



# CALPINE CORPORATION

4160 DUBLIN BOULEVARD

SUITE 100

DUBLIN, CA 94568

925.557.2224 (M)

925.479.9560 (F)

May 2, 2011

Ms. Christina Stora  
Compliance Project Manager  
California Energy Commission  
1516 9<sup>th</sup> Street  
Sacramento, CA 95614

**RE: Response to Data Requests Nos. 1 - 5 Cultural Resources  
Grimes Pipeline Project Amendment 97-AFC-02**

Dear Ms. Stora:

On behalf of the Sutter Energy Center, please find attached the Grimes Pipeline Project's Response to Commission Staff Data Requests Numbers 1 through 5.

If you have any questions, please contact me at (925) 557-2238.

Sincerely,

Barbara McBride  
Western Regional Director, Environmental Health and Safety

## DOCKET

**97-AFC-2C**

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## **DATA REQUEST**

- 1. Please provide a description of the persons directly involved in and responsible for the preparation of the Inventory Report. Please make explicit the respective roles of each person**

## **DATA RESPONSE**

1. Gabriel Roark, M.A., was the principal investigator for the cultural resources inventory. Mr. Roark was responsible for and directly involved in determining the scope of efforts, requested the records search, conducted research, consulted with Native Americans (letter preparation, phone conversations, email correspondence, and field meeting), conducted field survey, and was principal author for report preparation.

Andrea Nardin, M.A., submitted the Native American Heritage Commission database request, prepared letters to historical societies, and assisted with report preparation.

Dylan Stapleton, M.A., assisted Mr. Roark during the first episode of fieldwork.

Jay Brigham Baker, B.A., assisted Mr. Roark during the second episode of fieldwork.

Resumes for these four staff are attached to this response.

## **DATA REQUEST**

- 2. Please provide, with reference to data in the project owner's amendment document and other reliable secondary data, discussions of the types of archaeological, historic, and ethnographic resources that one would anticipate finding in the area of potential effects (APE) for the proposed project amendment and discussions that compare and interpret the actual results of the project owner's inventory efforts to the anticipated results of those efforts. What should these various resource types look like out on the ground in the APE? What in fact did they look like? Were the results of the inventory efforts a surprise in any way? On the bases of these discussions, how well can the cultural resource base in the APE be said to be understood?**

## **DATA RESPONSE**

2. Cultural resource managers can develop expectations for the prehistoric or Native American archaeological record from a number of sources: archaeological survey and excavation reports, regional syntheses, geoarchaeological studies, historic maps and



documents, and ethnographic sources. Many of these types of sources were consulted during the cultural resources inventory for the Grimes Pipeline Project (project) Amendment (ICF International 2011:2-1 through 3-2; also see discussion below).

Archaeological studies—published and gray literature contract reports—are unevenly represented and sparse within a 5-mile radius of the proposed project. Nevertheless, sufficient information is available in these documents to generate expectations as to the range of cultural resources that may be found in the project area.

## **Native American Archaeological Resources**

### **Summary of Previous Studies**

Most archaeological studies in the project vicinity and the larger Sutter Basin area have concentrated along the Sacramento and Feather River levees. Large numbers of prehistoric village and burial sites, as well as more recently occupied ethnographic villages, have been identified on the Colusa County side of the Sacramento River as a result (Westwood 2005; White 2003). Jensen (1970) reported on 29 prehistoric archaeological sites, two of which he excavated, in and adjacent to the Sutter Buttes. An unfortunate aspect of these studies is that their distance from the project area and their dissimilar landform contexts (river floodplain and volcanic mountain) confound the straight-ahead generation of archaeological expectations for the project area. In the immediate project vicinity, Davy and Nachmanoff's (1999, as summarized in Foster Wheeler Environmental 1997) cultural resources inventory of the Sutter Energy Center provides information that bears on the types of prehistoric archaeological sites expectable in the project area.

Previous archaeological studies in the greater Sutter Basin area have additional value, however, for hypothesizing about the nature and distribution of the prehistoric archaeological record of the project area. Meyer and Rosenthal (2008), Westwood (2005), and White (2003) all address the effects of geomorphic processes on the structure of the archaeological record in the Sutter Basin and adjacent areas. A particular contribution of these three studies is the establishment of a regional baseline from which to assess the potential for buried prehistoric sites in a given project area.

The ethnographic record concerning the Nisenan and Patwin Indians also provide information that bears on late prehistoric settlement patterns, site distribution, and site types in the project vicinity (see citations in ICF International 2011:2-4-2-6 and *Discussions and Implications* below).

### **Discussion and Implications**

All previously recorded prehistoric archaeological sites in the project vicinity east of the Sacramento River are surface-manifested mound sites (CA-SUT-4, SUT-6, SUT-7, SUT-12, and SUT-13). Additionally, two previously recorded, surface-manifest mounds are located on the western side of the Sacramento River near Grimes (CA-COL-7 and COL-177/H). These sites all ranged between 23 and 31 meters (m) in diameter, which are typical dimensions for Sacramento Valley mounds. The site records for these sites are characterized as sketchy and incomplete. Nevertheless, the records show that surface-



manifested mounds contain a variety of artifacts and features: human burials, clam shell, midden, stone pendants, arrow points, historic-period trade beads, groundstone, debitage, and historic artifacts. (Foster Wheeler Environmental 1997:8.3-15.)

Ethnographic data (see ICF International 2011: 2-4–2-6) suggest that mound sites represent occupation sites or even the remnants of larger villages. Descriptions of River Patwin villages in particular hint at sizable and complex archaeological remnants, as no fewer than six structure types are known among the River Patwin: domiciles, sweat houses, dance houses, granaries, menstrual huts, and fish weirs or fishing platforms; dance and sweat houses often measured in excess of 15 m along their long axes. (White 2003:15–17).

Beyond village and occupational sites, ethnographic and archaeological work in the region posits other potential site types for the project vicinity: seasonal camps, fishing stations, cemeteries, trading sites, ceremonial grounds, river crossings, food processing and procurement sites, and battlegrounds (Jensen 1970:43–44; Wilson and Towne 1978:389). The majority of the project area, however, was seasonally inundated by floodwaters from the Sacramento and Feather rivers, creating an environment ill-suited to long-term habitation (Foster Wheeler Environmental 1997:Figure 8.15-1). On the other hand, it is likely that activities with less archaeological visibility and obtrusiveness transpired in the project area. Such activities would include fishing in the backwater lakes that characterized most of the project area, as slow-water fish remains are well-represented in prehistoric sites (ICF International 2011:2-2; White 2003:261–262). Fishing sites in the project area might be represented by stone or fired clay net sinkers and incidental tools and minute quantities of debitage. Cordage from fishing nets may rarely be preserved. Ceremonial grounds and river crossings are likely to be low visibility and obtrusiveness.

It is now well known that the regional surface archaeological record is biased toward archaeological sites dating to the last 3,000 years; older sites are buried under fill and alluvial sediments (ICF International 2010:6-1, 6-2; Westwood 2005:44–45; White 2003:218–219). In the project area, buried prehistoric sites—if extant—are expected to occupy Shanghai soil units at a depth of 0.7–1.6 m below the present ground surface (ICF International 2011:2-2). Buried archaeological deposits would likely manifest along the full spectrum of open-air sites, considering work carried out at a handful of buried archaeological deposits near the city of Colusa (White 2003). Sites CA-COL-158, COL-245/H, COL-246/H, and COL-247 contained flaked stone tools, groundstone, debitage, shell artifacts, faunal bone and tools, hearths, structural remnants, midden, and human remains. Any buried archaeological sites in the project area could conceivably contain any or all of these types of material.

The surface survey described in ICF International (2011:3-3) is sufficient to have located prehistoric mound sites (whether leveled or mounded), had they been extant, as the transect interval employed during the survey was smaller (15 m) than the diameter of previously recorded sites in the area (23 to 31 m). Furthermore, ground surface visibility at the time of survey was good to excellent, or else improved at 20-m intervals via



surface scrapes (ICF International 2011:3-3). It is possible that nothing more than fishing and hunting occurred prehistorically in the project area, accounting for the negative survey results. It is also possible that agricultural practices have obscured ephemeral archaeological deposits or even larger villages through land leveling and plowing sites under. Given the prehistoric hydrological conditions in the project area, the lack of prehistoric finds during survey does not appear to be unusual or a consequence of inappropriate identification efforts.

### **Historic Built Environment and Archaeology**

The historic context for the region and previous cultural resource inventories suggest that historic-era built environment and archaeological resources in the project area would be of four broad types: roads, farmsteads, water conveyance features, and refuse scatters (Davy and Nachmanoff 1999, as summarized in Foster Wheeler Environmental 1997:8.3-15, 8.3-16; ICF International 2011:2-6, 2-7; Jones & Stokes 2000:5–10). Roads, farmsteads, and water conveyance features would generally be readily visible and obtrusive via examination of historic maps as well as pedestrian survey. The location of domestic or agricultural-related refuse scatters could in large measure be predicted on the basis of mapped or field-identified farmsteads, although historic refuse scatters occur in a variety of contexts. The close-interval transects walked by ICF International (2011) are well-suited to the identification of historic refuse deposits and other historic features; their absence from the project area does not appear to be caused by survey bias. Historic roads, farmsteads, and water conveyances were observed during ICF's survey of the project area but were not recorded because the proposed project excludes the resources from the project area by project design (horizontal directional drilling under roads and ditches).

### **DATA REQUESTS**

3. Please provide a discussion of the role of the subject ditch in the inventory effort for the proposed project amendment. Please include in that discussion answers to the following questions:

- Where is the ditch in relation to the proposed pipeline alignment, and is it representative of the complete complement of landforms in the APE?
- How deep was the ditch, and was this depth equal to or greater than the proposed depth of ground disturbance for the project amendment?
- What was the condition of the side banks, and did the surveyors shovel-scrape the banks to observe the local stratigraphy?

4. Please provide formal descriptions of the lithostratigraphic units observed in the banks of the subject ditch and a discussion of the relevance of the observed units to the stratigraphy of the APE. Please also include any profiles drawn or photographs taken to support this discussion.



### **DATA RESPONSE**

3. The ditch examined by ICF International (2011:Figure 2) extends through Sections 4, 5, 8, and 9, paralleling the proposed pipeline from Grimes Station 0.5 mile (mi) north, thence 0.30 mi east. The ditch's parallel course is offset from the area of potential effects by 45 m along the northern portion (east–west orientation) of the ditch to 31 m along the north–south portion of ditch (ICF International 2011:Appendix A, Sheets 6–8). The ditch is 1.8 m deep, whereas installation of the proposed pipeline will entail excavation to a depth of 1.8–2.1 m below ground surface (ICF International 2011:1-5). Therefore, if excavation is restricted to 1.8 m below ground surface, examination of the ditch sidewalls provides a cross-section of the entire vertical element of the APE along which the ditch extends. On the other hand, the bottom 0.3 m of the vertical aspect of the APE was not examined if excavation extends to 2.1 m below ground surface.

4. The sidewalls of the ditch were free of caliche or other visible encrustations. ICF did not scrape the sidewalls. Profile drawings, photographs, and formal lithostratigraphic characterization of the sidewalls were not made due to the homogenous profile presented by the sidewalls.

### **DATA REQUEST**

5. Please provide a strikeout version of the proposed modifications to the cultural resources conditions of certification. Annotations that justify the strikeouts would facilitate our further consultation.

### **DATA RESPONSE**

5. See below. Changes were made to remove reference to agencies that are not involved in the proposed Project changes: Western Area Power Administration and the State Historic Preservation Officer. In addition, inapplicable project components from the original AFC are removed. Monitoring proposals were modified to focus on the Grimes Station vicinity and to comprise construction monitoring by a tribal monitor rather than an archaeologist.

## **Cultural Resources**

As described in Section 3.2, *Cultural Resources*, of this Amendment, the original Conditions of Certification will be implemented as part of the Project to ensure that buried cultural resources are adequately documented and avoided. Calpine is requesting that the following cultural resources Conditions of Certification be modified to fit the Project changes.

**CUL-1** Prior to the start of project construction (defined as any construction-related vegetation clearance, ground disturbance and preparation, and site excavation activities), the project owner shall provide the California Energy Commission Compliance Project Manager (CPM) ~~and Western~~ with the name(s) and qualifications of its designated cultural resource specialist and mitigation team members. The designated cultural resource



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specialist shall be responsible for implementing all the cultural resource Conditions of Certification, using qualified personnel to assist him or her in project-related field surveys, monitoring, data collection and artifact recovery, mapping, mitigation, analysis of recovered cultural resources and data, or report preparation. After CPM and ~~Western~~ approval of the Cultural Resource Monitoring and Mitigation Plan (described below in condition CUL-3), the designated cultural resource specialist and team shall be available to implement the mitigation plan prior to, and throughout construction of the project.

Protocol: The project owner shall provide the CPM and ~~Western~~ with a resume or statement of qualifications for its designated cultural resources specialist and mitigation team members. The resume(s) shall include the following information:

- 1) The resume for the designated cultural resource specialist shall demonstrate that the specialist meets the following minimum qualifications: a graduate degree in archaeology, anthropology, California history, or cultural resource management; at least three years of cultural resource mitigation and field experience in California, including at least one year's experience leading cultural resource field surveys; leading site mapping and data recording; marshalling equipment necessary and leading archaeological resource recovery operations; preparing recovered materials for analysis and identification; recognizing the need for appropriate sampling and/or testing in the field and in the lab; directing the analyses of mapped and recovered materials and data; completing the identification and inventory of recovered cultural materials; and the preparation of appropriate reports to be filed with the receiving curation repository, the appropriate regional information center(s), ~~the State Historic Preservation Officer, Western~~ and the CPM.
- 2) The resume for the designated cultural resource specialist shall include a list of specific projects the specialist has previously worked on; the role and responsibilities of the specialist for each project listed; and the names and phone numbers of contacts familiar with the specialist's work on these referenced projects.
- 3) If additional personnel will be assisting the designated cultural resource specialist in project-related field surveys, monitoring, data and artifact recovery, mapping, mitigation, material analysis, or report preparation, the project owner shall also provide names, addresses, and resumes for these mitigation team members.
- 4) If the CPM and ~~Western~~ determine that the qualifications of the proposed cultural resource specialist are not in concert with the above requirements, the project owner shall submit another individual's name and qualifications for consideration.
- 5) If the previously approved, designated cultural resource specialist is replaced prior to completion of project mitigation, the project owner shall obtain CPM and ~~Western~~ approval of the new designated cultural resource specialist by submitting to the CPM and ~~Western~~ the name and qualifications of the proposed replacement specialist, at least ten (10) days prior to the termination or release of the preceding designated cultural resource specialist.

Verification: At least ninety (90) days prior to the start of construction on the project, the project owner shall submit the name and resume for its designated cultural resource specialist to the CPM and ~~Western~~ for review and written approval. Thirty (30) days prior to start of construction, the project owner shall confirm in writing to the CPM, ~~who will notify Western~~, that the previously approved designated cultural resource specialist and the team of assistants are prepared to implement the monitoring and mitigation measures for cultural resources, as described in the Cultural Resources Monitoring and Mitigation Plan, prepared per condition CUL-3, below.

At least ten (10) days prior to the termination or release of a designated cultural resource specialist, the project owner shall obtain CPM and ~~Western~~ approval of the new designated cultural resource specialist by submitting to the CPM and ~~Western~~ the name and resume of the proposed replacement specialist.



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**CUL-2** Prior to the start of project construction, the project owner shall provide the designated cultural resource specialist and the CPM with maps and drawings for the ~~Sutter Power Plant project~~ **proposed Project changes**. The final center lines and right-of-way boundaries shall be provided on 7.5 minute quad maps, and the location of all the various areas where surface disturbance may be associated with project-related access roads, storage yards, laydown sites, ~~pull sites, pump or pressure stations, Sutter Bypass switching station, onsite switchyard, electrical tower or pole footings,~~ etc. Where the potential for impacts to significant cultural resources has been identified, the designated cultural resource specialist may request, and the project owner shall provide, enlargements of portions of the 7.5 minute maps presented as a sequence of strip maps for the linear facility routes. The strip maps shall show mile-post markers and the detailed locations of proposed access roads, storage or laydown sites, ~~tower or pole footings,~~ and any other areas of disturbance associated with the construction and maintenance of linear facilities.

Verification: At least ninety (90) days prior to the start of construction on the project, the project owner shall provide the designated cultural resource specialist, ~~and the CPM, and Western~~ with final maps at appropriate scale(s) and drawings for all project facilities. Copies of all requests for more detailed maps by the designated cultural resource specialist shall also be submitted in writing to the CPM. ~~There is no need to include Western in this submittal.~~

**CUL-3** Prior to the start of project construction, the designated cultural resource specialist shall prepare a draft Cultural Resources Monitoring and Mitigation Plan to identify general and specific measures to minimize potential impacts to significant cultural resources. The CPM will review, and must approve in writing, the draft Cultural Resources Monitoring and Mitigation Plan. ~~The CPM will provide copies of the draft plan to Western so that Western may submit this plan to the SHPO for concurrence prior to the project owner taking any actions under the approved monitoring and mitigation plan.~~ Protocol: The Cultural Resources Monitoring and Mitigation Plan shall include, but not be limited to, the following elements and measures:

- a. A discussion of the sequence of project-related tasks, such as any final pre-project surveys, fieldwork, flagging or staking; construction monitoring; mapping and data recovery; preparation for recovery of cultural resources; preparation of recovered materials for analysis, identification, and inventory; preparation of preliminary and final reports; and preparation of materials for curation.
- b. An identification of the person(s) expected to assist with each of the tasks identified in a, above, and a discussion of the mitigation team leadership and organizational structure, and the inter-relationship of tasks and responsibilities.
- c. Where sensitive areas are to be monitored during construction or avoided during operation, the designated cultural resource specialist shall identify measures such as flagging or fencing to prohibit or otherwise restrict access to sensitive resource areas. The discussion should address how these measures will be implemented prior to the start of construction and how long they will be needed to protect the resources from project-related effects.
- d. Where the need for monitoring of project construction activities has been determined by ~~Western~~, the designated cultural resource specialist, in consultation with the CPM, will establish a schedule for the monitor(s) to be present. If the designated cultural resource specialist determines that the likelihood of encountering cultural resource or sites in certain areas is slight, monitoring may be discontinued in that location.
- e. If cultural resources are encountered are exposed during project-related grading, excavation, augering, and/or trenching, the designated cultural resource specialist shall have the authority to halt or redirect construction in the immediate vicinity of the find



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until the specialist can determine the significance of the find. The designated cultural resource specialist shall act in accordance with the following procedures:

- The project owner, or designated representative, shall inform the CPM and ~~Western~~ within one working day of the discovery of any potentially significant cultural resources and discuss the specific measure(s) proposed to mitigate potential impacts to these resources.
  - The designated cultural resource specialist, representatives of the project owner, ~~Western~~, and the CPM shall confer within 5 working days of the notification of the CPM, if necessary, to discuss any mitigation measures already implemented or proposed to be implemented, and to discuss the disposition of any finds.
  - The SHPO will be consulted on potential eligibility, effect, and proposed mitigative measures. As the federal lead agency, ~~Western~~ the U.S. Army Corps of Engineers will initiate the consultations with the SHPO.
  - All required data recovery and cultural resource impact mitigation shall be completed as expeditiously as possible.
- f. All isolates encountered will be recorded and mapped; all lithic scatters and/or cultural resource sites will be recorded and mapped and all diagnostic artifacts will be collected for analysis; and all recovered cultural resource materials will be prepared and delivered for curation into a retrievable storage collection in a public repository or museum which meets the Title 36 Code of Federal Regulations 79 standards for the curation of cultural resource materials.
- g. The identification of the public institution that has agreed to receive any maps and data, records, reports, and any cultural resource materials recovered during project-related monitoring and mitigation work. Also include a discussion of any requirements or specifications for materials delivered for curation and how they will be met. The name and phone number of the contact person at the institution shall be included as well.

Verification: At least sixty (60) days prior to the start of construction on the project, the project owner shall provide the CPM and ~~Western~~ with a copy of the draft Cultural Resources Monitoring and Mitigation Plan prepared by the designated cultural resource specialist. The CPM and ~~Western~~ will provide written approval or disapproval of the proposed Cultural Resources Monitoring and Mitigation Plan within 15 days of receipt of the submittal. If the draft plan is not approved, the project owner, the designated cultural resource specialist, and the CPM, ~~and Western~~ shall meet to discuss comments and work out necessary changes.

**CUL-4** Prior to the start of project construction, the project owner shall conduct a preconstruction reconnaissance and staking in all areas expected to be affected by construction and operation of the proposed project and its associated linear facilities. The staking of the linear facilities shall use the final design, centerlines, rights-of-way, and mile posts delineated in the construction drawings and maps prepared under condition of certification CUL-2. The designated cultural resource specialist will use the mile post stakes and boundary markers to identify sensitive areas with the potential to produce cultural resources and for implementation of specific measures, as described in condition CUL-8, below.

Verification: A least thirty (30) days prior to the start of construction, the project owner will complete a pre-construction reconnaissance and staking of the post miles and right-of-way boundaries in all areas expected to be affected by construction and operation of the proposed project and its associated linear facilities.

**CUL-5** Prior to the start of construction on the project, the designated cultural resource specialist shall prepare an employee training program. The designated cultural resource



specialist shall submit the training program to the CPM and Western for review and written approval.

Protocol: The training program will address the potential to encounter cultural resources during project-related site preparation and construction activities, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources. The training program shall also include the set of reporting procedures that workers are to follow if any cultural resources are encountered during project activities. This training program may be combined with other training programs prepared for paleontological and biological resources, hazardous materials, or any other areas of interest or concern.

Verification: At least thirty (30) days prior to the start of construction on the project, the project owner shall submit to the CPM and Western for review, comment, and written approval, the proposed employee training program and set of reporting procedures the workers are to follow if cultural resources are encountered during project construction. ~~Western may be required to submit this training plan to the SHPO for concurrence as part of the consultation process.~~

The CPM and Western shall provide written approval or disapproval of the employee training program and set of procedures within 15 days after receipt of the submittal. If the draft training program is not approved, the project owner, the designated cultural resource specialist, and the CPM, ~~and Western~~ shall confer as needed to achieve any necessary changes.

**CUL-6** Prior to the start of construction, and throughout the project construction period as needed for all new employees, the project owner and the designated cultural resource specialist shall provide the approved training to all project managers, construction supervisors, and workers who operate ground-disturbing equipment. The project owner and construction manager shall provide the workers with the approved set of procedures for reporting any cultural resources that may be discovered during project-related ground disturbance.

Verification: Prior to the start of construction, and throughout the project construction period as needed for all new employees, the project owner and the designated cultural resource specialist shall present the CPM ~~and Western~~-approved training program on the potential for project impacts to sensitive cultural resources. The training shall include a set of reporting procedures for cultural resources encountered during project activities. The project owner shall provide documentation in the Monthly Compliance Report to the CPM that the employee training and the set of procedures have been provided to all project managers, construction supervisors, and to all workers.

**CUL-7** Throughout the project construction period, the project owner shall provide the designated cultural resource specialist with a current schedule of anticipated weekly project activity and a map indicating the area(s) where construction activities will occur. The designated cultural resource specialist shall consult daily with the project superintendent or construction field manager to confirm the area(s) to be worked on the next day(s).

Throughout the monitoring and mitigation phase of the project, the designated cultural resource specialist shall maintain a daily log of monitoring and mitigation activities carried out by the specialist and members of the cultural resource mitigation team. The designated cultural resource specialist shall prepare summary reports on monitoring activities, any cultural resource finds and recovery efforts, and the progress or status of the resource monitoring, mitigation, preparation, identification, and analytical work being conducted for the project. Copies of these summaries shall be included in the Monthly Compliance Reports filed with CPM by the project owner. The CPM will forward copies of these summary reports to Western. The designated cultural resource specialist may informally discuss the cultural



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resource monitoring and mitigation activities with their Energy Commission technical counterpart at any time.

Verification: The project owner shall include, in the Monthly Compliance Reports to the CPM, a summary of the daily logs prepared by the designated cultural resource specialist; ~~the CPM will forward copies to Western.~~

**CUL-8** The designated cultural resource specialist or his or her designee shall be present at the construction site at all times when construction-related grading, excavation, trenching, and/or augering occurs in areas that lie within the proposed Grimes Station Site, the vicinity of the proposed Grimes Station Site enclosed by a riparian corridor, and the Below Ground Hot Tap and Valve, the natural river levee zone (found to be generally associated with the Shanghai-Nueva-Columbia soils group). Project areas where the natural levee zones may be found include the switchyard site, and portions of the 16-inch and the 4-inch natural gas pipeline routes. Using the mile posts and boundary stakes placed by the project owner, the designated cultural resource specialist or his or her designee shall monitor construction in the proposed Grimes Station Site, the vicinity of the proposed Grimes Station Site enclosed by a riparian corridor, and the Below Ground Hot Tap and Valve, route of the 16-inch natural gas pipeline, between Mile Post (MP) 8.97 to 9.51; MP 10.42 to MP 11.41; and MP 12.1 to 13.70. For the route of the 4-inch natural gas pipeline, areas to be monitored full-time are from MP 0.00 to MP 1.60. Other sections of the linear facility routes may be monitored as deemed necessary in the Cultural Resources Monitoring and Mitigation Plan by the CPM and Western.

Verification: The project owner shall include, in the Monthly Compliance Reports to the CPM, a summary of the daily logs prepared by the designated cultural resource specialist; ~~the CPM will forward copies to Western.~~

**CUL-9** If buried human remains are encountered during project-related grading, excavation, augering, and/or trenching, the construction crew shall halt or redirect construction in the immediate vicinity of the find and immediately contact the county coroner and the designated cultural resource specialist. If the coroner determines that the find is of Native American origin, the coroner shall notify the Native American Heritage Commission (NAHC) to request a determination of "most likely descendant". The NAHC is required to notify the descendant(s) and request that they inspect the burial and make recommendations for treatment or disposal. ~~If Native American remains are encountered on federally managed land (within the Sutter National Wildlife Reserve), the US Fish and Wildlife Service is required to follow the procedures of the Native American Graves Protection and Repatriation Act, to repatriate the remains.~~

Verification: The designated cultural resource specialist shall notify the County Coroner, the project owner and the CPM, and Western if any buried human remains are encountered during project construction activities.

**CUL-10** The project owner, through the designated cultural resource specialist, shall ensure the recovery, preparation for analysis, analysis, identification and inventory, the preparation for curation, and the delivery for curation of all significant cultural resource materials encountered and collected during the monitoring, data recovery, mapping, and mitigation activities related to the project.

Verification: The project owner shall maintain in its compliance files, copies of signed contracts or agreements with the designated cultural resource specialist and other qualified research specialists. These specialists will ensure the necessary recovery, preparation for analysis, analysis, identification and inventory, and preparation for curation of all significant cultural resource materials collected during monitoring, data recovery, mapping, and mitigation activities for the project. The project owner shall keep these files on-site and available for periodic audit by the CPM, for a period of at least two years after completion of the approved Final Cultural Resources Report.



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**CUL-11** The project owner shall ensure preparation of a Preliminary Cultural Resources Report following completion of data recovery and site mitigation work. The preliminary report is to be prepared by the designated cultural resource specialist and submitted to the CPM and Western for review and written approval. ~~Western will provide copies of the preliminary report to the SHPO.~~

Protocol: The preliminary report shall include (but not be limited to) preliminary information on the survey report(s), methodology, and recommendations; site records and maps; determinations of significance; data recovery and other mitigation activities; discussion of possible results and findings of any analysis to be conducted on recovered cultural resource materials and data; proposed research questions that may be answered, or that may have been raised by the data from the project; related information such as maps, diagrams, charts, photographs and other appropriate materials; and an estimate of the time needed to complete the analysis of recovered cultural resource materials and prepare a final report. ~~As the Federal lead agency, Western will provide a standard report format to be followed by the designated cultural resource specialist.~~

If no cultural resource materials are recovered during project-related construction activities, the approved preliminary report shall also serve as the final report and shall be filed with appropriate entities, as described in conditions CUL-13 and CUL-14.

Verification: Within ninety (90) days following completion of the data recovery and site mitigation work, the project owner shall submit a copy of the Preliminary Cultural Resources Report to the CPM and Western for review, comment, and written approval.

**CUL-12** The project owner will ensure preparation of a Final Cultural Resources Report by the designated cultural resource specialist, if cultural resource materials are found and recovered during project-related monitoring and mitigation. This final report shall be submitted to the CPM and Western for review and written approval.

Protocol: The final report shall include (but not be limited to) the survey report(s), methodology, and recommendations; site records and maps; description and inventory list of recovered cultural resource materials; determinations of sensitivity and significance; summary of data recovery and other mitigation activities; results and findings of any special analyses conducted on recovered cultural resource materials and data; research questions answered or raised by the data from the project; and the name and location of the public institution receiving the recovered cultural resource materials for curation. ~~As the lead federal agency, Western will provide a standard report format to be followed by the designated cultural resource specialist.~~

Verification: The project owner shall submit a copy of the draft Final Cultural Resources Report to the CPM and Western for review, comment, and written approval. The report shall be submitted to the CPM and Western within ninety (90) days following completion of the analysis of the recovered cultural materials and preparation of related information. The project owner shall submit a copy of the final cultural resources report to the CPM and Western for review and written approval.

**CUL-13** The project owner shall ensure that ~~Western~~ the USACE is provided with an original (or an original-quality) copy of the approved Final Cultural Resources Report, and other copies necessary to submit to the public institution receiving the recovered data and materials for curation, to the SHPO, and to the appropriate regional archaeological information center(s). A legible copy of the approved Final Cultural Resource Report shall be filed with the CPM, with a request for confidentiality, if needed to protect any sensitive resources or sites.

The report copy sent to the curating institution and to the appropriate regional information centers shall include the information required by 36 Code of Federal Regulations 79 and the regional archaeological information centers.



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Grimes Pipeline Project (97-AFC-2)

Verification: The project owner shall maintain in its compliance files, copies of all documentation related to the filing of the original materials and the approved final cultural resources report with the public institution receiving the recovered data and materials for curation, with the appropriate regional archaeological information repository, and the SHPO. If no cultural resource materials were recorded or recovered, then the approved Preliminary Cultural Resources Report shall serve as the final report and is to be filed with these same agencies.

**CUL-14** Within thirty (30) days following filing of the Final Cultural Resources Report with the CPM, ~~Western~~, and the appropriate entities, the project owner, through the designated cultural resource specialist, shall deliver for curation all cultural resource materials collected during data recovery and mitigation for the project. The materials shall be delivered for curation into a public repository which meets the U.S. Secretary of Interior requirements for the curation of cultural resource materials.

Verification: The project owner shall maintain in its project history or compliance files, copies of signed contracts or agreements with the museum(s), university(ies), or other appropriate public repository(ies) by which the project owner has provided for delivery for curation of all the cultural resource materials collected during data recovery and site mitigation for the project.

### References Cited

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Foster Wheeler Environmental

1997 *Application for Certification for Sutter Power Plant Project*. December. Foster Wheeler Environmental. Submitted to California Energy Commission, Sacramento, California.

ICF International

2010 *Cultural Resources Inventory Report for the Central Valley Natural Gas Storage Project, Colusa County, California*. Draft. February. ICF International, Sacramento, California. ICF 01099.07. Prepared for Central Valley Gas Storage, Lisle, Illinois.



- 2011 *Cultural Resources Inventory Report for the Grimes Pipeline Project, Sutter County, California*. February. ICF International, Sacramento, California. ICF 00776.10. Prepared for Calpine Construction Finance Company, Dublin, California, and CPN Pipeline Company, Rio Vista, California.

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- 1970 Notes on the Archaeology of the Sutter Buttes, California. In *Papers on California and Great Basin Prehistory*, edited by Eric W. Ritter, Peter D. Schulz, and Robert Kautz, pp. 27–64. Publication 2. Center for Archaeological Research at Davis, University of California, Davis.

Jones & Stokes

- 2000 *Cultural Resources Inventory and Evaluation on the Phase II Lower Butte Creek–West Side Channel Project, Sutter County, California*. Final. December. Jones & Stokes, Sacramento, California. J&S 99-348. Prepared for Montgomery Watson, Sacramento, California. On file, Northeast Information Center, California Historical Resources Information System, Chico.

Meyer, Jack, and Jeffrey S. Rosenthal

- 2008 *A Geoarchaeological Overview and Assessment of Caltrans District 3: Cultural Resources Inventory of Caltrans District 3 Rural Conventional Highways*. April. Far Western Anthropological Research Group, Davis, California. Submitted to North Region, District 3, Office of Environmental Management, California Department of Transportation, Marysville.

Westwood, Lisa D.

- 2005 *Cultural Resource Investigation for the Colusa Subreach Planning, Volume I of II, Glenn and Colusa Counties, California*. January 14. Reports 52. Archaeological Research Program, California State University, Chico. Prepared for The Nature Conservancy, Chico, California.

White, Gregory G.

- 2003 *Testing and Mitigation at Four Sites on the Level(3) Long Haul Fiber Optic Alignment, Colusa County, California*. May 15. Report 42. Archaeological Research Program, California State University, Chico. Prepared for Kiewit Pacific, Concord, California.

Wilson, Norman L., and Arlean H. Towne



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Handbook of North American Indians, Vol. 8, William C. Sturtevant, general  
editor, Smithsonian Institution, Washington, D.C.
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# Andrea Nardin

## Bioarchaeologist

Andrea Nardin is an archaeologist with more than ten years of experience in archaeology with an emphasis in bioarchaeology. She has participated in archaeological surveys and excavations in California, Utah, Great Basin, Ohio, Belize and the Middle East. Andrea has extensive laboratory analysis and supervisory experience and has special training in human osteology, paleopathology, and dental analysis. She also has an extensive background in preparing, curating, and managing archaeological collections. She has also conducted archaeological surveys, excavation and monitoring for a number of large, long and short-term projects. She meets the Secretary of the Interior's guidelines for a professional archaeologist.

## Project Experience

### Biological and Cultural Surveys—Big Sandy Rancheria, Fresno, California

Managed field excavations and laboratory analysis of human remains for the proposed Big Sandy Rancheria casino site near Fresno, California. The excavation was conducted to evaluate the site for California Register of Historical Resources and NRHP eligibility. Worked in conjunction with the Bureau of Indian Affairs preparing NAGPRA documents and publications for the findings and repatriation of human remains.

### North Connector Cultural Resources Monitoring—Solano Transportation Authority, Solano County, California

Field team leader for recovery of inadvertent discovery of human remains during monitoring of construction activities. The North Connector project is a Caltrans project for expansion of I-80 and I-680 access.

### Podesta School Construction Site Archaeological Review of Bone Discovery—Lodi Unified School District, Lodi, California

Responsible for the field excavation of inadvertent discovery of human remains for the Lodi Unified School District. Managed and analyzed osteological collections in accordance with NAGPRA protocols for repatriation.

## Education

MA, Anthropology, Ohio State University, 2004

BA, Anthropology, University of California, Davis, 2001

## Special Training

Bioarchaeology, paleopathology (Ohio State University)

Museum collections preparation, curation and management (University of California, Davis)



#### Gryphon Gold Corporation Borealis Mine Western Pediment Project— Knight Piesold, Mineral County, Nevada

Field Archaeologist. Conducted a Class III cultural resources inventory of 160 acres along the western slopes of the Wassuk Range within the jurisdiction of the BLM Carson City field office, in compliance with Section 106 of the NHPA.

#### Owens Lake Dust Mitigation Program Archaeological Testing, Evaluation, Data Recovery, and Monitoring— Los Angeles Department of Water and Power, Inyo County, California

Field archaeologist and laboratory supervisor for testing, evaluation and data recovery for multiple sites on the Owens dry lake bed for CH2M Hill and the Los Angeles Department of Water and Power in support of the 2003 Owens Valley PM10 Planning Area Demonstration of Attainment State Implementation Plan, implemented EIR/EIS mitigation for Section 106 (BLM lands) and CEQA (California State Lands Commission lands) compliance. Prepares and manages all archaeological collections from multiple studies associated with this project. Provides ongoing archaeological monitoring during construction phases of the program.

#### Cypress Bridge Replacement—Caltrans District 2, Shasta County, California

Field archaeologist and human osteologist for Section 106-related testing and evaluation of known archaeological site and project area footprint for the Cypress Avenue Bridge Replacement Project.

#### Bear River and UP Interceptor Canal Levees Improvement Project— HDR Engineering, Yuba County, California

Field archaeologist and human osteologist for Section 106-related testing and evaluation of known archaeological site and project area footprint for the Three Rivers Levee Improvement Authority. Conducted laboratory analysis of human remains prior to repatriation.

#### Lower Northwest Interceptor Mitigation Monitoring—Montgomery Watson Harza Americas Inc., Sacramento County, California

Provided full time archaeological compliance monitoring for the excavation and installation of a sewer main in Sacramento County. Responsible for archaeological presence-absence testing by obtaining soil samples at regular intervals during construction. Maintained detailed monitoring logs.



### UDOT I-15 Corridor Study—Parsons Brinckerhoff, Inc., Salt Lake and Utah Counties, Utah

Field archaeologist on Class III Inventory for compliance with Section 106 of the NHPA for Parsons Brinckerhoff and UDOT. Inventory totals 120 linear miles including the length of I-15 in Utah county and proposed commuter rail and light rail lines (in progress).

### Kyle Canyon Study—Forest Service, Humboldt-Toiyabe National Forest, Nevada

Field archaeologist on multiple inventories totaling over 2,000 acres within the Spring Mountains National Recreation area for the Forest Service. Archaeological mitigation monitor for the drilling and installation of fiber optic cable near National Register-eligible archaeological sites.

## Prior Experience

### Far Western Anthropological Research Group—Davis, California

- Gold Butte Land Transfer—BLM, Las Vegas Field Office, Clark County, Nevada. Crew member, completed 30 days of survey, testing and evaluation.
- Vidler Water Pipeline Project—Vidler Water, Washoe County, Nevada. Crew member, 45 days of survey, testing and evaluation.
- Reservoir Inventories—Southern California Edison, Fresno, Inyo and Mono Counties, California. Crew member, 20 days of survey, testing and evaluation.
- Ely Power Station Project—Nevada Power, White Pine County, Nevada. Crew member, 14 days of testing and evaluation.
- Ivanpah Airport Study—AECOM, Clark County, Nevada. Crew Member, 10 days of survey and site testing.

### Assistant Bioarchaeologist and Laboratory Manager—Jabal Hamrat Fidan Archaeology Project, Southern Jordan

Responsibilities included supervision and teaching a group of 45 students during excavation, identification, reconstruction, aging, sexing, and analysis of pathological conditions of an Iron Age cemetery population. Responsible for managing osteological collections excavated during the project.

### Laboratory Assistant, Research Assistant—Ohio State University, Columbus, Ohio

Identified and reconstructed human remains for various archaeological projects performed by Ohio State University.



Developed and maintained two bioarchaeological dental databases for research use.

**Field Archaeologist—Peter's Site Bioarchaeology Project, the Ohio State University**

Excavated Peter's Site, a prehistoric cemetery site in Pickaway County, Ohio. Reconstructed, analyzed, and catalogued human remains recovered during the project.

**Laboratory Assistant—University of California, Santa Cruz**

Conducted carbon and nitrogen isotope analysis of human remains from archaeological collections.

**Research Assistant—Museum of Anthropology, University of California, Davis**

Prepared archaeological collections containing human remains in accordance with the Curation of Federally-Owned and Administered Archeological Collections (36 CFR Part 79), under a NAGPRA grant. Organized archaeological and ethnographic museum collections for research purposes.

**Field, Laboratory, and Mapping Technician—Bodega Bay Archaeology Project, University of California, Davis**

Collected survey data using a Topcon GTS-802 total station and generated maps using Foresight software. Catalogued and prepared artifacts from coastal hunter-gatherer site in Northern California.

**Assistant Researcher—Center for Advanced Information Technology, University of California, Davis**

Researched and recommended software to UC Davis faculty and staff. Prepared instructional presentations and publications on new software.



## Dylan Stapleton, MA, RPA

### Archaeologist

Dylan Stapleton is an archaeologist who conducts cultural resources investigations for projects involving CEQA and Section 106 of the NHPA. He provides exceptional implementation of archaeological monitoring programs, archaeological surveys and excavations, archival research, and impact analyses.

### Project Experience

#### I-5/Cosumnes River Boulevard Interchange Project—City of Sacramento, California

Field archaeologist for analysis of an 880-acre study area (slated for the extension of Cosumnes River Boulevard to I-5) to comply with Section 106 of the NHPA and CEQA.

#### Freeport Regional Water Project—Freeport Regional Water Authority, Sacramento and San Joaquin Counties, California

Responsible for monitoring Section 106 and CEQA compliance services for an approximately 30-mile water delivery project. Conducted field surveys and archival research and wrote technical reports for APE modification/expansion of various project boundaries as needed by the contractors during the project.

#### Quechan Gaming Development Project—Ft. Yuma Indian Reservation, Imperial County, California

Conducted a pedestrian survey of the 2,000-acre fee-to-trust parcels per NEPA and Section 106 standards, recorded new archaeological sites, updated preexisting site records, conducted an NRHP evaluation of all archaeological sites encountered, prepared the cultural resources technical report and the cultural resources section of the EIS.

#### Sycuan Fee-to-Trust Project—El Cajon, California

Conducted a pedestrian survey of the 2,000-acre fee-to-trust parcels per Section 106 standards, recorded new archaeological sites, updated preexisting site records, conducted an NRHP evaluation of all archaeological sites encountered and prepared the final cultural resources technical report.

### Education

MA, Anthropology, California State University, Sacramento, 2004

BA, Anthropology, California State University, Sacramento, 2000

### Special Training

Archaeological Field School, Peoria, Illinois, 1999 (Illinois State University, Department of Anthropology)

Archaeological Field School, Ft. William Henry, Lake George, New York, 2000 (Adirondack Community College, Department of Anthropology)

Archaeological Field School, California State University, Sacramento, 1997-2004 (Dr. Jerald J. Johnson, instructor)

### Professional Memberships

Register of Professional Archaeologists



#### Scotts Valley Fee-to-Trust and Gaming Development Project— Richmond, California

Prepared a revised cultural resources technical report and updated the cultural resources section of the final EIS document.

#### Cowlitz Fee-to-Trust Architectural Evaluation Report

Prepared a Section 106 architectural evaluation report and updated the cultural resources section of the final EIS document.

#### Meadow Vista Water Treatment Facility Project—Meadow Vista, California

Performed a preliminary records search at the North Central Information Center, conducted the field survey, and wrote up the final cultural resources technical report.

#### Russian River Irrigation Expansion Project—Sonoma County, California

Performed a preliminary records search at the Northwest Information Center and assisted in the creation of the cultural resources technical report.

#### United Auburn Indian Community- 1,100-Acre Residential Development Project—Placer County, California

Performed a Phase 1 excavation as part of an EA report and assisted in the post-excavation analysis and write up of the cultural resources technical report.

#### SMUD Natural Gas Pipeline Project—Elk Grove, California

Performed construction ground disturbance monitoring duties in conjunction with local Native American monitors.

#### Stockton Waterfront Projects—Stockton, California

Performed a phase three excavation and subsequent laboratory analysis of recovered artifacts as part of a salvage excavation project.

#### Montezuma Hills Wind Turbine Assessment Project—Rio Vista, California

Conducted a pedestrian survey per CEQA standards and assisted with the write up of the cultural resources technical report.



# Gabriel Roark

## Archaeologist

Gabriel Roark is an archaeologist who directs and conducts cultural resource investigations for projects involving CEQA and Section 106 of NHPA. With extensive professional experience in prehistoric archaeology, historical archaeology, and regulatory compliance, Gabriel serves as the manager and technical lead on several projects. He provides exceptional design and implementation of archaeological monitoring programs, archaeological surveys and excavations, archival research, and impact analyses. His Section 106 experience includes drafting memoranda of agreement, programmatic agreements, and historic properties treatment plans.

## Project Experience

### Sacramento Intermodal Transit Facility Track Relocation Project Environmental Documents for CEQA/NEPA—City of Sacramento, Sacramento County, California

Advised Caltrans and the City of Sacramento as to Section 106 and NEPA compliance concerning cultural resources. Due to the shortened compliance schedule entailed with American Recovery and Reinvestment Act funding, recommended a tiered approach that secured funding and protected cultural resources. Directed identification of surface archaeological resources, archival and geoarchaeological research to isolate potential buried archaeological resources, and preparation of an archaeological resources treatment plan. Exploratory and evaluative test excavations, components of the treatment plan, are underway.

### Sacramento River Bank Protection Project EIS/EIR—Corps, Sacramento County, California

Primary author of the programmatic agreement and historic properties treatment plan (HPTP) for this state/federal levee repair program. The programmatic agreement will guide the Corps' cultural resources program for the life of the project particularly in the areas of consultation and documentation of cultural resource activities. The HPTP is a multidisciplinary document that stipulates appropriate identification efforts and treatment of a variety of property types: prehistoric and historic archaeology, non-archaeological properties of

## Start Year of Professional Service

1999

## Education

MA, Anthropology, California State University, Sacramento, 2009

BA, Anthropology, California State University, Sacramento, 1999

## Special Training

Cascade Range Archaeological Project, crew chief, 1999  
(California State University, Sacramento)

Archaeological Field School, Mammoth Lakes, California, 1999  
(California State University, Sacramento, Dr. Mark E. Basgall, Director)

Anthropology 199: Introduction to Analysis of California Gold Rush Chinese Ceramics, Independent Study, 1999 (California State University, Sacramento, Dr. Jerald J. Johnson, Instructor)

Anthropology 195A and 192: Fieldwork and Laboratory Work in Archaeology, Coloma, California, 1997 (California State University, Sacramento, Dr. Jerald J. Johnson and Dr. Tom Strasser, Instructors)

## Professional Memberships

Society for Archaeological Sciences

Society for California Archaeology



concern to Native Americans, historic built environment properties, cultural landscapes, and submerged resources.

#### **Carrizo-Midway 230kV Transmission Line Reconductoring Project—PG&E, Kern and San Luis Obispo Counties, California**

Lead cultural resource specialist responsible for CEQA and Section 106 compliance. Directed all aspects of the cultural resources work: research, geoarchaeological assessment, Indian consultation, survey, and reporting. Advised PG&E on feasible avoidance measures to protect archaeological sites.

#### **Palermo to East Nicolaus Transmission Line Reconstruction Project Proponent's EA Preparation—PG&E, Northern California**

Managed Section 106 and CEQA compliance tasks, including research, consultation with Indians and historical societies, archaeological and historic structures surveys, evaluation of identified resources, report preparation (cultural resources report and section of proponent's EA), and agency coordination. Designed the survey parameters such that PG&E did not have to authorize additional survey during construction.

#### **Big Sandy Casino and Resort Project EIS—Big Sandy Rancheria Band of Western Mono Indians, Fresno County, California**

Assisted Big Sandy Rancheria and the Bureau of Indian Affairs (BIA) with cultural resources compliance under NEPA and Section 106. Directed records searches and archival research, supported BIA's consultation with Indian tribes, corresponded with historical societies and non-federally recognized tribes, met with the state historic preservation officer to discuss compliance effort, conducted archaeological surveys and directed two evaluative test excavations. In addition, worked with BIA, Big Sandy, and Table Mountain Rancheria to devise a plan of action, pursuant to the NAGPRA, for the treatment of Indian human remains discovered during excavations. Also assisted with reburial of Indian remains. Preparation of the cultural resources report and EIS sections is underway.

#### **Central California Clean Energy Transmission Project Proponent's EA—PG&E, Fresno, Kern, Kings, Madera, and Tulare Counties, California**

Advised PG&E regarding cultural resources regulatory compliance strategy and responsibilities from the project design phase through late-stage project planning. Ranked alternative transmission line



routes via a GIS-based model of cultural resources distribution and sensitivity. Conducted records searches and research, consulted with Indian groups, directed archaeological and built-environment surveys, and prepared iterative cultural resource reports.

#### **Cultural Resources Compliance Support for the Railyards Initial Phase Project—Kimley-Horn Associates, Sacramento, California**

Coauthored the archaeological testing plan for prehistoric and historic archaeological sites, using geotechnical data and historic maps to identify archaeologically sensitive areas. Also prepared the project inadvertent archaeological discovery plan. Crew chief for mechanical archaeological testing; identified the historic 6<sup>th</sup> Street Levee.

#### **Suisun Marsh Management Plan EIS/EIR—DFG, Solano County, California**

Prepared a geoarchaeological assessment of Suisun Marsh to estimate the potential for buried and surface-manifested cultural resources for three project alternatives. Together with records search data and historic map research, the geoarchaeological assessment formed the crux of the analysis presented in the cultural resources section of the EIS/EIR.

#### **Sacramento Railyards Soil Remediation—ERM West, Sacramento, California**

Lead Archaeological Monitor. Responsibilities included construction monitoring, staff scheduling, evaluating inadvertent archaeological discoveries and coordinating such evaluations with staff from the California State Railroad Museum, reporting, and training construction staff in the proper procedures for archaeological discoveries.

#### **Port of Los Angeles Promenade Report of Archaeological Monitoring—Port of Los Angeles, San Pedro and Los Angeles County, California**

Contributing author to the archaeological monitoring report for numerous inadvertent archaeological discoveries in the historic neighborhood known as Mexican Hollywood. Contributions included archaeological feature descriptions, tabulated artifact (functional group) analysis, and interpretation of materials.



#### Vantage Wind Energy Project Cultural Resources Inventory—Kittitas County, Washington

Contributing author responsible for reporting survey methods and findings, as well as recommendations for the treatment of archaeological resources. Also prepared environmental and cultural contexts for the report.

#### Central Valley Gas Storage Project Section 106 Consultation—Central Valley Gas Storage, LLC, Colusa County, California

Completed a cultural resources inventory for compliance with Section 106. Tasks included records searches, correspondence with Indians, a geoarchaeological assessment of the project area, and preparation of an inventory report.

#### Buena Vista Rancheria Gaming and Entertainment Facility Tribal EIR—Stevens & O'Connell, Amador County, California

Lead cultural resources manager responsible for coordinating archaeological and built-environment inventories and assessments of off-reservation road improvements. Responsibilities included conducting records searches, archival research, ethnographic literature review, archaeological survey, and contributions to the Tribal EIR. Additionally, prepared a cultural resources management plan for the Buena Vista Band of Me-Wuk Indians' property to guide heritage preservation on the casino property. Also led the Section 106 compliance effort by meeting with agency personnel, Indian groups, and other concerned groups to arrive at reasonable terms for a memorandum of agreement.

#### Yuba-Feather Supplemental Flood Control Project—Yuba County Water Agency, California

Lead archaeologist for a CEQA compliance project that proposed periodic inundation of large agricultural holdings adjacent to the Feather River. Led a comprehensive archaeological survey and architectural survey of a 1,900-acre project area. One potentially significant archaeological site was identified in the project area. Worked with the agency and project engineers to devise appropriate mitigation for the site.

#### Madera Water Bank—Azurix Corporation, Madera County, California

Lead investigator for a cultural resources inventory and evaluation for a proposed water bank to comply with NEPA and CEQA. Responsible for designing appropriate research domains as a framework to evaluate the 20 historic resources identified through



research and survey, developing a two-prong survey strategy designed to record all historic sites in the project area, providing a representative sample of the 14,000 acres encompassed by the project, conducting site evaluations, and preparing a report.

#### **Jensen River Ranch Restoration Project—San Joaquin River Parkway and Conservation Trust, Fresno County, California**

Cultural resources team lead for a multi-disciplinary restoration project. Performed background research, Native American consultation, survey of the 167-acre restoration site, and NRHP evaluation of cultural resources; prepared a technical report for CEQA/NHPA compliance. Evaluated two historic structures and a historic refuse scatter on the restoration site, including historic property research at repositories in Fresno and Sacramento.

#### **Seaview Vineyard Development—Peter Michael Winery, Sonoma County, California**

Cultural resources team leader on an archaeological test excavation of prehistoric site CA-Son-2306 that would be affected by development of a vineyard in coastal Sonoma County. The excavation was conducted to evaluate the site for California Register of Historical Resources and NRHP eligibility. Responsible for research, development of a test excavation program, excavation, ground stone analysis, report preparation, and overall project management.

#### **El Dorado Hills Data Recovery—Serrano Associates, LLC, El Dorado County, California**

Crew member for archaeological excavations at 19th century mining camps and homestead sites located near the historic town of Clarksville. Member of the artifact analysis team and contributed to report preparation.

#### **Archaeological Survey Report—Mendocino Coast Recreation and Park District, Mendocino County, California**

Survey crew member and the chief researcher for an archaeological survey in heavily wooded terrain east of Fort Bragg.

#### **Sacramento Region Fiber Optic Projects—XO California, Inc., Placer, Sacramento, and Yolo Counties, California**

Managed cultural resources task, which consisted of providing sensitivity assessments, conducting inventories, and monitoring recommendations for more than 20 proposed fiber optic builds.



Because the majority of the proposed builds were located in urban settings not surveyed for archaeological sites before development, designed inventory and assessment methods to identify areas that likely contained buried archaeological deposits. According to the results of each assessment, assigned archaeological or Native American monitors to sensitive project areas.

#### **Cellular Tower Builds—Sprint PCS, Northern California**

Lead cultural resources manager for 31 cellular tower builds, including antenna-to-building collocations and new tower projects in Alameda, Contra Costa, El Dorado, Napa, Placer, Sacramento, Solano, Sonoma, and Yolo Counties. Responsible for conducting traditional cultural resource inventories (records search and research, Native American consultation, and field survey), sensitivity assessments, viewshed analysis, and monitoring recommendations under stringent time constraints.

#### **Lower Northwest Interceptor Project—Sacramento Regional County Sanitation District, Sacramento and Yolo Counties, California**

Coordinated efforts to identify potential cultural resources issues for the pre-design and design phase of a 19-mile sewer alignment. The proposed alignment was routed through portions of the greater Sacramento region that are highly sensitive for the presence of buried archaeological sites. Led a research program consisting of archival research, modeling of historic environments, extensive cooperation with Native Americans and local archaeologists, and architectural and archaeological surveys to recommend appropriate mitigation measures for known and potential cultural resources. Prepared the cultural resources section of an EIR and the cultural resources inventory report for the project.

#### **Lower Northwest Interceptor Project—Sacramento Regional County Sanitation District, Sacramento and Yolo Counties, California**

Devised an archaeological monitoring program designed to comply with complex federal regulatory requirements, determined whether construction was likely to disturb buried archaeological deposits, trained monitors and construction staff in their roles as resource stewards during construction, and oversaw staff archaeologists' fieldwork and reporting. Monitoring program included excavation of 298 auger tests to determine whether archaeological deposits were present in the project area and monitoring by qualified archaeologists to verify the results of the auger tests.



#### High Winds, LLC Wind Turbine Project—FPL Energy, Inc., Solano County, California

Conducted a cultural resources inventory for a proposed wind turbine project in the Montezuma Hills that included pre-field research, Native American consultation, historic research, and a field survey of a large wind turbine generator farm for compliance with CEQA. Identified cultural resources within the boundaries of the project and recommended mitigation and avoidance measures to protect identified resources.

#### I-5/Cosumnes River Boulevard Interchange Project—City of Sacramento, California

Lead archaeologist for analysis of an 880-acre study area (slated for the extension of Cosumnes River Boulevard to I-5) to comply with Section 106 of the NHPA and CEQA. In addition to using standard inventory methods, led a five-person crew in presence/absence excavations designed to explore geophysical anomalies detected through remote-sensing applications.

#### Tri-Valley 2002 Capacity Increase Project—PG&E, Alameda and Contra Costa Counties, California

Designed a program of cultural resource compliance to satisfy the MMP previously prepared for the project. The cultural resources compliance program included archival research, consultation with Native Americans, cultural resource inventories and evaluations, and preparation of a comprehensive cultural resources treatment plan (CRTP). The CRTP set the procedures and standards for archaeological monitoring during construction, procedures for dealing with accidental discoveries, and reporting methods. Also monitored construction in sensitive areas and assisted with an inadvertent discovery of archaeological materials.

#### Los Banos-Gates 500-kV Transmission Line Project (Path 15)—Infrasource, Inc., Merced and Fresno Counties, California

Lead archaeologist for the Path 15 archaeological monitoring program designed by the Western Area Power Administration (Western). Evaluated cultural resources identified by resource monitors, including Native American monitors, over an 84-mile project corridor. Responded to over 70 inadvertent discoveries—recording, test excavating, and researching a total of 26 archaeological sites. Also surveyed newly added project elements and assisted Western and Infrasource with Section 106 compliance.



#### Battle Creek Salmon and Steelhead Restoration Project—Reclamation and State Water Board, Shasta and Tehama Counties, California

Prepared a research design and guided archaeological test excavations of five prehistoric archaeological sites in the Cascade Range foothills near Red Bluff. Worked closely with Reclamation archaeologists to devise a suitable research design and a schedule and approach to completing Section 106 consultation under a stringent timeline.

#### South Delta Improvements Program EIR/EIS—DWR and Reclamation, Contra Costa and San Joaquin Counties, California

Led the cultural resources inventory and evaluation effort conducted in support of Section 106, CEQA, and NEPA compliance. Also the primary author of the cultural resources section for the project EIR/EIS. The technical team recorded and evaluated five historic-period cultural resources.

#### Freeport Regional Water Project—Freeport Regional Water Authority, Sacramento and San Joaquin Counties, California

Prior to construction of the FRWP, led ICF's cultural resources inventory of the 30-mile-long project and drafted a memorandum of agreement (MOA), to direct compliance with Section 106 of the NHPA. The MOA established procedures for the inventory of changes to the FRWP area, treatment of a historic property, and inadvertent archaeological discoveries during construction. Construction resulted in one inadvertent discovery of cultural resources. Worked with Reclamation and construction staff to comply with the project MOA while allowing the contractor to continue work on the project. The construction contractors identified the need for additional work areas after the MOA was executed. These areas needed to be surveyed and reported to the lead federal agency, Reclamation, and SHPO, which began to cause construction delays. Negotiated an amended MOA with Reclamation and the SHPO that streamlined the review process for newly identified project components.



# Jay Baker

2617 V St Sacramento, CA 95818 [jaybrighambaker@gmail.com](mailto:jaybrighambaker@gmail.com)

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**Objective** To broaden my experience working within the professional environment of cultural resource management, and to enrich my knowledge of the methodologies of archaeological field and labwork.

## Employment

**May 1999-April 2008**

**Tower Theatre**

**Sacramento, CA**

**Assistant Manager**

- Supervision of staff
- Cash management
- Tracking of inventory and vendor accounts
- Staff scheduling

## Education

**May 2009**

**California State University Sacramento**

**Sacramento, CA**

**Anthropology Major**

Relevant Courses:

- Cultural Resource Management
- Field and Labwork in Archaeology
- California Prehistory
- Environmental Archaeology
- Introduction to ArcGIS

**December 1994**

**Cabrillo Community College**

**Aptos, CA**

**Archaeological Technology Program**

## Fieldwork Experience

**June 2008**

**Los Padres National Forest, CA**

**Joint project CSUS Dominguez Hills- US Forest Service**

- Survey and Identification of Prehistoric and Historic Sites
- Excavation of Prehistoric Site
- Laboratory Analysis of Recovered Cultural Materials
- Site Recordation

**2009-Present**

**Sacramento, Ca**

**ICF International**

- Survey and Identification of Prehistoric and Historic Sites
- Excavation of Prehistoric and Historic Sites
- Archaeological Monitoring
- Laboratory Analysis of Recovered Cultural Materials
- Site Recordation
- Report Preparation

## Professional Memberships

Society for California Archeology  
American Anthropological Association



