordation of prehistoric artifacts encountered during grading. Work was performed prior to joining EDAW.

Tustin Field 2 (Tustin PA 21) Development Project, Tustin, CA

Archaeologist

CLIENT: John Laing Homes

Archaeological monitor and lead contact with the client. Duties included construction monitoring and recordation of historic artifacts encountered during grading. Work was performed prior to joining EDAW.

SELECTED REPORTS

Metropolitan Water District/Tulare Lakes Drainage District Kings County Agricultural Drainage Water Treatment Project Cultural Resources Report. EDAW, San Diego (2008)

MATTHEW TENNYSON

Archaeological Survey Report for the State Route 76 Highway Improvement Project South Mission Road to Interstate 15 San Diego County, California. EDAW, San Diego (2008)

Cultural and Archaeological Resources Survey Report for the Niland Solar Energy Project Initial Study, Niland, Imperial County, California. EDAW, San Diego (2008)

Addendum 2 to the Cultural Resources and Survey Report for the Yuma Lateral Pipeline Project. EDAW, San Diego (2008)

Phase I Cultural Resources Investigation for IWA Lost Horse Reservoir and Pipeline Project, City of Indio, Riverside County, California. EDAW, San Diego (2008)

Peak to Playa: Southern Nevada Supplemental Airport Environmental Impact Statement Cultural Resources Report, Clark County, Nevada. Contributing author with James Cleland and Christy Dolan. EDAW, San Diego (2008)

CONFIDENTIAL Solar Energy Project Historic Architectural Resources Report, Kern County, California. Contributing author with Jennifer Hirsch. EDAW, San Diego (2008)

CONFIDENTIAL Solar Energy Project Archaeological Resources Report, Kern County, California. Contributing author with Rebecca Apple and Wayne Glenny. EDAW, San Diego (2008)

Monitoring and Mitigation of Seventeen Historic Features at CA-SDI-17,581, San Diego, California. Co-authored with Alex Wesson and Kevin Hunt. SWCA Environmental Consultants (2006)

Identification and Documentation of Unassociated Funerary Objects, Sacred Objects, and Objects of Cultural Patrimony of a Late Period Kumeyaay Archaeological Collection. Co-authored with Dr. Lynn Gamble, San Diego State University (2005)

Cultural Resources Reconnaissance of the Vereecken Property, Winchester Hills, Riverside County, California. SWCA Environmental Consultants (2004)

Archaeological Monitoring and Historic Trash Recovery During Grading For The Tomlinson Park Development, Located In Brea, Orange County, California. Co-authored with Joan Brown. SWCA Environmental Consultants (2003)

TRINA MEISER
Architectural Historian

SUMMARY

Historic preservation specialist and architectural historian

EDUCATION

MA, Historic Preservation Planning, Cornell University, 2003

BA, History, Kenyon College, 1998

AFFILIATIONS

National Trust for Historic Preservation

Society of Architectural Historians

California Preservation Foundation

Trina Meiser is a historic preservation specialist and an architectural historian with 6 years of experience in surveying, documenting, evaluating, and planning for historic structures, districts, sites, and cultural resources. Her background is based on a solid knowledge of architectural history, architectural styles and terminology, building materials conservation, and historic preservation theory. She has led seminars on architectural styles and the history of historic preservation, charrettes for the design treatments of historic districts, as well as workshops in materials conservation. She has completed cultural resource technical reports, National Register of Historic Places nominations, historic structures reports, and Federal Rehabilitation Tax Credit applications. She has consulted on a variety of historic structure rehabilitation plans with clients, architects, engineers, and agency representatives for regulatory review. Her experience in historic preservation planning provides a strong understanding of federal, state, and local historic preservation laws. She has a thorough knowledge of the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and their functions in historic preservation planning.

Ms. Meiser's areas of interest include urban and landscape preservation planning and design, building restoration, archaeology, international heritage sites, and historic district and neighborhood revitalization projects. She is a member of the Society of Architectural Historians, the California Preservation Foundation, the National Trust for Historic Preservation, and several regional historical societies and preservation organizations.

HISTORIC PRESERVATION PROJECTS

National Register Eligibility Assessment for Naval Base Ventura County, Port Hueneme, California

Architectural Historian

CLIENT: U.S. Navy, Southwest Division

Recorded and evaluated 18 buildings at the Naval Construction Training Center at Port Hueneme for eligibility to the National Register. Conducted research on the Disaster Recovery Training School for incorporation into the historical context. Completed DPR forms and incorporated findings in a Historic Resources Evaluation Report.

Ramona Air Center Environmental Impact Report, Ramona, California
Architectural Historian

CLIENT: TCR Properties

Conducted a survey and historical research of structures more than 50 years old to evaluate and document historic resources. Results were recorded on DPR forms and summarized for inclusion in the project Environmental Impact Report.

Exposition Light Rail Transit Phase 2, Los Angeles County, California
Architectural Historian

CLIENT: Exposition Light Rail Authority/AECOM Transportation

Conducted fieldwork to record and evaluate historic resources along the Exposition Corridor ROW. Completed a Historical Resources Evaluation Report for the evaluation of historical resources for eligibility to the National Register of Historic Places and the California Register of Historical Resources. Provided cultural resources portion of Environmental Impact Statement, including mitigation measures for the treatment of evaluated historical resources.

TRINA MEISER

SR-76 Mission to I-15 Historical Resources Evaluation Report,
San Diego, California
Architectural Historian

CLIENT: San Diego Association of Governments/Caltrans
Conducted fieldwork to record and evaluate ranching buildings and residences. Completed a Historical Resources Evaluation Report per Caltrans standards for the evaluation of historical resources for eligibility to the National Register of Historic Places and the California Register of Historical Resources.

Main Street Bridge Replacement Project, Temecula, California
Architectural Historian

CLIENT: City of Temecula
Conducted a survey and historical research of historic resources in Old Town Temecula adjacent to the Main Street Bridge. Results were recorded on DPR forms and in a Historical Resources Survey Report per Caltrans guidelines.

301 University Avenue Historical Evaluation and Technical Report,
San Diego, California

Architectural Historian

CLIENT: Allen, Matkins, Leck, Gamble, Mallory & Matsis, LLP
Evaluated the condition and integrity of the former supermarket building dating from 1942. Prepared Historic Resources Evaluation Report and survey forms. Summarized findings for inclusion in the 301 University Uptown Environmental Impact Report.

SFVAMC Environmental Assessment of Seismic Upgrades,
San Francisco, California

Architectural Historian

CLIENT: Department of Veterans Affairs

Consulted with architects and designers for the rehabilitation and seismic retrofit of the 1930s-era Art Deco San Francisco Veterans Affairs Medical Center buildings. Reviewed plans and rehabilitation standards to evaluate design of new additions and alterations. Engaged in consultation with the State Historic Preservation Office.

North Torrey Pines Bridge "Sorrento Overpass" Restoration,
Del Mar, California

Historic Preservation Specialist

CLIENT: City of Del Mar

Consulted with engineers for the restoration of the 1933 North Torrey Pines Bridge to resolve significant impacts to the National Register-eligible resource. Assessed the deterioration of the bridge and established the historic character-defining features to be preserved. Evaluated restoration plans to suggest mitigation measures for its treatment in compliance with the Secretary of Interior Standards for Restoration.

Jefferson National Expansion Memorial, St. Louis, Missouri
Architectural Historian

CLIENT: National Park Service

Contributed to the cultural resources section of the GMP/EIS. Provided historical context for the Native American occupation, the French colonial establishment, and the 19th century development of the built environment in St. Louis, Missouri.

Fort Totten Conservation Work Weekend, New York, New York
Historic Preservation Specialist

CLIENT: New York City Department of Parks and Recreation

Organized a historic preservation event to perform restoration work on Officers' Quarters at retired military site along New York's East River. Oversaw the conservation of historic exterior woodwork elements. This conservation project was completed prior to joining EDAW.

TRINA MEISER

Hurricane Katrina Recovery, Disaster 1604-DR-MS, Biloxi, Mississippi
Architectural Historian

CLIENT: Federal Emergency Management Agency, Region VI
Recorded the condition and integrity of multiple properties affected by Hurricane Katrina and performed photo documentation. Determined if structures were eligible for National Register designation. Results were summarized in a report and through a series of maps generated in GIS. This conservation work was performed prior to joining EDAW.

Hurricane Katrina Recovery, Disaster 1604-DR-MS, Biloxi, Mississippi
Historic Preservation Specialist

CLIENT: Federal Emergency Management Agency, Region VI
Completed Section 106 review and coordinated with the State Historic Preservation Office to ensure that all projects funded by FEMA complied with federal regulations and the National Historic Preservation Act. Evaluated restoration projects for National Register eligibility in compliance with Secretary of Interior's Standards for Restoration and Rehabilitation under Programmatic Agreement. This historic preservation work was performed prior to joining EDAW.

Ithaca Downtown Commercial Historic District National Register
Eligibility Nomination, Ithaca, New York
Historic Preservation Planner

CLIENT: City of Ithaca
Completed research and documentation of downtown commercial buildings dating from the 1830s to the 1930s. Document included architectural descriptions of each building. Successful nomination to the National Register. This historic preservation planning project was completed prior to joining EDAW.

University Avenue Historic District National Register Eligibility
Assessment, Ithaca, New York
Historic Preservation Planner

CLIENT: City of Ithaca
Completed documentation included in the survey and nomination of this residential historic district with resources dating from the 1860s to the 1950s. This historic preservation planning project was completed prior to joining EDAW.

Historic Ithaca's State Theatre Restoration Project, Ithaca, New York
Historic Preservation Specialist

CLIENT: Historic Ithaca, Inc.
Evaluated restoration designs for compatibility with the historic character of the resource and for compatibility with the *Secretary of the Interior's Standards for Rehabilitation*. Performed conservation of textiles, decorative fixtures, plaster, and windows. Managed construction projects relating to aesthetic and ADA accessibility modifications. This restoration work was completed prior to joining EDAW.

The Clinton House, Ithaca, New York
Historic Preservation Planner/Specialist

CLIENT: Historic Ithaca, Inc.
Evaluated designs for compatibility with the historic character of the resource and for compatibility with the *Secretary of the Interior's Standards for Rehabilitation*. Compiled and prepared Part 1 of the Federal Rehabilitation Tax Credit Application. Oversaw construction management for aesthetic modifications to historic elements. This planning and conservation project was completed prior to joining EDAW.

TRINA MEISER

The Delaware, Lackawanna and Western Train Station National Register Eligibility Nomination, Ithaca, New York
Historic Preservation Specialist

CLIENT: City of Ithaca

Composed historic context statement and architectural description for historic train station. Photodocumented building and submitted the application to the State Office of Historic Preservation. This historic preservation planning project was completed prior to joining EDAW.

Athens Exchange Hotel Stagecoach Livery Historic Structures Report, Athens, Pennsylvania
Preservation Planner

CLIENT: Town of Athens, Pennsylvania

Conducted comprehensive assessment of exterior and interior spaces of 1860s livery structure. Identified character-defining features and compiled historic context statement. Photodocumented building and developed recommendations for treatment and maintenance of deteriorated historic features. This conservation project was completed prior to joining EDAW.

Christopher John Doolittle, M.A., RPA

AECOM

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christopher.doolittle@aecom.com

Mr. Doolittle is the cultural resources manager and the environmental compliance and planning group leader for the AECOM Colton, California office. Mr. Doolittle has served as senior project director and/or project manager on hundreds of cultural resource projects from one-day archaeological surveys to multi-year data recovery excavations. Most of these projects were either under contract to or regulated by federal agencies such as the U.S. Army Corps of Engineers, the U.S. Air Force, the U.S. Navy, the United States Forest Service, the Bureau of Land Management, and the Bureau of Reclamation. He has worked throughout California and the desert southwest for over 20 years.

Mr. Doolittle is the leader of an integrated staff with extensive experience in the evaluation of project impacts on the human and natural environments and in documenting those findings and recommendations in accordance with requirements of NEPA and other federal and state regulatory requirements. Mr. Doolittle works closely with clients to develop comprehensive, defensible analyses and mitigation plans to assist in the execution of important programs and missions.

EDUCATION

M.A. 1992 University of Arizona, Tucson (Anthropology)
B.A. 1987 University of California, Berkeley (Anthropology)

PROFESSIONAL EXPERIENCE

ECP Group Leader	2008-present	AECOM/Earth Tech, Inc.
Cultural Resources Manager	2006-present	Earth Tech, Inc.
Office Director/Project Manager	2004-2006	Statistical Research, Inc
Senior Project Director	1996-2004	Statistical Research, Inc.
Project Director	1992-1996	Statistical Research, Inc.
Crew Chief	1991-1992	Statistical Research, Inc.
Teaching Assistant	1990-1992	University of Arizona
Archaeologist	1990	Desert Archaeology
Archaeologist	1989-1992	Arizona State Museum
GPR Technician	1989-1992	LASI, University of Arizona

PROFESSIONAL TRAINING

Section 106 Section 106 in the New Regulatory Environment: A Workshop for Consultants and their Clients; Cultural Resource Consulting, June 2000
ARPA Archaeological Damage Assessment; Archaeological Resource Investigations. June 2002
HAZWOPER 40-Hour HAZWOPER, 24 Hour First Responder, and 8 Hour Supervisory Certificates; ETAC, valid through 2009
First Aid/CPR Standard First Aid and Adult CPR; American Red Cross, valid through 2009

PROFESSIONAL ORGANIZATIONS

Register of Professional Archaeologists
Society for American Archaeology
Archaeological Survey Foundation (Board Member)

SELECTED PROJECTS AS CULTURAL RESOURCES AND ECP MANAGER

Southern California Edison On-Call Archaeological and Biological Services

Managing an on call cultural and biological resources contract for SCE that involves multiple task orders, field investigations, and reports throughout southern California and Nevada. Reports are prepared to meet the standards of both state and federal guidelines depending on the nature of the work being carried out and the ownership of the property.

Enhanced Use Lease Environmental Baseline Survey, Beale AFB

Managing the Environmental Baseline Survey (EBS) for the enhanced use lease project on Beale AFB. Data were collected and an EBS was produced for five separate areas that were designated by the U.S. Air Force for potential leasing opportunities.

Four Lakes Communication Station Environmental Assessment and Archaeological Survey

Conducted an archaeological survey of Four Lakes Communication Station, authored report, and contributed to the Environmental Assessment regarding the transfer of the base to a non-federal entity. Mr. Doolittle also coordinated the recordation of a National Register of Historic Places district at Four Lakes; a originally a Nike Missile facility. He is also tasked with conducting a survey of similar Nike Missile sites in and around Spokane, Washington and preparing appropriate recordation forms and report.

BRAC Related Environmental Assessments

Coordinating Native American consultation, contributed to the historic building inventory and evaluation, and prepared sections of the Environmental Assessment for the transfer of General Mitchell Air Reserve Station, Buckley Annex, Mesa Research Laboratory, Onizuka Air Reserve Station to non-federal entities.

Galena Air Force Station Historic Building Inventory

Conducted site visit and prepared sections of historic building recordation forms for numerous buildings associated with the Galena Air Force Station in Alaska.

PPG Torrance Initial Study

Conducted archival research, site visit, and authored sections of a California Environmental Quality Act Initial Study for this industrial project in southern California. October 2008 to present.

SMC Carlson Initial Study

Conducted archival research, site visit, and authored sections of a California Environmental Quality Act Initial Study for this industrial project in southern California. August 2007 to present.

Edwards Air Force Base, California

Responsible for managing several task orders issued by the U.S. Army Corps of Engineers, Sacramento for cultural resources work on Edwards AFB. Current task orders include a Phase I survey, a Phase II evaluation project, and several synthetic volumes. May 2006 to present.

Los Angeles Department of Water and Power

Directed an archival research project for LADWP that involved rights of way permits held on federal land dating back to 1906. The final report was submitted in September 2006.

Luke Air Force Base, Arizona

Project Manager and Senior Project Director for 34 separate delivery orders including survey, testing, and data recovery on the Barry M. Goldwater Range. Responsibilities include project management, fieldwork, and report writing. In addition, Mr. Doolittle regularly conducted site tours for Native American and other interested groups and trained Site Stewards in methods of site recording and damage assessment.

Playa Vista Archaeological and Historical Project, Playa Capital Corporation, California

Project Manager and Senior Project Director managing the analysis, reporting, and eventual curation for multiple data recovery projects in the Ballona region of southern California. This was a fifteen year project that has generated over 6,000 boxes of archaeological material.

Dove Cemetery

Senior Project Director/Project Manager. Developed testing and data recovery plans for this historical-period cemetery located in Atascadero, California. Responsibilities included project management, fieldwork, presentations at public meetings, and report writing. October 2004. Centex Homes.

Villages of Lakeview

Senior Project Director/Project Manager. Participated in the survey and buried sites testing programs associated with this housing development in Riverside County. Coordinated field work, report writing and production. January 2005 to May 2006. Lewis Operating Corp.

LAN-211 Data Recovery

Senior Project Director/Project Manager. Co-directed the fieldwork and managing the analysis and report writing phases of this large-scale data recovery in the Ballona Lagoon. August 2005 to March 2006. Playa Capitol Corp.

Big Pocket Monitoring

Senior Project Director/Project Manager. Coordinated monitoring activities associated with drilling activities along the Sacramento River levee for the U.S. Army Corp of Engineers, Sacramento District. July 2005 to May 2006

Port Hueneme Testing

Senior Project Director/Project Manager. Directed fieldwork at VEN-662, coordinated analyses, participated at public meetings, and wrote portions of the report. October 2004 to May 2005. John Laing Homes.

San Nicolas Island

Senior Project Director. Directed the Cave of the Whales mapping project on San Nicolas Island and assisted with the testing and evaluation of SNI-39 and SNI-162. September 1995-1999, Corps of Engineers, Los Angeles District.

San Clemente Island

Senior Project Director. Archaeological testing and evaluation of nine sites on San Clemente Island. September 1995-June 1997. Southwest Division - Naval Facilities Engineering Command, San Diego.

Emergency Data Recovery along Highway 49

Senior Project Director. Emergency Data Recovery along Highway 49 in Amador County, California. Directed data recovery excavations and co-authored report. May 2001 to December 2002, Caltrans.

The Griffith Energy Project

Senior Project Director. Directed the survey of 80 miles of 230 kV transmission lines in northern Arizona from the Peacock Mountains to the Colorado River. September 1999 to January 2000, Greystone Environmental Consultants.

Southern Trails Pipeline Project

Senior Project Director. Assisted in the write-up of the cultural resources survey of 75.5 discontinuous miles along the Southern Trails Pipeline through northern Arizona and southern California. August 1999 to September 1999, CH2M Hill and Questar Corporation.

Data Recovery at ORA-116

Senior Project Director. Assisted in the report writing, production, and editing phase of this data recovery project at a site located in Upper Newport Bay. February 1998 to 2002, Food and Drug Administration and Health and Human Services, and the U.S. Army Corps of Engineers, Los Angeles District.

Data Recovery at Antelope Hill

Senior Project Director. Participated in a multi-disciplinary research effort to mitigate previous damage to Antelope Hill. Research directed at the petroglyphs located on Antelope Hill and in the surrounding area. September 1996 to 2002, Wellton-Mohawk Irrigation and Drainage District.

Camp Pendleton Survey - 500 acres

Senior Project Director. Directed the survey and conducted shovel testing of nearly 500 acres on the U.S. Marine Corps base at Camp Pendleton. November 1997 to 1999, U.S. Army Corps of Engineers, Los Angeles District.

Otay Mesa Testing Project

Senior Project Director. Conducted test level investigations and authored report on a prehistoric site on Otay Mesa along the U.S./Mexico border. November 1997 to February 1998, U.S. Army Corps of Engineers, Los Angeles District.

Camp Pendleton Survey -10,000 acres

Senior Project Director. Directed the survey of nearly 10,000 acres on the U.S. Marine Corps base at Camp Pendleton and co-authored the final report. September 1996 to January 1998, U.S. Army Corps of Engineers, Los Angeles District.

NAGPRA Curation and Collection Management Services

Project Director. Conducting site visits at various Federal and State agencies across the western United States to document archaeological collections as mandated by the Native American Graves Protection and Repatriation Act. July 1995 to present, U.S. Army Corps of Engineers, St. Louis District.

Lower Colorado River survey. Directed fieldwork and co-authored report for 2800 acre survey on Bureau of Reclamation/Bureau of Land Management near Blythe, CA. May 1995 to September 1995, Bureau of Reclamation, Lower Colorado Region, Boulder City, Nevada.

REPORTS

2008 Southern California Edison Survey reports. Mr. Doolittle has submitted over 30 cultural resource reports for surveys conducted throughout Southern California. Reports cover operations and maintenance projects as well as Capital Improvement Projects and portions of proponents environmental assessments.

2008 *Environmental Baseline Survey, Enhanced Use Lease Property, Beale AFB, California*. Co-authored sections of the report submitted to AFCEE. December 2007 to March 2008.

2008 *Synthesis of Prehistoric Archaeology within Management Region 3 at Edwards Air Force Base, Kern and San Bernardino Counties, California*. Christopher J. Doolittle and Amy M. Holmes. Submitted January 2008 to Edwards AFB and the USACE, Sacramento.

2007 *Archaeological Survey Report, Southern California Edison Operations and Maintenance Program, American Mine Spill, San Bernardino County, California*. Co-authored with Susan Hogan-Conrad. Report submitted to SCE.

2007 *Archaeological Survey Report, Southern California Edison Operations and Maintenance Program, City of Wildomar, Tenaja Substation Survey, Riverside County, California*. Co-authored with Susan Hogan-Conrad. Report submitted to SCE.

2007 *Synthesis of Prehistoric Archaeology within Management Region 4 at Edwards Air Force Base, Kern and San Bernardino Counties, California*. Christopher J. Doolittle and Amy M. Holmes. Submitted March 2007 to Edwards AFB and the USACE, Sacramento.

- 2006 *Los Angeles Department of Water and Power Rights of Way in the Angeles National Forest*. Draft. Christopher J. Doolittle and Susan Hogan-Conrad. Prepared for LADWP. Submitted August 15, 2006.
- 2006 *Gila Bend Air Force Auxiliary Field: Intensive Archaeological Survey of 2,322 Acres on the Barry M. Goldwater Range East, Arizona*. Koral Ahmet, Christopher J. Doolittle, and Stephanie M. Whittlesey. Prepared for the 56th Range Management Office, Luke AFB.
- 2006 *Archaeological Damage Assessment of CA-PLA-272 (FS 05-17-57-02) in Martis Valley, Placer County, Tahoe National Forest, California*. Christopher J. Doolittle and Michael K. Lerch. Submitted to U.S. Army Corps of Engineers, Sacramento, CA.
- 2005 *Manned Ranges 3 and 4: Intensive Archaeological Survey of 6,252 Acres on Manned Ranges 3 and 4, Barry M. Goldwater Range East, Arizona*. Gabrielle Duff, Marcy Rockman, Stephanie M. Whittlesey, and Christopher J. Doolittle. Prepared for the 56th Range Management Office, Luke AFB, Arizona.
- 2005 *Cultural Resources Survey of Assessor's Parcel Number 075-320-01, -02, and -03, Ventura, California*. Kenneth M. Becker and Christopher J. Doolittle. Draft prepared for John Laing Homes, Ventura,
- 2005 *ETAC 2000: Intensive Archaeological Survey of 5,502 Acres on the East Tactical Range, Barry M. Goldwater Range East, Arizona*. Christopher J. Doolittle, Gabrielle Duff, Stephanie M. Whittlesey, and Vincent M. LaMotta. Prepared for the 56th Range Management Office, Luke AFB, Arizona.
- 2005 *STAC 2000: Intensive Archaeological Survey of 5,575 Acres on the South Tactical Range, Barry M. Goldwater Range East, Arizona*. Christopher J. Doolittle, Stephanie M. Whittlesey, Vincent M. LaMotta, Kenneth M. Becker, and Koral Ahmet. Prepared for 56th Range Management Office, Luke AFB, Arizona.
- 2005 *Cultural Resources Survey of an 80-acre parcel (APN 3096-311-01), in the City of Victorville, San Bernardino County, California*. Christopher Doolittle. Prepared for Lewis Operating Corp., Upland, CA.
- 2005 *Cultural Resources Survey of a John Laing Homes Property between Harbor Boulevard and the Southern Pacific Railroad Tracks, Ventura, California*. Christopher J. Doolittle. Prepared for John Laing Homes, Ventura, CA.
- 2004 *An Extended Phase I Study of CA-VEN-662, Port Hueneme, California*. Christopher J. Doolittle and Lance Wollwage. Prepared for John Laing Homes, Van Nuys, CA.
- 2004 *Susanville Road: Archival Research and Archaeological Survey, Lassen County, California*. Anne Q. Stoll and Christopher J. Doolittle. Submitted to the U.S. Army COE, Sacramento District.

2004 *Dove Cemetery: Significance Evaluation and Treatment Plan for CA-SLO-1892H, Atascadero, San Luis Obispo County, California.* Edited by Michael K. Lerch and Christopher J. Doolittle. Prepared for Bermant Development Company, Santa Barbara.

2004 *Field Summary Report for the NTAC 2004 Survey, Barry M. Goldwater Range, Arizona.* Christopher J. Doolittle. Prepared for the 56th RMO/ESM, Luke AFB

2004 *Damage Assessment of Four Rockshelter Sites on the Barry M. Goldwater Range, East Arizona.* Christopher J. Doolittle. Prepared for the 56th RMO/ESM, Luke AFB. Contract F02604-99-0002, Delivery Order 5001.

2004 *The Munitions Storage Area Survey: A Class III Archaeological Inventory and Evaluation of 274 Acres Adjacent to Luke Air Force Base, Arizona.* Christopher J. Doolittle, Scott Thompson, and Gabrielle Duff. Prepared for the 56th Civil Engineering Squadron, Luke AFB.

2003 *End-of-Fieldwork Report for an Intensive Class III Archaeological Inventory of Parcels adjacent to the Munitions Storage Area, Luke Air Force Base, Arizona.* Christopher J. Doolittle and Scott Thompson. Prepared for the 56th Civil Engineering Squadron, Environmental Flight, Luke AFB. Contract No. F02604-99-0-0002, Task Order 5027.

2003 *The Gila Bend Air Force Auxiliary Field Survey: A Class III Archaeological Inventory and Evaluation of 2,322 Acres on the Barry M. Goldwater Range, Arizona.* Koral Ahmet and Christopher J. Doolittle. Prepared for 56th RMO/ESMC, Luke AFB.

2003 *A Class III Archaeological Inventory Survey of Two Unmanned Threat Emitters (UMTE) Locations, Barry M. Goldwater Range, Arizona.* Christopher J. Doolittle. Prepared for the 56th RMO/ESMC, Luke AFB

2003 *Survey of Two F16 Crash Sites: A Class III Archaeological Inventory and Evaluation of 174 Acres on the Barry M. Goldwater Range.* Arizona Amelia Natoli and Christopher J. Doolittle. Prepared for the 56th RMO/ESMC, Luke AFB.

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ATTACHMENT 2

RECORDS SEARCH

*This information is Confidential and
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ATTACHMENT 3

CONTACT PROGRAM

*This information is Confidential and
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ATTACHMENT 4

PROJECT MAPS

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ATTACHMENT 5

DPR SITE FORMS

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ATTACHMENT 6

ARCHITECTURAL SURVEY REPORT

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