Attachment E:

Cultural Resources Technical Report (November 2015)

SUNCREST DYNAMIC REACTIVE POWER SUPPORT PROJECT CULTURAL RESOURCES TECHNICAL REPORT

August 2015, Revised November 2015

SUBMITTED TO

NextEra Energy Transmission, West LLC
700 Universe Boulevard
Juno Beach, Florida 33408

SUBMITTED BY

SWCA Environmental Consultants
60 Stone Pine Road, Suite 201
Half Moon Bay, California 94019

Archaeological and other heritage resources can be damaged or destroyed through uncontrolled public disclosure of information regarding their location. This document contains sensitive information regarding the nature and location of archaeological sites that should not be disclosed to the general public or unauthorized persons.

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For Public Distribution – Confidential Information Redacted

Suncrest Dynamic Reactive Power Support Project
Cultural Resources Technical Report
Alpine, San Diego County, California

Prepared for

NextEra Energy Resources, LLC
700 Universe Boulevard
Juno Beach, Florida 33408
Attn: Andy Flajole

Prepared by

Laura Hoffman, M.A., RPA,
Steven Treffers, M.A.

Contact: Megan Peterson, Project Manager

SWCA Environmental Consultants
60 Stone Pine Road, Suite 201
Half Moon Bay, California 94019
(650) 440-4160
www.swca.com

U.S. Geological Survey 7.5-Minute Quadrangle: Viejas Mountain, California

SWCA Project No. 32001
SWCA Cultural Resources Report No. 15-188

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Keywords: CEQA; cultural resources survey; positive survey results; three isolated prehistoric artifacts; two isolated historical artifacts; six prehistoric archaeological sites; two built environment resources; ineligible; CA-SDI-19307; CA-SDI-20166; CA-SDI-20984; SUN-S-1004; SUN-S-1005; SUN-S-1012; SUN-BSO-1002/Bell Bluff Truck Trail; SUN-BSO-1011; Alpine; San Diego County; Viejas Mountain quadrangle; Section 34, Township 15 South, Range 3 East; Sections 3 and 4, Township 16 South, Range 3 East; San Bernardino Base and Meridian

EXECUTIVE SUMMARY

Purpose and Scope: NextEra Energy Transmission West, LLC (NEET West) retained SWCA Environmental Consultants (SWCA) to conduct a cultural resources study that includes a cultural resource records search and literature review, Native American coordination, a cultural resource survey, and preparation of a cultural resources technical report in support of the proposed Suncrest Dynamic Reactive Power (Static Var Compensator [SVC]) Support Project (Proposed Project) in an unincorporated area of San Diego County, California. This study is intended to identify and describe cultural resources that could be affected by ground-disturbing activities associated with the Proposed Project. This study was completed in compliance with and in satisfaction of the California Environmental Quality Act (CEQA). California Public Resources Code (PRC) Section 5024.1, California Code of Regulations (CCR) Title 14, Section 15064.5 of the State CEQA Guidelines, and PRC Sections 21083.2 and 21084.1 were also used as the basic guidelines for the cultural resources study (Governor's Office of Planning and Research 1998).

The Proposed Project is located in an unincorporated area of San Diego County, California, approximately 29 miles east of San Diego and 3.36 miles southeast of the community of Alpine. The Proposed Project consists of the SVC location, underground electrical transmission line (SVC tie-line), riser pole, and a 300-foot-long overhead transmission span connecting the SVC tie-line to the Suncrest Substation. Construction of the SVC will occur on an approximately 6-acre, privately owned parcel comprising the SVC facility, temporary laydown yard, stormwater drainage and conveyance system, and associated site improvements. Once complete, the SVC will be contained within a fenced area of up to approximately 112,000 square feet (2.58 acres). The approximately 1-mile-long 230-kilovolt (kV) SVC tie-line will be located on two privately owned parcels, one of which is owned by San Diego Gas and Electric (SDG&E). At the terminus of the SVC tie-line, a riser pole will connect an approximately 300-foot-long overhead span into the existing Suncrest Substation's 230 kV bus. Because the cultural resources study was conducted prior to finalization of project plans, SWCA surveyed a larger "Cultural Resources Survey Area" comprising approximately 65.2 acres that consisted of all land under consideration for the Proposed Project at the time of the survey; the 12.21-acre Proposed Project Area, which includes the entire Proposed Project Footprint, including temporary and permanent disturbance areas, is located entirely within the Cultural Resources Survey Area. This report documents the results of these efforts.

Dates of Investigation: SWCA requested a California Historical Resources Information System (CHRIS) records search of the Records Search Area, consisting of the Proposed Project Area plus approximately a 1-mile buffer, on February 13, 2015, from the South Coastal Information Center (SCIC), located at San Diego State University; SCIC provided the results to SWCA on February 18, 2015. On March 16, 2015, SWCA requested a search of the Sacred Lands Files (SLF) from the Native American Heritage Commission (NAHC) and received a response letter by fax on April 20, 2015. SWCA requested a supplemental SLF search from the NAHC on July 1, 2015, that covered an expanded area of interest in case of future changes to the Proposed Project, and received a response letter by email on August 18, 2015. NEET West initiated coordination with Native American groups on June 22, 2015. As of August 21, 2015, NEET West has received two responses—the first requesting a site visit and a copy of the cultural resources survey report when it is publicly available, and the second requesting to review the cultural resources technical report and recommending the Viejas Band of Kumeyaay Indians provide Native American monitoring for the Proposed Project. SWCA archaeologists conducted an intensive pedestrian survey of the Proposed Project Area on five occasions between February 24 and August 13, 2015. This report was completed in August 2015.

Summary of Findings: The SCIC records search identified 21 previously conducted cultural resources studies within the Records Search Area (approximately a 1-mile radius around the Proposed Project Area), five of which occurred within the Proposed Project Area. The SCIC records search also identified

21 previously recorded cultural resources within the Records Search Area. Of these, three prehistoric archaeological sites (CA-SDI-20166/P-37-031744, CA-SDI-19307/P-37-030375, and CA-SDI-20984/P-37-033363), all bedrock milling stations, are located in the Cultural Resources Survey Area. Archaeological site CA-SDI-20166 is located within the Proposed Project Area. SWCA revisited and updated all three previously recorded sites during the cultural resources survey. In addition, SWCA identified and recorded three prehistoric archaeological sites, two historic built environment resources, three prehistoric isolated artifacts, and two historic isolated artifacts within the Cultural Resources Survey Area. Of these, archaeological site SUN-S-1012, a prehistoric lithic scatter, and built environment SUN-BSO-1002, the historic Bell Bluff Truck Trail, are located in the Proposed Project Area.

Investigation Constraints: Most of the Cultural Resources Survey Area is covered in dense vegetation, and ground visibility is variable though generally very poor, ranging from less than 10 percent in undisturbed, highly vegetated areas to over 70 percent in disturbed areas that have been cleared of brush. However, visibility within the Proposed Project Area is generally good to excellent (over 70 percent), and no areas of poor visibility were located within the Proposed Project Area.

Conclusions: One previously recorded prehistoric archaeological site, CA-SDI-20166, and one newly identified prehistoric archaeological site, SUN-S-1012, are located within the Proposed Project Area. Site CA-SDI-20166 was previously found ineligible for listing on the California Register of Historical Resources (CRHR) by the California Public Utilities Commission (CPUC) and the Bureau of Land Management (Kyle and Williams 2013); SWCA finds the site remains ineligible and no further cultural resources work is recommended for this resource. SWCA finds site SUN-S-1012 ineligible for listing on the CRHR and no further cultural resources work is recommended for this resource. One newly identified built environment resource, SUN-BSO-1002, is located within the Proposed Project Area; SWCA finds SUN-BSO-1002 ineligible for listing on the CRHR and no further cultural resources work is recommended for this resource.

Archival research indicates that there is a moderate to high potential to encounter prehistoric resources in the Cultural Resources Survey Area, and ground visibility during the pedestrian survey was very poor in portions of the Cultural Resources Survey Area. However, visibility within the Proposed Project Area is generally good to excellent, and nearly all sediments within the Proposed Project Area have been highly disturbed from construction activities associated with the Sunrise Powerlink, including road construction, the use of the proposed SVC site as a materials storage and laydown area (Wilson Laydown Area), and habitat restoration efforts. Based on survey results and the highly disturbed context of sediments within the Proposed Project Area, it is unlikely that previously unidentified cultural resources, including intact buried archaeological deposits, occur within the Proposed Project Area.

The following applicant-proposed measures have been developed to ensure that significant impacts to cultural resources are avoided or reduced to less-than-significant during Proposed Project implementation: retain a qualified principal investigator to carry out all applicant-proposed measures related to archaeological and historical resources; conduct ~~periodic spot checking~~ full-time monitoring of construction activities by a qualified archaeological and Native American monitors; stop work within a 15-meter (m; 50-foot) radius if unanticipated cultural deposits or human remains are discovered and treat newly identified resources appropriately; and comply with existing regulations. The duration and timing of the monitoring shall be determined by the principal investigator in consultation with the CPUC. If, in consultation with the CPUC, the principal investigator determines that monitoring is no longer warranted, he or she may recommend that monitoring cease entirely. In addition, if, in consultation with the CPUC, the principal investigator determines that full-time monitoring is required, he or she may recommend continued monitoring of ground-disturbing activities.

Disposition of Data: The final cultural resources survey report and any subsequent related reports will be filed with NEET West, the CPUC, the SCIC, and SWCA's Half Moon Bay, California, office. All field

notes, photographs, and records related to the current study are on file at the SWCA Half Moon Bay office.

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1 INTRODUCTION

NextEra Energy Transmission West, LLC (NEET West) retained SWCA Environmental Consultants (SWCA) to conduct a cultural resources study that includes a cultural resource records search and literature review, Native American coordination, a cultural resource survey, and preparation of a cultural resources technical report in support of the Suncrest Dynamic Reactive Power (Static Var Compensator [SVC]) Support Project (Proposed Project) in an unincorporated area of San Diego County, California (Figures 1 and 2). The Proposed Project Area measures approximately 12.21 acres and consists of an approximately 6-acre SVC location on private land, which comprises the SVC facility, temporary laydown yard, and stormwater drainage and conveyance system; a 2.56-acre temporary staging area; plus approximately 3.6 acres located on both private and San Diego Gas and Electric (SDG&E) land consisting of the remaining project components, including the 1-mile 230-kilovolt (kV) SVC-Suncrest Substation single-circuit underground electrical transmission line (SVC tie-line), riser pole, and 300-foot-long overhead span that will connect into the existing Suncrest Substation.

Because the cultural resources study was conducted prior to finalization of project plans, SWCA surveyed a larger Cultural Resources Survey Area comprising approximately 65.2 acres, herein called the "Cultural Resources Survey Area" or "Survey Area," that consisted of all land under consideration for the Proposed Project at the time of the survey; the 12.21-acre Proposed Project Area is included in the Survey Area (Figures 3 and 4).

SWCA refers to several different areas associated with the Proposed Project, as defined below and shown on Figure 3:

- **Proposed Project Area:** An approximately 12.21-acre area comprising the entire Proposed Project Footprint, including temporary and permanent disturbance areas.
- **Cultural Resources Survey Area:** An approximately 65.2-acre area that was surveyed for cultural resources and encompasses the entire Proposed Project Area.
- **Records Search Area:** An approximately 1-mile radius around the Proposed Project Area for which a California Historical Resources Information System (CHRIS) records search was conducted.

This study was completed in compliance with and in satisfaction of the California Environmental Quality Act (CEQA). California Public Resources Code (PRC) Section 5024.1, California Code of Regulations (CCR) Title 14, Section 15064.5 of the State CEQA Guidelines, and PRC Sections 21083.2 and 21084.1 were also used as the basic guidelines for the cultural resources study (Governor's Office of Planning and Research 1998).

The format used in this report follows *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (California Office of Historic Preservation [OHP] 1990), and includes four appendices: Confidential Cultural Resources Survey Results Map (Appendix A), the South Coastal Information Center (SCIC) Records Search Results Letter (Appendix B), Native American Coordination Documentation (Appendix C), and California Department of Parks and Recreation (DPR) 523 Series Forms (Appendix D). Cultural Resource Project Manager Laura Hoffman, M.A., Registered Professional Archaeologist (RPA), managed the study, conducted the field survey, prepared all the figures, and coauthored the report. Architectural Historian Steven Treffers, M.A., coauthored the report. Principal Investigator Heather Gibson, Ph.D., RPA, reviewed this report for quality assurance and quality control. Principal Investigator John Dietler, Ph.D., RPA, conducted the field survey and provided quality assurance and quality control. Archaeologists Aaron Elzinga, M.A., RPA; Rebekka Knierim, B.A.; and Erica Nicolay, B.A., conducted the field survey. Technical Editor Jaimie Jones edited the report.

Figure 1. Project Vicinity Map

Figure 2. Project Location Map

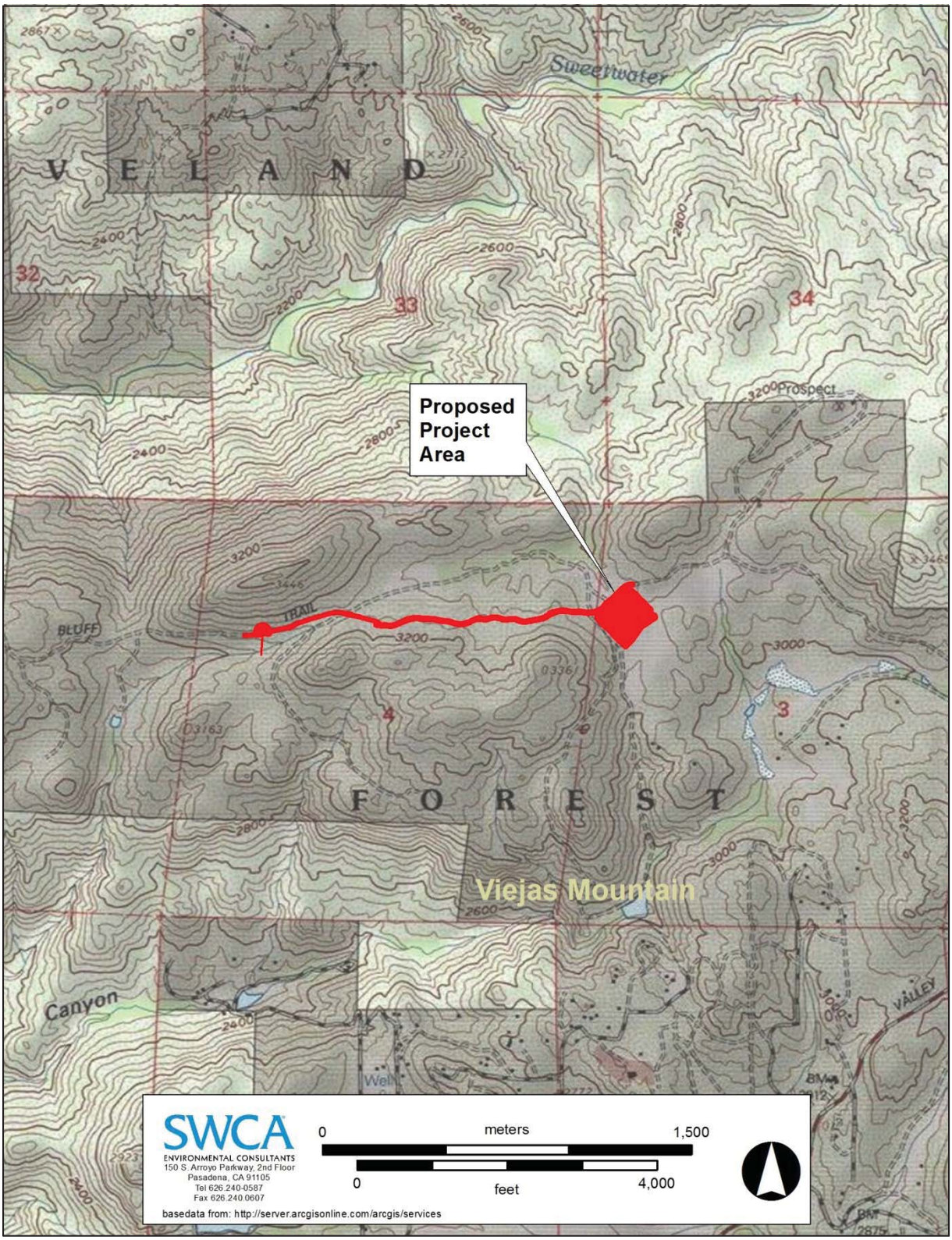


Figure 3. Proposed Project Area, Cultural Resources Survey Area, and Records Search Area

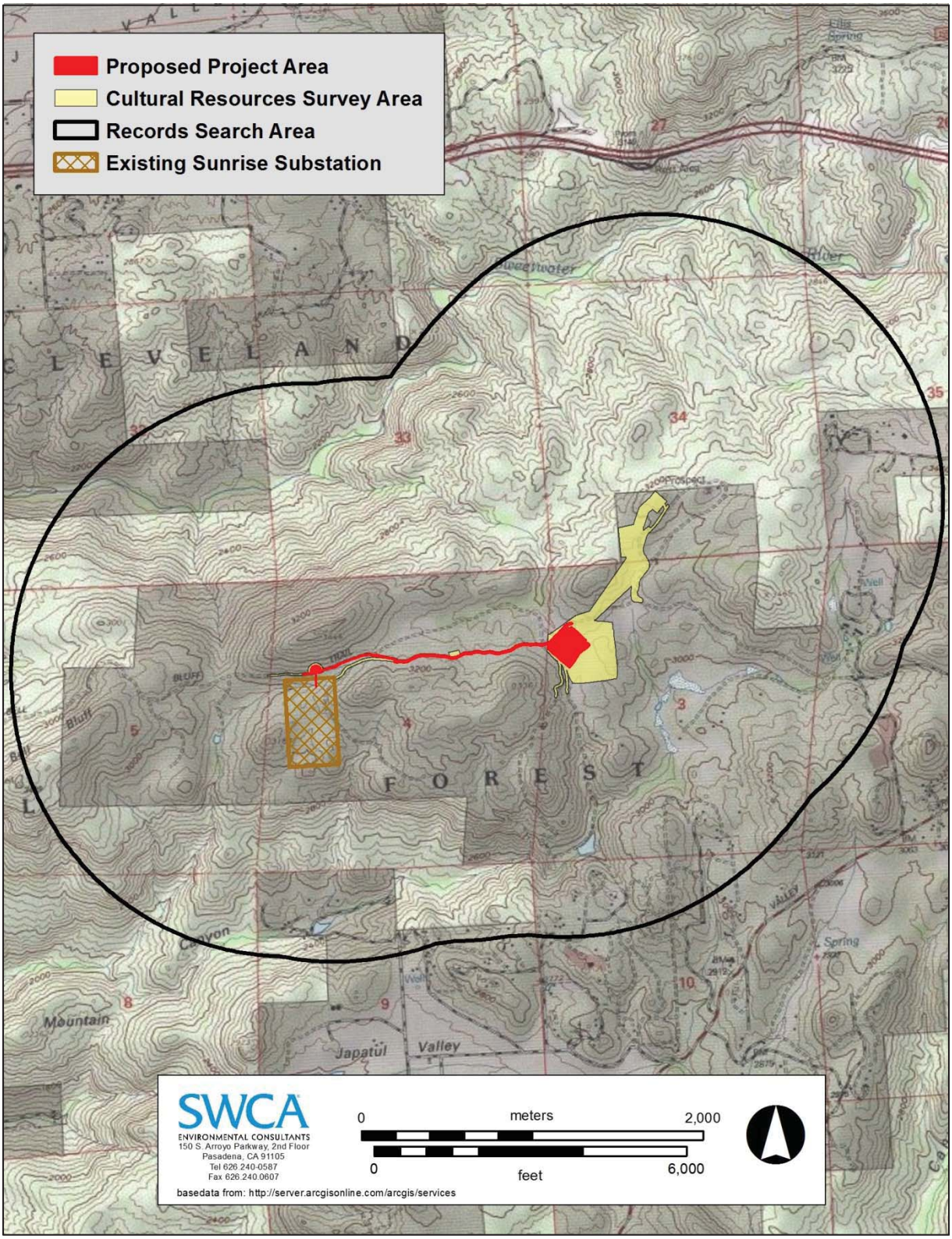
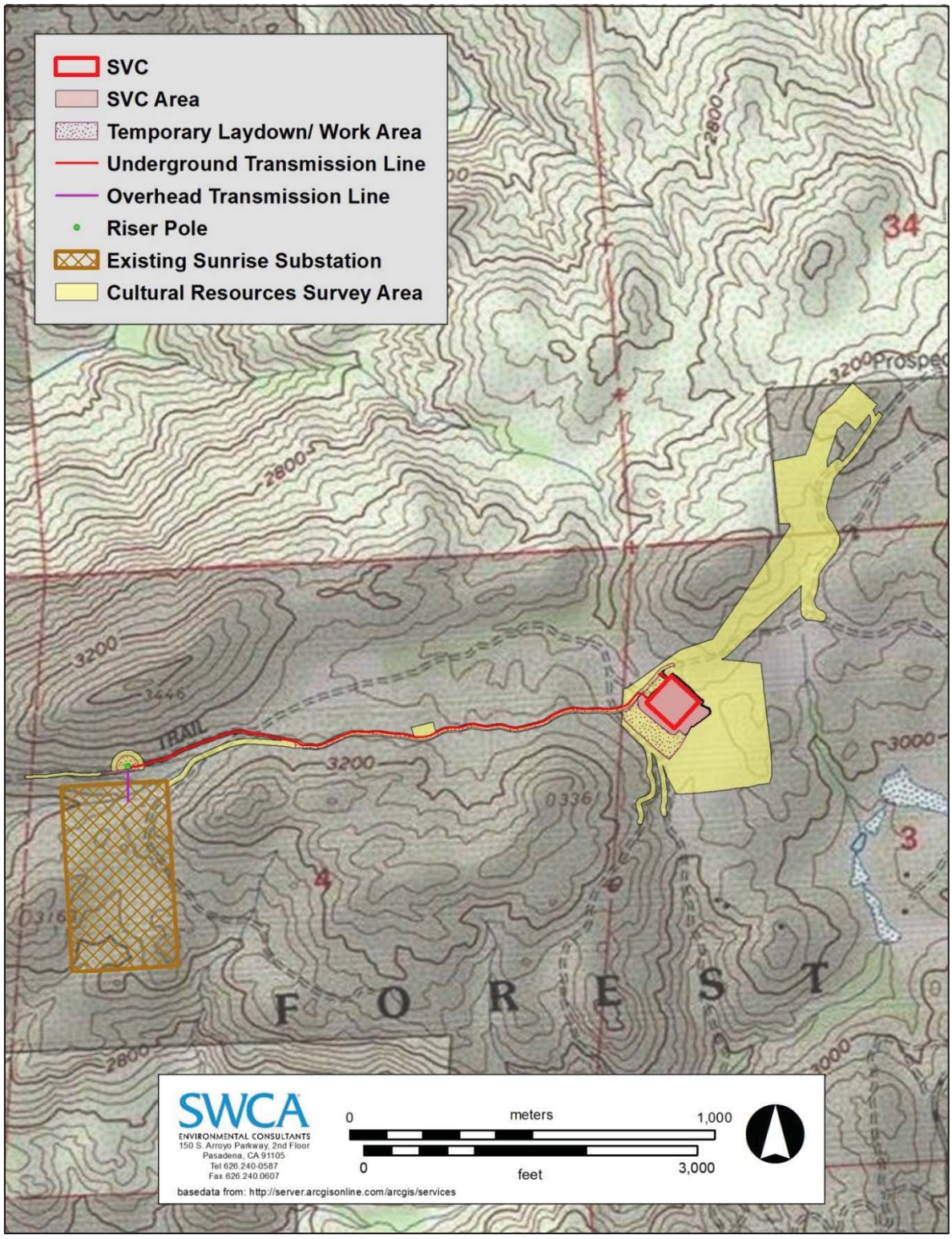


Figure 4. Major Proposed Project Components and Cultural Resources Survey Area



2 PROJECT DESCRIPTION

2.1 Project Location

The Proposed Project is located in an unincorporated area of San Diego County approximately 29 miles east of San Diego and 3.36 miles southeast of the community of Alpine (see Figure 1). Interstate 8 is approximately 1.75 miles to the north, and California Highway 79/Japatul Valley Road is approximately 1.66 miles to the east. The SDG&E 500/230 kV Suncrest Substation (Suncrest Substation), constructed ca. 2012 as part of the SDG&E Sunrise Powerlink Transmission Project (Sunrise Powerlink), is located at the western terminus of the Proposed Project Area. Specifically, the Proposed Project Area is in Section 34, Township 15 South, Range 3 East, and Sections 3 and 4, Township 16 South, Range 3 East, San Bernardino Base and Meridian, as shown on the Viejas Mountain, California, U.S. Geological Survey (USGS) 7.5-minute quadrangle (see Figure 2).

2.2 Proposed Project Work

The Proposed Project has two primary components, the SVC and an approximately 1-mile-long 230 kV single-circuit underground transmission line connecting the SVC to the existing Suncrest Substation, which is owned and operated by SDG&E. An approximately 300-foot-long overhead span will connect to the existing Suncrest Substation's 230-kV bus.

In addition to the two primary components, the Proposed Project will also include the following:

- Construction of two new access drives to facilitate construction, operation, and maintenance of the SVC;
- installation of fiber optic cable within the same underground duct bank as the 230 kV cable to provide communications for line relaying, Supervisory Control and Data Acquisition (SCADA), and other devices as required;
- installation of up to five splice vaults to facilitate installation of the new underground cable and operation and maintenance of the transmission line; and
- installation of a 12 kV underground electrical distribution feed to the SVC.

Construction of the SVC will occur on an approximately 6-acre, privately owned parcel comprising the SVC facility, temporary laydown yard, stormwater drainage and conveyance system, and associated site improvements. Once complete, the SVC will be contained within a fenced area of up to approximately 112,000 square feet (2.58 acres). The approximately 1-mile-long, 230 kV SVC tie-line will be located on two privately owned parcels, one of which is owned by SDG&E. The proposed SVC will be constructed immediately south of Bell Bluff Truck Trail (an existing paved private road that is approximately 30 feet wide curb-to-curb near the SVC site, and 12 feet wide curb-to-curb closer to the Suncrest Substation), in an area that was previously used as a materials storage and laydown area for the Sunrise Powerlink. The proposed underground transmission line will exit the SVC on the north side and then turn westward along the north side of Bell Bluff Truck Trail for approximately 1 mile to a point where the transmission line will transition to a riser pole structure. The riser pole structure will serve as the change of ownership pole between NEET West and SDG&E. SDG&E will then string the conductor overhead with a single, approximately 300-foot-long overhead span to enter the Suncrest Substation and make the interconnection.

With the exception of the riser pole structure and some temporary work areas (to facilitate installation of the vault structures), the majority of the proposed underground transmission line will be located within the paved roadbed of Bell Bluff Truck Trail. Duct bank installation and equipment and material staging

will be limited to either the north or south side of the road centerline, depending on the location of other utilities in the roadway, to maintain an unobstructed single lane of travel on the 30-foot-wide road section so as not to impede access to Suncrest Substation. Up to five splice vaults will be installed underground along the transmission line alignment approximately every 900 feet to facilitate installation of the underground cable and operation as well as maintenance of the transmission line following construction. Blasting is not anticipated at the SVC site, but may be required for transmission line and splice vault excavations on less than 10 percent of the transmission line. ~~may occur during excavation for approximately 15 to 20 percent of the proposed underground transmission line.~~ Blasting will be limited to areas where standard excavation methods are not feasible, such as within bedrock, and will occur after other sediments have been mechanically removed with standard exaction methods. In addition, blasting will be minimized to localize disturbance. Access to the proposed SVC area will be immediately off Bell Bluff Truck Trail via two new approximately 20-foot-wide by 95-foot-long access drives. The roadway aprons of these access drives will be paved while the remainder of the access drives will be graveled.

Construction of the SVC (e.g., limit of grading and associated site improvements based on current information) will occupy a total area of approximately 261,360 square feet (6.00 acres). The SVC will be contained within a fenced area of up to approximately 112,000 square feet (2.58 acres). An approximately 12-foot-wide permanent easement will be obtained from SDG&E and the private landowner to operate and maintain the underground transmission line on their respective properties. New temporary disturbance associated with the underground transmission line will be approximately 0.48 acre. The remaining 3.13-acre temporary work area will be within the paved portion of Bell Bluff Truck Trail. Permanent disturbance totals 0.01 acre as the majority of the underground line will be installed within the existing roadway.

Construction of the Proposed Project will follow a typical sequence beginning with pre-construction surveys and survey staking; then site preparation and grading for the SVC pad, transmission structure work areas, and access road construction; followed by installation of SVC structures, transmission structure foundations, pole installation, and laying of conductor; and, lastly, installing and testing of electrical equipment, energization, and site restoration. Site preparation will involve clearing, grubbing, and grading of the SVC footprint, transmission structure work areas, and access roads, as well as installing security fencing. Underground equipment, if necessary, will be installed in trenches, and backfilled with suitable material (e.g., excavated soil or clean fill). SVC equipment will be installed on concrete foundations. After clearing and grading, transmission line and SVC construction activities will occur simultaneously. Construction is targeted to start September 1, 2016, and is expected to be complete March 11, 2017, at a total of approximately 6.5 months from initial site disturbance until the SVC is ready for testing. Testing and commissioning of the Proposed Project will take approximately 2.5 months between March 11, 2017, and May 30, 2017, at which point the SVC will be fully operational and ready for energization. Restoration and cleanup will take another 2 months following energization.

3 REGULATORY FRAMEWORK

3.1 Federal

3.1.1 National Historic Preservation Act of 1966

The Proposed Project does not have a federal nexus and, therefore, compliance with reference to the NHPA and other federal laws is provided here for informational purposes only. Projects that involve federal funding or permitting (i.e., have a federal nexus) must comply with the provisions of the National Historic Preservation Act of 1966 (NHPA), as amended (16 United States Code [U.S.C.] 470f). Cultural resources are considered during federal undertakings chiefly under Section 106 of the NHPA through one of its implementing regulations, 36 Code of Federal Regulations (CFR) 800 (Protection of Historic Properties), as well as the National Environmental Policy Act (NEPA). Properties of traditional religious

and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of the NHPA. Other relevant federal laws include the Archaeological Data Preservation Act of 1974, American Indian Religious Freedom Act of 1978, Archaeological Resources Protection Act of 1979, and Native American Graves Protection and Repatriation Act of 1989.

Section 106 requires federal agencies to take into account the effects of their undertakings on any district, site, building, structure, or object that is included in or eligible for the National Register of Historic Places (NRHP), and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings (36 CFR 800.1). Under Section 106, cultural resources must be identified and evaluated; effects to historic properties are reduced to acceptable levels through mitigation measures or agreements among consulting and interested parties. Historic properties are those resources listed in or are eligible for the NRHP per the criteria listed below (36 CFR 60.4; Advisory Council on Historic Preservation 2000).

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

(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) that are associated with the lives of persons significant in our past; or

(c) that embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) that have yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting these criteria, a property must retain historic integrity, which is defined in *National Register Bulletin 15* as the "ability of a property to convey its significance" (National Park Service [NPS] 1990). In order to assess integrity, the NPS recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, which are defined in the following manner in National Register Bulletin 15:

1. **Location:** the place where the historic property was constructed or the place where the historic event occurred;

2. **Design:** the combination of elements that create the form, plan, space, structure, and style of a property;

3. **Setting:** the physical environment of a historic property;

4. **Materials:** the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

5. **Workmanship:** the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;

6. **Feeling:** a property's expression of the aesthetic or historic sense of a particular period of time; and

7. **Association:** the direct link between an important historic event or person and a historic property.

Impacts of an undertaking that affect contributing elements of a historic property are considered a significant effect on the environment. Under 36 CFR 800.5(a)(2), adverse effects on historic properties include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;

(ii) Alteration of a property;

(iii) Removal of the property from its historic location;

(iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;

(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;

(vi) Neglect of a property which causes its deterioration;

(vii) Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

3.1.2 Cleveland National Forest

The *Cleveland National Forest (CNF) Land Management Plan* includes goals and objectives regarding cultural resources, including Native American traditional use of resources. The Plan discusses the importance of balancing the protection of cultural resources and Native American concerns with managing the CNF. The CNF aims to promote conservation education as well as provide heritage site protection, and to maintain the national forest in a condition so that Native Americans can exercise and retain traditional connections to the land and to foster both traditional and contemporary cultural uses of the national forests.

3.2 State

The policies of the NHPA are implemented at the state level by the California Office of Historic Preservation (OHP), a division of the DPR. The OHP is also tasked with carrying out the duties described in the California Public Resources Code and maintaining the California Historic Resources Inventory and California Register of Historical Resources (CRHR). The State-level regulatory framework also includes CEQA, which requires the identification and mitigation of substantial adverse impacts that may affect the significance of eligible historical and archaeological resources.

3.2.1 California Environmental Quality Act

CEQA requires a lead agency to analyze whether historic and/or archaeological resources may be adversely impacted by a proposed project. Under CEQA, a "project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment" (California PRC Section 21084.1). Answering this question is a two-part process: first, the determination must be made as to whether the proposed project involves cultural resources; second, if

cultural resources are present, the proposed project must be analyzed for a potential "substantial adverse change in the significance" of the resource.

3.2.1.1 HISTORICAL RESOURCES

According to State CEQA Guidelines, Section 15064.5, for the purposes of CEQA, historical resources are:

- A resource listed in, or formally determined eligible for listing in, the CRHR (PRC Section 5024.1; 14 CCR, Section 4850 et seq.);
- A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significance in a historic resources survey meeting the requirements of PRC Section 5024.1(g); and,
- Any building, structure, object, site, or district that the lead agency determines eligible for national, state, or local landmark listing; generally, a resource shall be considered by the lead agency to be historically significant (and therefore a historic resource under CEQA) if the resource meets the criteria for listing on the CRHR (as defined in PRC 5024.1; 14 CCR 4852).

Resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity (as defined in previous section) does not meet NRHP criteria may still be eligible for listing in the CRHR.

According to CEQA, the fact that a resource is not listed in or determined eligible for listing in the CRHR or is not included in a local register or survey shall not preclude the lead agency from determining that the resource may be an historical resource (PRC Section 5024.1). Pursuant to CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource may have a significant effect on the environment (State CEQA Guidelines Section 15064.5(b).

Substantial Adverse Change and Indirect Impacts to Historical Resources

The State CEQA Guidelines specify that "substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (State CEQA Guidelines Section 15064.5). Material impairment occurs when a project alters in an adverse manner or demolishes "those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion" or eligibility for inclusion in the NRHP, CRHR, or local register. In addition, pursuant to State CEQA Guidelines Section 15126.2, the "direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."

Pursuant to the State CEQA Guidelines (Section 15378), study of a project under CEQA requires consideration of "the whole of an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." The State CEQA Guidelines (Section 15064d) further define direct and indirect impacts as follows:

1. A direct physical change in the environment is a physical change in the environment which is caused by and immediately related to the project.
2. An indirect physical change in the environment is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. If a direct

physical change in the environment in turn causes another change in the environment, then the other change is an indirect physical change in the environment.

3. An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project.

3.2.1.2 ARCHAEOLOGICAL RESOURCES

Archaeological resources can be historical resources as defined above; in addition, unique archaeological resources must also be considered by a lead agency under the State CEQA Guidelines. PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological 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 any of the following criteria:

1. Contains information needed to answer important scientific 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 of its type or the best available 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 proposed project will cause damage to a unique archaeological resource, the lead agency may require that reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.2[a], [b], and [c]). CEQA notes that if an archaeological resource is neither a unique archaeological resource nor an historical resource, the effects of the project on those resources shall not be considered to be a significant effect on the environment (State CEQA Guidelines Section 15064.5(c)(4)).

The disposition of burials falls first under the general prohibition on disturbing or removing human remains under California Health and Safety Code Section 7050.5. More specifically, remains suspected to be Native American are treated under CEQA in CCR Section 15064.5, which cites language found in PRC Section 5097.98 that illustrates the process to be followed in the event that remains are discovered. Further, if human remains are discovered during the construction of the Proposed Project, no further disturbance to the site shall occur, and the San Diego County Coroner must be notified (PRC Sections 15064.5 and 5097.98). If the County Coroner determines the remains to be Native American, the coroner shall notify the Native American Heritage Commission (NAHC) within 48 hours. The NAHC shall identify the person or persons it believes to be the most likely descendant (MLD) of the deceased, and the MLD may then make recommendations as to the disposition of the remains.

3.2.1.3 ASSEMBLY BILL 52

This study complies with CEQA, including Assembly Bill 52 of 2014 (AB 52), which amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3.

Consultation with Native Americans

AB 52 formalizes the lead agency – tribal consultation process, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with the project, including tribes that may not be federally recognized. As the lead agency, the CPUC Energy

Division is required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report.

Tribal Cultural Resources

Section 4 of AB 52 adds Sections 21074 (a) and (b) to the PRC, which address tribal cultural resources and cultural landscapes. Section 21074 (a) defines tribal cultural resources as one of the following:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Section 1 (a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment." Effects on tribal cultural resources should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to tribal cultural resources, the consultation shall include those topics (PRC Section 21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3[a]).

3.2.1.4 CALIFORNIA REGISTER OF HISTORICAL RESOURCES

Created in 1992 and implemented in 1998, the CRHR is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Sections 21083.2 and 21084.1). PRC Section 5024.1 requires an evaluation of historical resources to determine their eligibility for listing in the CRHR. Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys or designated by local landmarks programs, may be nominated for inclusion in the CRHR.

According to PRC Section 5024.1(c), a resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it 1) retains "substantial integrity," and 2) meets one or more of the following criteria, which are modeled on NRHP criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2. It is associated with the lives of persons important in our past;

3. It 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. It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity does not meet NRHP criteria may still be eligible for listing in the CRHR.

3.3 Local

Because the CPUC regulates and authorizes the construction of investor-owned public utility facilities, it has exclusive jurisdiction over the siting and design of the Proposed Project. As such, projects, including the Proposed Project, are exempt from local land use and zoning regulations and discretionary permitting. However, Section III.C of CPUC General Order 131-D (planning and construction of facilities for the generation of electricity and certain electric transmission facilities) requires "the utility to communicate with, and obtain the input of, local authorities regarding land-use matters and obtain any non-discretionary local permits." As such, NEET West has taken into consideration all State and local land use plans and policies, as well as local land use priorities and concerns as they relate to cultural resources. Although County and other local polices are provided below, they are provided for disclosure purposes only.

3.3.1 County of San Diego Municipal Code

The County Municipal Code, Section 396.7 (San Diego County Local Register of Historical Resources) provides guidelines for the application, enforcement, and public awareness of the County's historic preservation regulations, as enforced by the County Planning and Development Services department. The purpose of the historic preservation ordinance is stated as follows: "The Local Register is an authoritative listing and guide to be used by local agencies, private groups, and citizens in identifying historical resources within the County. In addition, the listing shall also be used as a management tool for planning, and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (Subsection B).

Subsection E(2) of Section 396.7 of the Municipal Code provides the following criteria for the designation of historical resources in San Diego County:

A. Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage;

B. Is associated with the lives of persons important to the history of San Diego County or its communities;

C. Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,

D. Has yielded, or may be likely to yield, information important in prehistory or history.

3.3.2 County of San Diego General Plan

Chapter 5, Conservation and Open Space Element, of the *San Diego County General Plan* (County of San Diego 2011a) includes goals and policies regarding cultural resources to ensure their protection and preservation. The goals and policies are intended to supplement NEPA, the NHPA, and CEQA, and are listed below.

- **Goal COS-7, Protection and Preservation of Archaeological Resources:** Protection and preservation of the County's important archeological resources for their cultural importance to local communities, as well as their research and educational potential.
    - **Policy COS-7.1, Archaeological Protection:** Preserve important archaeological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.
    - **Policy COS-7.2, Open Space Easements:** Require development to avoid archeological resources whenever possible. If complete avoidance is not possible, require development to fully mitigate impacts to archaeological resources.
    - **Policy COS-7.3, Archaeological Collections:** Require the appropriate treatment and preservation of archaeological collections in a culturally appropriate manner.
    - **Policy COS-7.4, Consultation with Affected Communities:** Require consultation with affected communities, including local tribes, to determine the appropriate treatment of cultural resources.
    - **Policy COS-7.5, Treatment of Human Remains:** Require human remains be treated with the utmost dignity and respect, and that the disposition and handling of human remains will be done in consultation with the MLD and under the requirements of federal, State, and County regulations.
    - **Policy COS-7.6, Cultural Resource Data Management:** Coordinate with public agencies, tribes, and institutions to build and maintain a central database that includes a notation whether collections from each site are being curated, and, if so, where, along with the nature and location of cultural resources throughout San Diego County.
- **Goal COS-8, Protection and Conservation of the Historical Built Environment:** Protection, conservation, use, and enjoyment of the County's important historic resources.
    - **Policy COS-8.1, Preservation and Adaptive Reuse:** Encourage the preservation and/or adaptive reuse of historic sites, structures, and landscapes as a means of protecting important historic resources as part of the discretionary application process, and encourage the preservation of historic structures identified during the ministerial application process.
    - **Policy COS-8.2, Education and Interpretation:** Encourage and promote the development of educational and interpretive programs that focus on the rich multicultural heritage of San Diego County.

3.3.2.1 ALPINE COMMUNITY PLAN

The *Alpine Community Plan* was developed as a part of and in conjunction with the *San Diego County General Plan* to provide guidance for decisions regarding land use in the Alpine Planning Area. Chapter 9, Conservation, addresses cultural resources—Goal 1 is to "promote the well-planned management of all valuable resources, natural and man-made, and prevent the destruction and wasteful exploitation of natural resources, where feasible." The chapter discuses Resource Conservation Areas (RCAs), localities identified as worthy of special efforts to protect resources, and it includes policies and recommendations to help meet conservation goals; those listed below pertain to cultural resources.

Conservation

- **Policies and Recommendations 1:** Encourage the protection and conservation of unique resources in the Alpine Planning Area.

- **Policies and Recommendations 2:** Important plant, animal, mineral, water, cultural and aesthetic resources in the *Alpine Community Plan* area shall be protected through utilization of the Resource Conservation Area designations and appropriate land usage.

- **Policies and Recommendations 3:** Agencies regulating environmental reports and analyses required by CEQA may require supplemental studies for projects with land located in RCAs, if necessary.

- **Policies and Recommendations 4:** Promote conservation education in the community and schools.

- **Policies and Recommendations 26:** Support the preparation of an adequate inventory of significant historical landmarks in Alpine.

- **Policies and Recommendations 27:** Encourage cooperation with other jurisdictions for trading and otherwise negotiating land transfers to consolidate holdings for historical preservation.

3.3.2.2 CENTRAL MOUNTAIN SUBREGIONAL PLAN

The *Central Mountain Subregional Plan* (County of San Diego 2011c) was developed as a part of and in conjunction with the San Diego County General Plan to provide guidance for decisions regarding land use in the Central Mountain Area. The Proposed Project Area is west of the boundary of the Central Mountain Subregional Plan, but within several hundred feet of that Plan's coverage area. Therefore, given the Proposed Project site's proximity to the area formally addressed by the Plan, the Plan's policies are considered in this analysis. Chapter 8, Conservation, is the primary section that addresses cultural resources and discuses RCAs. The goals and policies specific to cultural resources are listed below.

Conservation

Goals

- **Goal 1:** The preservation of known historical and archaeological resources, and the provision of adequate protection for new sites as they are discovered.

- **Goal 2:** The preservation of archaeological and historical resources through the identification of resources and regulatory review of development projects.

Policies

- **Policy 1:** Appropriate historical resources shall be nominated to the State and/or National Register of Historic Resources.

- **Policy 2:** Significant historic and prehistoric sites located within the Subregion shall be evaluated for Historic Landmark Status under Ordinance 7105 and if qualified shall be designated and rezoned in accordance with Section 7550 and regulated under Section 5700 of The Zoning Ordinance.

- **Policy 3:** Encourage public agencies and private property owners to make significant archaeological and historic resources available to the public for educational purposes.

- **Policy 4:** Create RCAs to protect unique or otherwise scientifically valuable archaeological sites that are identified in CEQA studies, scientific investigations, or from institutional records.

- **Policy 5:** Create management plans to protect archaeological sites from future land development and vandalism.

4 PROJECT SETTING

4.1 Environmental Setting

The Proposed Project is located on the west side of the Peninsular Range approximately 3.36 miles southeast of the community of Alpine. The topography of the region is characterized by steep hills interspersed by narrow valleys and deep canyons with incised high gradient drainage corridors that are home to waterways and ephemeral streams. Other than the SVC location, most of the Proposed Project Area is located on or adjacent to slopes where the depositional context is not conducive to sediment accumulation. The Sweetwater River is approximately 0.7 mile northwest, Japatul Valley approximately 1.3 miles south, and Bell Bluff approximately 0.7 mile southwest. The vicinity is largely undeveloped, consisting of unpopulated open space, with the notable exception of the SDG&E Suncrest Substation and associated infrastructure.

Nearly all of the Proposed Project Area is disturbed, most notably by recent improvements to Bell Bluff Truck Trail and the former Wilson Laydown Area, a temporary laydown yard area for construction associated with Sunrise Powerlink that is currently the site of biological habitat restoration and is proposed as the site for the SVC. The segment of Bell Bluff Truck Trail located within the Proposed Project area was widened, graded, and paved during construction associated with the Sunrise Powerlink. Within the former Wilson Laydown Area, construction activities associated with site preparation included brush clearing and grading in 2011–2012; removed native vegetation was incorporated into the topsoil, and topsoil salvage to a depth of 6 inches (15.24 cm) was conducted (AECOM and RECON 2012). After the location was no longer used as a materials storage and laydown area in late 2012, restoration efforts included re-contouring the land and mechanically ripping the ground, resulting in substantial movement of sediments. The yard was ripped and cross-ripped to a depth of 18 to 24 inches (46 to 61 cm) prior to being re-contoured to the original topography, and the salvaged topsoil was then re-distributed over the site and seeded (SDG&E 2015). Biological habitat restoration efforts, including restoration maintenance activities, weed control, and monitoring, are currently ongoing (SDG&E 2015).

The elevation in the Proposed Project Area varies between 3,000 to 3,200 feet above mean sea level. The local climate is mild, with an annual mean temperature of 63.4 degrees Fahrenheit (°F) (IDcide 2015). Summers are warm, with average maximum temperatures peaking at 76°F in August, and winters are cool, reaching the lowest average minimum temperatures in December at 54°F. The average annual precipitation in Alpine is 14.7 inches, with most of the rainfall occurring in the winter and spring (NOAA 2015). Vegetation in the vicinity is consists of a mixture of chaparral scrub and oak woodlands, with pockets of disturbance dominated by non-native grasses and forbs. Dominant species include chamise (*Adenostoma fasciculatum*) and several varieties of live oak (*Quercus* spp.), along with smaller shrubs

and various grasses, including manzanita (*Arctostaphylos manzanita*), red brome (*Bromus madritensis*), and buckwheat (*Fagopyrum esculentum*).

4.2 Cultural Setting

4.2.1 Prehistoric Overview

The prehistory of coastal and inland southern California is varied and rich, with occupations extending from at least 12,000 years ago to historic contact. Numerous chronological sequences have been devised to assess cultural changes within various areas of southern California in the past 75 years or more (Byrd and Raab 2007:215–227; Moratto 1984;). The framework used here is divided into three major periods: the Paleoindian Period (ca. 9000–6000 B.C.), Archaic Period (6000 B.C.–A.D. 500), and Late Prehistoric Period (A.D. 500–Historic Contact). Within these lengthy periods are refined ecological and chronological subdivisions (e.g., Sutton et al. 2007:229–245). These subdivisions help us better understand the dynamism and diversity of the archaeological record—the presence over time of a variety of technological features, economy and exchange systems, and social organization and complexity—as well as the timing of and responses to environmental shifts present within the southern coastal region (Orange, western Riverside, and San Diego Counties).

4.2.1.1 PALEOINDIAN PERIOD (~9000–6000 B.C. [11,500–8000/7500 B.P.])

Discovery of the earliest human presence in the Americas, and for that matter coastal and interior southern California, continues to be of interest to archaeologists and the general public. Although occupation in California began as early as 8,000 to 11,000 years ago, evidence for the presence of humans prior to about 6000 B.C. (or 8,000 years before present [B.P.]) is relatively sparse and scattered throughout the state. The earliest accepted dates for human occupation of southern California come from sites along the coast, particularly from two of the Northern Channel Islands situated off the coast of Santa Barbara, and form part of a Paleo-Coastal Tradition dependent on marine resources (e.g., Jones 1991; Jones et al. 2002). However, an increasing frequency of radiocarbon dates show occupation of the Southern Channel Islands as well as the coastal areas of Orange and San Diego Counties as early as 7000 to 8000 cal. B.C. (or 9,000 to 10,000 years B.P.) (Byrd and Raab 2007:219). Away from the coast in California were Western Pluvial Lakes Tradition (WPLT) Paleoindians, who practiced a diverse mixture of hunting and gathering, but who were not dependent on large Pleistocene megafauna as in other parts of North America at the time. A major occupational emphasis by WPLT peoples was on Pleistocene lakeshores in the now-arid areas of southern California, the western Great Basin, and along the Cascade–Sierra Nevada uplift that forms California's eastern border (see Moratto 1984:90–92).

4.2.1.2 PALEO-COASTAL TRADITION

The pattern of early Holocene, and in some cases late Pleistocene, sites along the coast is generally subsumed within the Paleo-Coastal Tradition. The Paleo-Coastal Tradition was originally proposed more than three decades ago by Davis et al. (1969), and recently brought to the forefront again by new finds from the southern California coastal region (e.g., Jones et al. 2002; Mason and Peterson 1994:57–58; Moratto 1984:104). The Paleo-Coastal Tradition has recently been reconsidered as a spatially and temporally coherent archaeological and adaptive pattern, reflecting broad similarities in organizational strategies, knowledge, and practices related to the exploitation of both marine and terrestrial resources under certain environmental and social conditions (Elzinga 2011:41; see also Davis 2011). The two Northern Channel Islands with the earliest accepted dates for human habitation within southern California are San Miguel and Santa Rosa. Daisy Cave (CA-SMI-261), situated on San Miguel Island, has evidence for a short-term camp as early as 11,500 B.P., with several other occupations dating before 8800 B.P. (Erlandson 1991:105; Erlandson et al. 2007:57). The Arlington Springs site (CA-SRI-173) on Santa Rosa Island has human remains dating to between 8,600 and 13,000 B.P. (Johnson et al. 2002).

4.2.1.3 WESTERN PLUVIAL LAKES TRADITION

Paleoindian Period sites located on or near the shores of former pluvial lakes and marshes or along old stream channels form part of the WPLT as first defined by Bedwell (1970). Moratto (1984:92) subsumed numerous local California patterns (e.g., San Dieguito Complex, Lake Mojave Period) under the overarching WPLT to reduce terminological confusion, but the literature on California prehistory typically references the Paleoindian Period, Early Man Period, or San Dieguito Complex, rather than the WPLT. With the onset of the early Holocene around 10,000 years ago, significant warming and drying occurred in the environment, and hunter-gatherers subsequently adapted their subsistence economy to the changing resource structure along the coast and interior deserts of California. Lakes and streams within the interior desert regions gradually dried and shrank compared with late Pleistocene times. The WPLT way of life, which emphasized adaptations to lakes and marshes, gradually disappeared by 8000 to 7000 B.P. as the environment warmed during the Altithermal (Byrd and Raab 2007:217–218; Moratto 1984:91). Localized studies, however, indicate that the complete disappearance of a WPLT (i.e., San Dieguito) adaptation was not necessarily uniform across all regions; in San Diego County, for example, archaeological sites representing substantial residential bases have been documented adjacent to coastal lagoons, marshes, and river valleys well into the Archaic Period (Noah and Gallegos 2006:1–14).

4.2.1.4 ARCHAIC PERIOD (6000 B.C.–A.D. 500 [8000–1500 B.P.])

Subsistence patterns shifted around 6000 B.C. coincident with the gradual desiccation associated with the onset of the Altithermal, a warm and dry period that lasted about 3,000 years (Antevs 1955). Greater emphasis was placed on plant foods and smaller animals during this time and into the subsequent Late Prehistoric Period. Compared with the preceding Paleoindian Period, subsistence practices were more diversified but focused on gathering activities in interior ecological areas, with a continued emphasis on a maritime economy in coastal areas (Erlandson 1997:4). According to Maxon et al. (2004:4), researchers have referred to the presence of the San Dieguito culture as marking the start of the Archaic Period. The Archaic Period generally is characterized by an ecological adaptation to collecting, which resulted in an increased frequency of ground stone implements. The Early Archaic Period in southern California is generally referred to as the Milling Stone Period (Wallace 1955, 1978); this period is also sometimes designated as the La Jolla Complex, with sites common in the southern California coastal region between Santa Barbara and San Diego, and at many near-coastal and inland locations (Jordan 2006:4).

A distinction is made between coastal (La Jolla complex) and inland (Pauma complex) culture within San Diego County during the entirety of the Archaic Period (Moriarty 1966; Rogers 1939, 1945; True 1958). The La Jolla complex is characterized by shell midden sites near the coast, and is usually distinguished from inland Pauma complex sites that lack shell middens. Recent research indicates that inland Pauma complex sites potentially represent a seasonal component of the subsistence round used by coastal La Jolla complex populations (Smith et al. 1996; True and Pankey 1985). Considerable debate exists as to the relationship between the San Dieguito, La Jolla, and Pauma complexes within the San Diego County subregion. Gallegos et al. (1987), for example, suggest that these cultural complexes represent adaptations by related peoples between 8,500 and 3,500 years ago (see also Jordan 2006:5). In contrast, Smith (1987) argues that the La Jolla complex replaced the San Dieguito complex. Regardless of the San Dieguito debate, archaeological evidence from both inland and coastal sites in San Diego County indicates a long period of cultural continuity during the entire span of the Archaic Period (Noah and Gallegos 2006:1–15).

Within the inland portion of northern San Diego County, Phase I of the San Luis Rey complex (Meighan 1954; True et al. 1974) appears by approximately 1000 B.C. during the Late Archaic Period. True and Waugh (1982) proposed that San Luis Rey I phase peoples frequently resided in small camps and were residentially mobile throughout the year. San Luis Rey I sites are distinguished from San Luis Rey II sites of the Late Prehistoric Period by a lack ceramics. Noah and Gallegos report that cultural configurations in northern San Diego County, including the San Luis Rey complex, display seasonal settlement and

subsistence patterns marked by semi-sedentary winter settlements with stored resources at lower elevations and use of mountain settlements during the summer and fall months (Noah and Gallegos 2007:1–16). This pattern apparently continued into the Late Prehistoric Period, albeit with populations becoming increasingly sedentary around major water resources.

4.2.1.5 LATE PREHISTORIC PERIOD (A.D. 500–HISTORIC CONTACT [1500 B.P.–HISTORIC CONTACT])

The Late Prehistoric Period in southern California is characterized by a number of changes in subsistence, foraging, and land use patterns, which begins to reflect the use pattern known from ethnographic and Historic Period Native American groups. Hallmarks of the Late Prehistoric Period include the dominance of small projectile points, signifying introduction and use of the bow and arrow, and, with the exception of the rudimentary ceramic industry found during the Early Archaic/Milling Stone Period in Orange and Riverside Counties, pottery (i.e., Patayan III/Colorado Buff) occurs in southern California sites for the first time (Noah and Gallegos 2006:1–17). The period also witnessed an increased emphasis on plant collecting and processing, population size and settlement growth, permanent villages, expansion of trade networks, the practice of cremation in lieu of flexed burials, and rock art in some areas (Jordan 2006:5). The changes most likely reflect in situ cultural adaptations in response to shifts in environmental conditions, as well as influences from outside the area.

Two cultural complexes have been defined for San Diego County during the Late Prehistoric Period: the San Luis Rey II complex in the north and the Cuyamaca complex in the south (Meighan 1954; True et al. 1974; see also Noah and Gallegos 2007:1-16 through 1-19). The San Luis Rey II complex likely represents the forebears of the Takic-speaking Luiseño/Juaneño, who inhabited what is present-day northern San Diego County during the Ethnohistoric Period. The forebears of the Yuman-speaking Kumeyaay (Ipai and Tipai geographic divisions) of ethnographic and modern times may be represented by the Cuyamaca complex.

San Luis Rey II began as early as A.D. 1200 and lasted during the Contact period, until approximately 100 years ago. San Luis Rey II phase sites differ from San Luis Rey I sites in that they have ceramic cooking and storage vessels, cremation urns, and polychrome pictographs (Meighan 1954; True et al. 1974). Subsistence probably focused on the utilization of acorns, a storable species that allowed for relative sedentism and increased population. As evidenced by the presence of bedrock milling stations, acorns and other nuts were exploited at the highland summer camps. San Luis Rey II peoples in lower elevation areas of the drainage system likely lived in sedentary villages, and were at least partially dependent on marine resources (True 1993:17).

The Cuyamaca complex in southern San Diego County centered on the Cuyamaca Mountain area (True 1966, 1970; True et al. 1974, 1991). True (1970:53–54) indicates that the Cuyamaca complex, although generally similar to the San Luis Rey complex, differs in important ways. It is represented by a wider range of ceramic forms (bow pipes, effigy forms, rattles); a steatite industry; cremation ashes placed in urns away from habitation areas; grave markers; scrapers and scraper planes; a higher dependence on grinding implements; and the production and placement of mortuary goods (Maxon et al. 2004:5). These characteristics suggest a definite influence from the cultures along the Colorado River and of Numic speakers from the north (Maxon et al. 2004:5). In addition, as noted, the Cuyamaca complex may represent the culture of the forbearers of ethnohistoric Yuman-speaking Kumeyaay (Ipai and Tipai geographic divisions).

4.2.2 Ethnographic Overview

4.2.2.1 DIEGUEÑO/KUMEYAAY

At the time of European contact, most of present-day Imperial and San Diego Counties were populated with Yuman-speaking peoples, who are collectively referred to today as the Kumeyaay. Termed the Diegueño by the Spanish (Kroeber 1925; Luomala 1978), this diverse geographic Native American group inhabited the region along the Pacific coast from central San Diego County southward into the Baja California region past Ensenada, and eastward into the Yuha and Anza-Borrego Deserts to the Sand Hills. The Diegueño/Kumeyaay language is recognized as a member of the California–Delta Yuman division of the Yuman-Cochimi language family (Mithun 2004:304, 577). Diegueño consists of three main dialects: 'Iipay, Kumeyaay, and Tiipay (the first and third terms from the word meaning "people") (Mithun 2004:577).

Geographic divisions of the three Diegueño dialects have been commonly referred to as Ipai, Kamia (also Kumeyaay), and Tipai (California Indian Assistance Program [CIAP] 2003:56; Gifford 1918:156; Loumala 1978:607–608; Kroeber 1925:710). The Ipai (formerly Northern or Western) inhabited the central portion of San Diego County, whereas the Kamia (formerly Eastern) occupied the remaining southern part of San Diego County and eastward into Imperial County and the California portion of the Colorado Desert. Tipai (formerly Southern) territory included Jamul in San Diego County, extending southward deep into Baja California. Some recent ethnographers combine Tipai and Kamia/Kumeyaay as a continuous social group (the Tipai) (Loumala 1978). The Yuman-language-speaking Kumeyaay thus have been variously referred to as Tipai-Ipai, Kamia, Northern and Southern Diegueño, or by clan name, such as Kwaaymii. Today, many local groups have banded together as the Kumeyaay Nation or Kumeyaay-Diegueño Nation (Kumeyaay Information 2015). The preference for use of the name Kumeyaay was established more than 30 years ago (e.g., Hedges 1975:77).

Kumeyaay territory was divided among bands that generally controlled 10 to 30 miles within a drainage system (Shipek 1982:297). Each band had five to 15 kinship groups (sibs or shiimul) (Kroeber 1925:719; Shipek 1987:8), some of which were divided among more than one band. The entire band aggregated in winter villages, which were placed in sheltered valleys near reliable sources of water (Luomala 1978:597). Dwellings in these villages were semi-subterranean and roughly circular, with a wooden pole framework covered with brush thatch. Other structures in winter villages included family-owned platform granaries, a village-owned brush ceremonial enclosure, and sweat lodges. Granaries and more permanent housing were sometimes constructed within frequently visited oak groves. All of the Ipai and many of the Tipai camped in coastal valleys during certain times of the year when they gathered coastal resources. Land resources generally belonged to individual bands, with few areas considered "tribal" or open to anyone (Shipek 1982:301).

The religious conversion and physical removal of the Kumeyaay from their territory (through the *reduccion* process) began after establishment by the Spanish of the presidio at San Diego and the Mission San Diego de Alcalá in A.D. 1769. The loss of freedom and land by the Kumeyaay negatively affected their traditional subsistence strategies and overall lifeways (Carrico 1987). Many of the Kumeyaay eventually worked for the mission, though there was a feeling of nationality among the Kumeyaay that resulted in a level of federation not seen among other southern California native groups (Shipek 1987:5). Many Native American neophytes left the mission grounds when freed from mission control by the Mexican government in 1825. When the missions were fully secularized from 1834 to 1836, even more Native Americans left to find work on the large cattle ranchos created from prior mission lands.

California officially became part of the United States in 1848 with the signing of the Treaty of Guadalupe Hidalgo, and several reservations were formed after the mid-1870s. These include Barona Ranch, Campo, Cuyapaipe, Inaja and Cosmit, Los Coyotes (shared with Mountain Cahuilla), Manzanita, Mesa Grande,

Santa Ysabel, Sycuan, and Viejas (CIAP 2003). In the four decades following U.S. control, many of the ranchos became small farms and towns. The Kumeyaay who remained at or around the mission grounds usually tended to cattle and sheep, and maintained personal subsistence gardens. In the 1920s, many Kumeyaay became members of the Mission Indian Federation, which was organized to fight for self-rule on southern California reservations.

4.2.3 Historic Overview

Post-Contact history for California is generally divided into three periods: the Spanish Period (1769–1822), Mexican Period (1822–1848), and American Period (1848–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and signing of the Treaty of Guadalupe Hidalgo in 1848, which ended the Mexican-American War, signals the beginning of the American Period when California became a territory of the United States.

4.2.3.1 SPANISH PERIOD (1769–1822)

Spanish explorers made sailing expeditions along the coast of southern California between the mid-1500s and mid-1700s. In search of the legendary Northwest Passage, Juan Rodríguez Cabrillo stopped in 1542 at present-day San Diego Bay. With his crew, Cabrillo explored the shorelines of present Catalina Island, and San Pedro and Santa Monica Bays. Much of the present-day California and Oregon coastline was mapped and recorded in the next half-century by Spanish naval officer Sebastián Vizcaíno. Vizcaíno's crew also landed on Santa Catalina Island, and at San Pedro and Santa Monica Bays, giving each location its long-standing name. The Spanish crown laid claim to California based on the surveys conducted by Cabrillo and Vizcaíno (Bancroft 1886:96–99; Gumprecht 1999:35).

Inland exploration and colonization of Alta California by Spain was not a priority for more than 200 years. The 1769 overland expedition by Captain Gaspar de Portolá marks the beginning of California's "Historic Period," occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Baja (lower) California Native Americans, and Mexican civilians, Portolá established the Presidio of San Diego, a fortified military outpost, as the first Spanish settlement in Alta California. In July 1769, Franciscan Fr. Junípero Serra founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823.

To establish overland connections with California from Mexico's interior, Captain Juan Bautista de Anza set out in 1774 from Sonora and crossed the Colorado River into present-day Imperial Valley with a party of 34 padres, soldiers, and servants. Fr. Francisco Garcés, who had charted much of this route in 1770, guided the caravan through present-day Imperial County along the Alamo River drainage west and then north (Imperial County 2007; NPS 2004; Trimble 1977). The Spaniards continued their trek northwest to Monterey Bay, marching into present-day Riverside County through the Cahuilla Valley, tracing the Santa Rosa Mountains, continuing through Coyote Canyon, marching through San Jacinto Valley by way of Bautista Creek, and possibly passing through lands that now constitute March Air Reserve Base (Brown 1985). De Anza called the San Jacinto plain "Paradise Valley," and considered it to have good potential for future ranching and agriculture (Greenwood et al. 1993:10). De Anza returned to California in 1775 along the same route with a larger group of 240—including permanent settlers—pushed to San Francisco Bay, then retraced his trail to Sonora through present-day Riverside, San Diego, and Imperial counties in 1776 (Guerrero 2006).

Garcés returned in 1779 to the Yuma area, where he established Mission La Purisima Concepción de la Virgén Santisima on the north bank (California side) of the Colorado River. The mission was administered as part of the Arizona missions, and so was not part of the California series. The settlement included soldiers, settlers, and missionaries, but lasted only 6 months. To retaliate for the loss of their lands and crops, the local Native American population, the Quechan (formerly known as the Yuma) attacked and destroyed the settlement in 1781, killing the missionaries and nearly a hundred others (Weber 1992:257). With the Spanish expelled, this land route between northern Mexico and California settlements remained closed for decades.

Soon after the de Anza expeditions, seven additional missions were established in the 1770s as far north as present-day San Francisco. In southern California, these included Missions San Juan Capistrano and San Gabriel Arcángel in today's Orange and Los Angeles counties, respectively. A second mission in San Diego County, Mission San Luis Rey de Francia, was not founded until 1798.

The 21 missions were situated paralleling California coastline between San Diego and Sonoma. Near-coastal locations were preferred by the Spaniards for colonization because they were easier to defend and supply from ships, and were also bordered by populous Native American villages with potential converts. Approximately 30 miles or a day's ride by horseback typically separated the missions. The connecting roadway became known as "El Camino Real." Today's Interstate 5 between San Diego and Los Angeles and Highway 101 between Los Angeles and Petaluma generally follow "the King's Highway."

Only three fortified outposts besides the Presidio of San Diego were established by the Spanish government in Alta California. The northernmost was founded with the Mission San Francisco de Asís in 1776. The other two presidios were spaced in between these northern and southern arms of the mission system. The Presidio of Monterey and accompanying mission (San Carlos de Monterey) were established in 1770; in 1782, Spain built its last presidio in Alta California at Santa Bárbara.

All the missions contained churches, workshops, storehouses, soldiers' barracks, and quarters for Native American neophytes. These new converts were used as labor, establishing and nurturing the mission orchards, gardens, vineyards, and pastures. In San Diego, for example, 1,400 Native Americans were associated with the mission by 1797. Initially, cattle and horses were raised on the pastures adjacent to that first mission. Sheep, goats, and pigs were later added to the repertoire of animals raised on mission lands. These animals ultimately provided meat, wool, tallow for candles and soap, and leather for clothing, among other uses. Ranching eventually expanded to other areas and missions within San Diego County and beyond.

At all the missions, padres exercised strict control over the Native American neophytes, and oversaw all economic activities of Spanish California, particularly directing agricultural activities, including slaughter of cattle, pigs, and sheep, and nearly all related commercial activity (Dallas 1955:3–4). Chapman (1921:387) described the unique role of the padres as "[s]omething more than teachers of religion. The wide power of their administration made them virtual owners and managers of a vast economic plant. They were farmers, cattlemen, manufacturers, traders, and, in a sense, bankers and innkeepers, as well as preachers."

Although the areas within present-day Riverside and San Bernardino counties did not formally host Spanish missions, they remained connected to the California presidio and mission system through the Franciscan establishment of *estancias* (ranchos) and *asistencias* (submissions with a chapel but without a resident priest). Riverside was considered a part of the San Diego district, a military designation associated with the presidio; however, most of the territory fell under the authority of the Mission San Luis Rey de Francia, near present-day Oceanside in San Diego County. The most populous of California's 21 missions, San Luis Rey was founded in 1798. A series of mission *estancias* and *asistencias* were established in what is now Riverside County, including Santa Margarita, Las Flores, San

Mateo, San Juan, Pala, San Marcos, Agua Hedionda, Buena Vista, and the northernmost, San Jacinto (Greenwood et al. 1993:10; Tetra Tech 1999:7).

In 1818, Mission San Diego de Alcalá initiated a plan for a chain of inland branches, the first of which was Asistencia de Santa Ysabel, located in the mountains east of San Diego near the Native American village of *Elcuanan*. By 1821, the *asistencia* boasted a chapel, granary, cemetery, and adobe houses, and a population of 600 Native Americans (Quinn 1964). Two other inland substations were established by the powerful and populous Mission San Luis Rey. Asistencia de San Antonio de Pala was founded ca. 1816 approximately 20 miles inland from San Luis Rey. The second substation, the Los Flores Estancia, was constructed ca. 1823 between Missions San Luis Rey and San Juan Capistrano on the San Pedro Rancho, later called Rancho Santa Margarita y Los Flores, and now the Marine Corps Base at Camp Pendleton in northern San Diego County.

4.2.3.2 MEXICAN PERIOD (1822–1848)

A major emphasis during the Spanish Period in California was to build missions and associated presidios to integrate the Native American population into Christianity and communal enterprise. Inducements were also made to bring settlers to pueblos or towns, but just three pueblos were established during the Spanish Period, only two of which were successful and are now major California cities (San José and Los Angeles). The threat of foreign invasion, political dissatisfaction, demands for land by civilian settlers and retiring soldiers, and unrest among the indigenous population kept growth within Alta California to a minimum. After more than a decade of intermittent rebellion and warfare, New Spain (Mexico and the California territory) won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports, including San Diego, open to foreign merchants (Dallas 1955:14).

With Mexican independence, the new government attempted in 1823 to reopen the de Anza Trail and established Fort Romauldo Pacheco at Laguna Chapala on New River, about 20 miles northwest of present Calexico. The Quechan in 1826 once again expelled these intruders, whose survivors fell back to San Diego. Despite these efforts, the de Anza Trail eventually found a new purpose and accommodated tremendous traffic after the 1840s (von Werlhof 1992).

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population away from the more settled coastal areas where the Spanish had concentrated their colonization efforts. At the same time, the influence of the California missions waned in the late 1820s through the early 1830s. This decline resulted from a combination of outside events and pressures, including increasing hostilities between missionaries and local civilians who demanded mission lands, decimation of the Native American population by introduced diseases, and the influence of private traders in the hide and tallow industry.

Following adoption of the Secularization Act of 1833, the Mexican government privatized most Franciscan lands, including holdings of their California missions. By 1836, this sweeping process effectively reduced the California missions to parish churches and released their vast landholdings. Although earlier secularization schemes had called for redistribution of lands to Native American neophytes who were responsible for construction of the mission empire, the vast mission lands and livestock holdings were instead redistributed by the Mexican government through several hundred land grants to private, non–Native American ranchers (Langum 1987:15–18). The private Mexican citizens who received the land and their holdings subsequently used local Native Americans expelled from the missions for cheap, protracted labor, and in some instances expelled them from their grant holdings.

During the Mexican Period, the large ranchos became important economic and social centers. These included Cuyamaca Rancho, San Felipe Rancho, and Santa Ysabel Rancho, which together comprised

about 63,000 acres in today's central San Diego County. Nearly 48,000 acres were awarded as part of the Santa Rosa land grant in the southwestern corner of today's Riverside County, with an additional 27,000 acres as the Temecula Rancho to the east in Temecula and Murrieta Valleys. The Santa Rosa Rancho was located northeast of Rancho Santa Margarita y Los Flores, comprising more than 133,000 acres, and is now the Marine Corps Base at Camp Pendleton in northwestern San Diego County. The adjacent lands of Rancho Mission Viejo (also known as La Paz) in southeastern Orange County comprised more than 43,000 acres.

San Diego was organized under Mexico's laws as a pueblo (town) in 1834, bringing development of its own growing non-native population beyond the walls of the presidio in the area now known as Old Town (Pourade 1964). The lands of the Mission San Diego de Alcalá were sold to Santiago Arguella in 1845, although in 1862 the Catholic Church claimed the 22 acres of the rancho that included the mission buildings, graveyard, and church.

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The non-native population of California increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population unfortunately contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities. Large numbers of native peoples in the Central Valley, for example, died from disease between 1830 and 1833, and disease exterminated whole tribes along the American, Merced, Tuolumne, and Yuba Rivers. The Central Valley was hit by a second epidemic in 1837, which further decimated indigenous Californians (Cook 1955).

4.2.3.3 AMERICAN PERIOD (1848–PRESENT)

War in 1846 between Mexico and the United States brought U.S. Colonel Stephen Watts Kearny and part of his Army of the West from Kansas to California through present-day Imperial Valley. Lt. Colonel Philip St. George Cooke and the Mormon Battalion, following Kearny west to map a strategic wagon road through the territory, likewise moved through Imperial Valley. The Mexican-American War ended with the Treaty of Guadalupe Hidalgo signed in 1848, ushering California into its American Period.

Horticulture and livestock, based primarily on cattle as the currency and staple of the rancho system, continued to dominate the southern California economy through the first decade of the Gold Rush beginning in 1848. California became one of the United States with the Compromise of 1850, which also designated Utah and New Mexico (with present-day Arizona) as U.S. territories. San Diego County, at first stretching from the bay east to the Colorado River, was designated upon statehood and formally organized in 1852, followed in 1853 by San Bernardino County to the northeast (Greenwood et al.1993:14). Later, portions of San Diego County were carved out to create part of Riverside County in 1893 and Imperial County in 1907. Orange County, created in 1889, includes former Los Angeles County lands. Riverside County was also formed from parts of Los Angeles and San Bernardino counties.

During the Gold Rush, thousands of people traveled the Gila Trail or Southern Overland Trail from Texas to Arizona, then crossed the Colorado River at present-day Yuma, Arizona, into California and proceeded across the Colorado Desert to the San José Valley. The main trail continued from that point northward to Temecula and Los Angeles. Many left the main trail and traveled southward to San Diego, where they then journeyed via ship to San Francisco or took the inland coastal route to Los Angeles, rejoining the main trail to the gold fields.

With the influx of people seeking gold, cattle were no longer desired mainly for their hides, but also as a source of meat and other goods. During the 1850s cattle boom, rancho vaqueros drove large herds from

southern to northern California to feed that region's burgeoning mining and commercial boom. Cattle were at first driven along major trails or roads such as the Gila Trail or Southern Overland Trail, then were transported by trains where available. The cattle boom ended for southern California as neighbor states and territories drove herds to northern California at reduced prices, as operation of the huge ranchos became increasingly difficult, and as droughts severely reduced their productivity.

American politics and the need for a mild-winter route to the West favored a southerly thoroughfare from the eastern United States to California in the 1850s. The U.S. Gadsden Purchase of 1854 secured more land from Mexico for this route, and by 1857 surveys established the current international boundary from New Mexico west to California (Walker and Bufkin 1986). In 1857 the government awarded to James E. Birch a 1,475-mile mail contract from San Antonio, Texas, to San Diego. The contractor's "Jackass Mail" passed through the Imperial Valley on its 2-month-long roundtrips. In 1858, the federal contract passed to the Butterfield Overland Mail Company. With the start of the Civil War in 1861 and departure of Southern representatives from Congress, the U.S. government cancelled Butterfield's contract and suspended talks on a southern transcontinental rail route.

With the disruption of the Civil War and other factors, rancho ownerships changed hands often, and patróns subdivided some larger holdings into smaller parcels. The winters of 1862–1863 and 1863–1864 produced almost no rainfall in southern California, and by the time rains came in February 1864, thousands of livestock had perished from hunger and/or thirst. Devastation brought about by severe droughts and the changing economy ruined many surviving ranchero families and resulted in the refocusing of grazing activities in southern California upon sheep (Beattie and Beattie 1939; Brown 1985; Ingersoll 1904).

Following the Civil War, overland stage services to and from southern California resumed in 1868 with the Holladay and Wells Fargo operations (Nevin 1974; Stein 1994). The pre–Civil War national initiative for a southern transcontinental railroad route resumed during the 1870s, as the Texas and Pacific (T&P) Railway Company in 1871 received a federal charter and conducted transcontinental surveys to pursue the initiative. In 1873, however, the T&P's westerly construction stalled in north-central Texas. The resulting delay was critical, allowing San Francisco investors to extend their own Southern Pacific Railroad (SPRR) through Imperial Valley to the Colorado River in 1877, bridging the river at Yuma into Arizona along the T&P survey in 1878 (Yenne 1985).

The California Southern Railroad (a subsidiary of the Santa Fe Railway system) connected the Los Angeles area through Oceanside with San Diego in 1885 (Davidson 1955). Arrival of the Southern Pacific, Santa Fe, and connecting lines throughout southern California in the 1870s and 1880s brought economic opportunity and exponentially increased the state's population, a combined economic and cultural phenomenon widely identified as the Boom of the Eighties (Dumke 1944).

Agricultural development of the Imperial Valley around 1900 brought regional rail service deeper into its fertile lands, beginning with a SPRR branch in 1903 between Niland and Imperial, eventually connecting to Calexico in 1904. The town of El Centro was linked directly with San Diego in 1919 with construction of the San Diego and Arizona (SD&A) Railway, which penetrated part of the rough Jacumba Mountains by meandering south into Mexico through its San Ysidro and Tecate Valleys (Imperial County 2007; Wee and Ferrell 2000).

4.2.3.4 SAN DIEGO COUNTY

Successful Gold Rush merchant and land speculator Alonzo E. Horton moved from San Francisco to San Diego in 1867, purchased 960 acres adjacent to the bay south of Old Town, and laid out an "addition" for San Diego's new town site. The fast-growing city was re-incorporated in 1872, and within a few years San Diego became the largest California city south of Los Angeles, aided significantly by completion of

the Atchison, Topeka, and Santa Fe Railway (as its California Southern Railroad subsidiary) connection to its transcontinental line northeast of Los Angeles in 1885 (Dumke 1944).

Beginning in the 1870s, many residents of San Diego County commonly lived on farmsteads, often forming rural communities with clusters of other nearby farmsteads. Many of these farmsteads were built on land surrounding Horton's Addition, while his "South San Diego" rapidly developed into the new downtown San Diego and the Hillcrest area. The county's farming communities included El Cajon, Jamacha, Mission, and Otay, supplying urban San Diego with food and developing strong local markets and businesses. Wheat was an important cash crop early on, but in the 1870s and 1880s, farmers increasingly cultivated tree or vine sustenance crops such as apricots, cherries, grapes, lemons, olives, oranges, peaches, and plums. Fruit trees grew best on hillsides and mesas, while barley, corn, oats, and wheat grew well in the valleys (Davidson 1955).

The discovery of gold-bearing quartz during the winter of 1869–1870 was San Diego County's first and only gold rush. A thriving mining district located in the Cuyamaca Range about 50 miles east of San Diego grew around the town of Julian, the district's social and commercial center (Anonymous 1890; Hoover et al. 2002). With over 60 mining locations, the hard rock mines, particularly the better-known George Washington, Cuyamaca, Golden Chariot, and Stonewall Jackson, yielded some $5 million in gold ore. Oak and pine timber for the mines, camps, quartz mill furnaces, and towns was obtained in the mountains around the mines; dim traces of "skid roads" remain visible in the area. As gold production declined over the ensuing decade, most of the hard rock mines at Julian and its sister community of Banner were played out by 1880.

San Diego Bay first harbored U.S. Navy ships in 1898, and San Diego County thereafter hosted several major naval installations, accelerating after construction of the Pacific fleet's coaling station in 1907. San Diego in the late 1910s experienced another major urban boom highlighted by the Panama-California Exposition of 1915–1916, celebrating completion of the Panama Canal. Starting in the 1910s, aircraft enthusiasts and builders found San Diego weather attractive; the Navy added its first Naval Air Station on North Island in 1917, and in 1927 Charles Lindbergh prepared his Ryan monoplane in San Diego for its record-setting trans-Atlantic flight. San Diego's mild climate and strong military presence attracted other aircraft manufacturers in the 1930s, and during World War II the city and bay became a major center of the aircraft industry and naval aviation. At the northwestern extent of the county, Marine Corps Base Camp Pendleton was established on the coast in 1942 to train Marines for the war. After the war, many personnel that had been stationed in San Diego County returned to the area with their families to create the next population and housing boom (Davidson 1955).

Yet another transportation event strongly affected southern California in the 1910s, as national automobile clubs sought to stitch the country together with a highway network for their members who were discovering the freedom and economics of gasoline-powered vehicles. Promoters of the "Ocean-to-Ocean Highway," including Alabama Senator John H. Bankhead, first drew lines on maps to connect Washington, D.C. (through Alabama) with California. While the Ocean-to-Ocean Highway crossed into California at Yuma, by 1912 its members decided to connect with Los Angeles. Another association promoting the "Dixie Overland Trail" projected a connection west to San Diego and eventually sponsored the infamous "Old Plank Road" through Imperial Valley as part of its route. Through the 1920s, City, County, and State road departments with some federal assistance pieced together a paved series of roads for this San Diego transcontinental connection, now called the "Broadway of America" and "Bankhead Highway" for its loudest promoter after his death in 1920. In 1926, a federal committee designated the route in Arizona and California U.S. Highway 80, eventually improved as a 2,500-mile "critical, primary road" passing through eight states from the Atlantic seaboard through Imperial Valley to the Pacific Ocean at San Diego. By 1972, completion of Interstate Highway 8 largely replaced U.S. 80 in California, but many sections of the old highway, regularly improved through the 1960s, still carry traffic in San Diego and Imperial counties (Weingroff 2008; Finley 1997).

Outside the City of San Diego, the earliest farmers and farming communities owned the most productive land and prospered well into the 1920s. Unfortunately, latecomers who purchased less productive land often struggled to maintain farms they frequently sold within 10 years. Many of the county's smaller agricultural tracts disappeared in the 1920s and 1930s, and some were incorporated into a few large agricultural tracts. The associated decline in cattle ranching was further exacerbated by the creation of the CNF in 1908. Developed to protect the San Diego, Orange, and Riverside County watershed, the U.S. Forest Service placed strict guidelines on the number of cattle permitted to graze the forest lands and on burning vegetation to improve forage quality. Still, beef production remained one of the more important agricultural industries in San Diego throughout the 1930s and 1940s.

According to the San Diego Regional Chamber of Commerce (1998–2008), the key industries in the county include agriculture, the military and homeland defense industry, high technology (biomedical, software, telecommunications), international trade, manufacturing, and tourism. Of these, manufacturing, including shipbuilding and repair, production of toys and sporting goods, computers, metals, and industrial machinery, contributed the most to the county's gross national product in 2002. Agricultural production in the county now focuses on specialized crops (e.g., avocados, exotic flowers, and nursery and decorative plants). The county has the second largest number of farms and is the twentieth largest agriculture producer in the United States; nursery plants and flowers constitute two-thirds of the value of crops produced.

5 NATIVE AMERICAN COORDINATION

On March 16, 2015, SWCA requested a search of the Sacred Lands Files (SLFs) from the NAHC. SWCA received a response letter by facsimile from the NAHC on April 20, 2015, stating that the results of the SLF search indicate that no Native American cultural resources are known in the immediate vicinity of the Proposed Project Area. The NAHC provided a list of 15 Native American groups and individuals who may have knowledge of cultural resources in the Proposed Project Area. On June 22, 2015, Carolyn Stewart, Director of Tribal Relations for NEET West, sent letters to each of the contacts listed by the NAHC, plus four additional contacts NEET West identified independently, identifying an area of interest in which the Proposed Project will be located and requesting input by email or by U.S. mail. Table 1 summarizes NEET's coordination efforts with each Native American contact. As of August 21, 2015, NEET West has received two responses: Julie Hagen of the Viejas Band of Kumeyaay Indians requested a site visit and a copy of the cultural resources technical report when it is publicly available, and Carmen Lucas of the Kwaaymii Laguna Band of Mission Indians requested to review the cultural resources technical report and recommended that the Viejas Band of Kumeyaay Indians provide Native American monitoring for the Proposed Project. NEET West responded to Hagen and Lucas, and arranged a site visit on August 4, 2015. Copies of the cultural resources technical report will be provided to the two groups upon filing the PEA with the CPUC.

On July 1, 2015, SWCA requested a supplemental SLF search from the NAHC, which covered an expanded area of interest in case of future changes to the Proposed Project. SWCA received a response letter by email from the NAHC on August 18, 2015, stating that the results of the SLF search indicate that no Native American cultural resources are known in the immediate vicinity of the expanded area of interest. The NAHC provided a list of Native American groups and individuals who may have knowledge of cultural resources in the Proposed Project Area; the list was identical to the list provided in response to the initial request. Documentation of coordination with Native American groups and individuals is provided in Appendix C.

Table 1. Native American Coordination Summary

Native American Contact	Letter Sent	Follow-Ups	Results
Ewiiaapaayp Tribal Office Robert Pinto Sr., Chairperson 4054 Willows Road Alpine, CA 91901 wmicklin@leaningrock.net (619) 445-6315 (619) 445-9126 (fax)	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Jamul Indian Village Raymond Hunter, Chairperson P.O. Box 612 Jamul, CA 91935 Rhunter1948@yahoo.com (619) 669-4785	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Sycuan Band of the Kumeyaay Nation Cody J. Martinez, Chairperson 1 Kwaaypaay Court El Cajon, CA 92019 ssilva@sycuan-nsn.gov (619) 445-2613 (619) 445~1927 (fax)	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Kwaaymii Laguna Band of Mission Indians Carmen Lucas P.O. Box 775 Pine Valley, CA 91962 (619) 709-4207	06/22/2015: via U.S. Mail		07/06/2015: Letter received via U.S. Mail requesting a copy of the cultural resources technical report and recommending that the Viejas Band of Kumeyaay Indians provide Native American monitoring for the Proposed Project. A site visit was conducted on August 4, 2015, and the cultural resources technical report will be provided once the PEA is filed with CPUC.
Viejas Band of Kumeyaay Indians Anthony R. Pico, Chairperson P.O. Box 908 Alpine, CA 91903 jhagen@vlejas-nsn.gov (619) 445-3810 (619) 445-5337 (fax)	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Kumeyaay Cultural Repatriation Committee Steve Banegas, Spokesperson 1095 Barona Road Lakeside, CA 92040 sbanegas50@gmail.com (619) 742-5587 (619) 443-0681 (fax)	06/22/2015: via U.S. Mail		No response as of 8/21/2015

Table 1. Native American Coordination Summary

Native American Contact	Letter Sent	Follow-Ups	Results
Kumeyaay Cultural Historic Committee Ron Christman 56 Viejas Grade Road Alpine, CA 91901 (619) 445-0385	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Viejas Band of Kumeyaay Indians Julie Hagen, Cultural Resources P.O. Box 908 Alpine, CA 91903 jhagen@viejas-nsn.gov (619) 445-3810 (619) 445-5337	06/22/2015: via U.S. Mail		06/29/2015: Letter received from Hagen via email requesting a copy of the cultural resources technical report and a site visit. Stewart responded informing Hagen that she would be in touch regarding her requests. Subsequently, a site visit was conducted on August 4, 2015. The cultural resources technical report will be provided once the PEA is filed with CPUC.
Ewiiaapaayp Tribal Office Will Micklin, Executive Director 4054 Willows Road Alpine, CA 91901 wmicklin@leaningrock.net (619) 445-6315 (619) 445-9126 (fax)	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Inter-Tribal Cultural Resource Protection Council Frank Brown, Coordinator 240 Brown Road Alpine, CA 91901 frbrown@viejas-nsn.gov (619) 884-6437	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Iipay Nation of Santa Ysabel Clint Linton, Director of Cultural Resources P.O. Box 507 Santa Ysabel. CA 92070 cjlinton73@aol.com (760) 803-5694	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Kumeyaay Cultural Repatriation Committee Bernice Paipa, Vice Spokesperson P.O. Box 937 Boulevard, CA 91905 bernicepaipa@gmail.com	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Sycuan Band of the Kumeyaay Nation Lisa Haws, Cultural Resource Manager 1 Kwaaypaay Court El Cajon, CA 92019 (619) 445-4564	06/22/2015: via U.S. Mail		No response as of 8/21/2015

Table 1. Native American Coordination Summary

Native American Contact	Letter Sent	Follow-Ups	Results
Iipay Nation of Santa Ysabel Virgil Perez, Chairperson P.O. Box 130 Santa Ysabel, CA 92070 (760) 765-0845 (760) 765-0320 (fax)	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Kumeyaay Diegueno Land Conservancy Kim Bactad, Executive Director 2 Kwaaypaay Court El Cajon, CA 92019 kimbactad@gmail.com (619) 659 1008 (619) 445-0238 (fax)	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Barona Band of Mission Indians Mr. Adam Reyes, Councilman 1095 Barona Road Lakeside, CA 92040	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Barona Band of Mission Indians Mr. Clifford LaChappa, Chairman 1095 Barona Road Lakeside, CA 92040	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Campo Kumeyaay Nation Mr. Ralph Goff, Chairman 36190 Church Road, Suite 1 Campo, CA 91906	06/22/2015: via U.S. Mail		No response as of 8/21/2015
Campo Kumeyaay Nation Mr. Steven Cuero, Committee Member 36190 Church Road, Suite 1 Campo, CA 91906	06/22/2015: via U.S. Mail		No response as of 8/21/2015

6 METHODS

6.1 Records Search

On February 13, 2015, SWCA requested a search of the California Historical Resources Information System (CHRIS) from the SCIC, located at San Diego State University; SCIC provided the results to SWCA on February 18, 2015. The search included any previously recorded cultural resources and investigations within the Records Search Area, defined as approximately a 1-mile radius around the Proposed Project Area (see Figure 3). Both the Survey Area and the Proposed Project Area are within Records Search Area. The CHRIS search also included a review of the NRHP, the CRHR, the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, the Historic Properties Directory, and the California State Historic Resources Inventory. The letter from the SCIC summarizing the results of the records search is provided in Appendix B.

In addition to reviewing the results of the SCIC records search, SWCA contacted SDG&E to request copies of reports for archaeological monitoring conducted as part of the Sunrise Powerlink Project.

SDG&E provided one report, which was reviewed for information pertaining to resources located in the Records Search Area (Kyle and Williams 2013).

6.2 Cultural Resources Survey

SWCA conducted cultural resources surveys on February 24, March 25, May 1, May 11–14, and August 13, 2015. An intensive-level survey of the Cultural Resources Survey Area was conducted. The intensive-level survey consisted of systematic surface inspection with transects walked at 15-m (50-foot) intervals or less to ensure that all surface-exposed artifacts, sites, and built environment resources in the Survey Area could be identified. SWCA examined the ground surface for the presence of prehistoric artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools), historical artifacts (e.g., metal, glass, ceramics), sediment discoloration that might indicate the presence of a cultural midden, roads and trails, and depressions and other features that might indicate the former presence of structures or buildings (e.g., post holes, foundations).

Whenever cultural materials were encountered, SWCA collected all data necessary to complete the appropriate DPR 523 series forms (Appendix D). Resources were mapped with a handheld mapping-grade Trimble GeoXT global positioning system (GPS) unit with sub-meter accuracy and differential correction. Field GPS data for sites were post-processed using ArcGIS ArcPad software and projected into Universal Transverse Mercator, Zone 11 North, North American Datum 1983 coordinates. All GPS data were exported into geographic information systems (GIS) geodatabases and plotted onto the associated geo-referenced USGS 7.5-minute quadrangle to ensure accuracy and to produce location maps of all resources. In addition to mapping, SWCA documented all resources with overview photographs. No artifacts were collected during the surveys. SWCA assigned temporary field numbers using the prefix "SUN" (Suncrest) and the designation "S" for site, "BSO" for built environment resources, and "ISO" for isolate. All field notes, photographs, and records related to the current study are on file at the SWCA Half Moon Bay, California, office.

7 RESULTS

7.1 Records Search

7.1.1 Previously Conducted Cultural Resource Studies

Results of the SCIC cultural resources records search indicate that 21 previous cultural resource studies have been conducted within the Records Search Area, which is defined as approximately a 1-mile radius around the Proposed Project Area (see Figure 3); five of these were conducted within the Proposed Project Area. Two of these studies are cultural resources surveys that were conducted within the Proposed Project Area within the last 10 years (SD-12046 and SD-12711). One additional study (Kyle and Williams 2013) was not included in the SCIC results but was provided to SWCA by SDG&E; this study documents the results of cultural resources monitoring during construction of the Sunrise Powerlink. Details pertaining to these investigations are presented in Table 2.

Table 2. Prior Cultural Resource Studies within the Records Search Area

Report Number	Author	Year	Study Title	Proximity to Survey Area	Proximity to Proposed Project Area
SD-00293	Carrico, Richard	Unknown	*Archaeological Investigation of TPM 13476 Willows Road Alpine, California*	Outside	Outside

Table 2. Prior Cultural Resource Studies within the Records Search Area

Report Number	Author	Year	Study Title	Proximity to Survey Area	Proximity to Proposed Project Area
SD-00614	Fink, Gary R.	1974	*Archaeological Survey for the Proposed Descanso Landfill, Descanso, California, Project No. UJ0112*	Outside	Outside
SD-00617	Fink, Gary R.	1973	*Archaeological Survey of the Descanso Landfill Site*	Outside	Outside
SD-01261	Isham, Dana	1974	*An Archaeological Survey of Some Rock Circles in the Japatul Valley, San Diego County, California.*	Outside	Outside
SD-01551	Swenson, James D., and Phillip J. Wilke	1980	*An Assessment of Cultural Resources Located on the Viejas Indian Reservation, San Diego County, California*	Outside	Outside
SD-01648	Welch, Patrick	1977	*Archaeological Reconnaissance of the Proposed Alpine Recreational Vehicle Park*	Outside	Outside
SD-02116	TMI Environmental Services	1989	*Draft Environmental Impact Report Tully General Plan Amendment Alpine Community Plan Update (GPA 89-03)*	Outside	Outside
SD-04221	Crouthamel, Steven J.	1994	*An Archaeological Survey of the Viejas Indian Reservation of 10 Scattered Housing Sites, CA 80-60, in the Viejas Mtn, Quad (7.5 minute)*	Outside	Outside
SD-05851	Crouthamel, Steven J.	1991	*Archaeological Site Survey of the Viejas Indian Reservation, San Diego County, California, Proposed House Sites CA 80-56*	Outside	Outside
SD-06425	Carrico, Richard	1990	*Historic Resources Inventory Sweetwater Valley*	Within	Within
SD-07107	Welch, Pat	1977	*An Archaeological Survey of the Claus Property, Escondido*	Outside	Outside
SD-07825	Nighabhlain, Sinead, and Drew Pallette	2000	*Archaeology Survey for the Viejas Water Distribution System Improvement Project Viejas Indian Reservation, California*	Outside	Outside
SD-07827	Nighabhlain, Sinead, and Drew Pallette	2000	*Cultural Resource Survey of Four Properties for the Viejas Fee-To-Trust Transfer Application, Alpine, California*	Outside	Outside

Table 2. Prior Cultural Resource Studies within the Records Search Area

Report Number	Author	Year	Study Title	Proximity to Survey Area	Proximity to Proposed Project Area
SD-10217	Rosen, Martin D., and Lori Harrington	2005	*Qwest Viejas Relocation Project Historic Property Survey Report and Negative Archaeological Survey Report*	Outside	Outside
SD-10476	Carrico, Richard L.	1974	*Archaeological Reconnaissance of Rezone Request R74-53*	Outside	Outside
SD-10551	Arrington, Cindy	2006	*Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California*	Outside	Outside
SD-10997	Carrico, Richard L., Theodore G. Cooley, and Laura J. Barrie	2003	*Final Archaeological Overview for the Cleveland National Forest, California*	Within	Within
SD-11977	SWCA Environmental Consultants	2008	*Final Cultural Resources Survey of Alternatives for the Sunrise Powerlink Project in Imperial, Orange, Riverside, and San Diego Counties, California*	Within	Within
SD-12046	Noah, Anna C.	2008	*Cultural Resources Study of the Modified Route D Substation and Access Road for the SDG&E Sunrise Powerlink Project, San Diego County, California*	Within	Within
SD-12181	Mitchell, Patricia	2009	*Sunrise Powerlink Incident Report of Findings*	Outside	Outside
SD-12711	Garcia-Herbst, Arleen, David Iversen, Don Laylander, and Brian Williams	2010	*Final Inventory Report of the Cultural Resources Within the Approved San Diego Gas & Electric Sunrise Powerlink Final Environmentally Superior Southern Route, San Diego and Imperial Counties, California*	Within	Within
N/A (Report provided by SDG&E, Kyle and Williams 2013)	Kyle, Carolyn and Brian Williams	2013	*Archaeological Resources Monitoring Results for Construction of San Diego Gas & Electric's Sunrise Powerlink Project, San Diego and Imperial Counties, California*	Within	Within

7.1.2 Previously Recorded Cultural Resources

The SCIC records search results identify 21 previously recorded cultural resources within the Records Search Area, which is defined as approximately a 1-mile radius around the Proposed Project Area (see Figure 3). Of these, one is within the Proposed Project Area: prehistoric site P-37-031744/CA-SDI-20166, a prehistoric bedrock milling station, which was determined not eligible for the CRHR and NRHP by the CPUC (Kyle and Williams 2013). Details pertaining to these sites are presented in Table 3.

Two additional prehistoric archaeological sites in the immediate vicinity of the Proposed Project Area (P-37-029773/CA-SDI-19036 and P-37-031970/CA-SDI-20239) have been evaluated and determined not eligible for the CRHR and NRHP by the CPUC and the Bureau of Land Management as part of the Sunrise Powerlink. Site P-37-029773/CA-SDI-19036 is a large site which includes lithic scatters, ground stone, bedrock mortars, and hearths. Prehistoric archaeological site P-37-029774/CA-SDI-19037, which was originally recorded as a separate site, was incorporated into CA-SDI-19036 prior to evaluation. Although the site records indicate it was originally recommended eligible, CA-SDI-19036 was evaluated and determined not eligible prior to construction of the Suncrest Substation; some subsurface materials were recovered during construction monitoring at the site, but this did not affect the evaluation (Kyle and Williams 2013). Site P-37-031970/CA-SDI-20239 is a small flaked and ground stone scatter with no identified intact subsurface component; the site was evaluated prior to construction of the Suncrest Substation and determined not eligible (Kyle and Williams 2013).

Table 3. Previously Recorded Cultural Resources within the Records Search Area

Primary Number	Trinomial	Type	Resource Description	CRHR/NRHP/ SHL Eligibility Status	Recorded By and Year	Proximity to Survey Area	Proximity to Proposed Project Area
P-37-009194	CA-SDI-9194	Prehistoric site	Lithic scatter	Not evaluated	Brandoff, J. 1975	Outside	Outside
P-37-009841	CA-SDI-9841	Prehistoric site	Lithic scatter	Not evaluated	Noach, A., and R. Gadler 1984	Outside	Outside
P-37-029773	CA-SDI-19036	Prehistoric site	Bedrock milling features and lithic scatter	~~Recommended~~ Not eligible for NRHP/CRHR	Bouscaren, C., P. Hanes, P. Shattuck, L. Burgos, M. Hares, and R. Pettus 2007; Williams, B. 2010; Williams, B. 2011	Outside	Outside
P-37-029774	CA-SDI-19037 (subsumed into CA-SDI-19036)	Prehistoric site	Bedrock milling features and lithic scatter	Not evaluated individually; found not eligible for NRHP/CRHR as part of CA-SDI-19036	Bouscaren, C., P. Hanes, P. Shattuck, L. Burgos, M. Hares, and R. Pettus 2007	Outside	Outside
P-37-029775	CA-SDI-19038	Prehistoric site	Bedrock milling features and lithic artifact	Not evaluated	Bouscaren, C., P. Hanes, R. Pettus, L. Burgos, and M. Hares 2007; Comeau, B. 2009	Outside	Outside
P-37-030222	CA-SDI-19254	Prehistoric site	Lithic scatter	Not evaluated	Piek, L. 2007	Outside	Outside
P-37-030375	CA-SDI-19307	Prehistoric site	Bedrock milling feature and lithic scatter	Not evaluated	Doose, N, B. Spelts, R. Brooke, and C. Linton 2008; Williams, B. 2010	Within	Outside
P-37-031198	CA-SDI-19771	Prehistoric site	Bedrock milling features and lithic scatter	Not evaluated	Williams, B., D. Mengers, W. Reed, and J. Herrera 2009	Outside	Outside
P-37-031199	CA-SDI-19772	Prehistoric site	Bedrock milling features	Not evaluated	Williams, B., W. Reed, and J. Herrera 2009	Outside	Outside
P-37-031200	CA-SDI-19773	Prehistoric site	Ceramic scatter	Not evaluated	Williams, B., W. Reed, and J. Herrera 2009	Outside	Outside

Table 3. Previously Recorded Cultural Resources within the Records Search Area

Primary Number	Trinomial	Type	Resource Description	CRHR/NRHP/ SHL Eligibility Status	Recorded By and Year	Proximity to Survey Area	Proximity to Proposed Project Area
P-37-031202	CA-SDI-19775	Prehistoric site	Lithic scatter	Not evaluated	Williams, B., D. Mengers, S. Rochester, L. Piek 2010	Outside	Outside
P-37-031203	CA-SDI-19776	Prehistoric site	Lithic scatter and rock alignment	Not evaluated	Williams, B., D. Mengers, S. Rochester, L. Piek 2010	Outside	Outside
P-37-031204	CA-SDI-19777	Prehistoric site	Bedrock milling features and ceramic scatter	Not evaluated	Williams, B. 2010	Outside	Outside
P-37-031206	CA-SDI-19779	Historic site	Refuse scatter	Not evaluated	Comeau, B. 2009	Outside	Outside
P-37-031212	N/A	Historic site	Two rock cairns	Not evaluated	Williams, B., D. Mengers, W. Reed, and J. Herrera 2009	Outside	Outside
P-37-031221	CA-SDI-19793~~CA-SDI-20166~~	Prehistoric site	Bedrock milling features	Not evaluated	Elliot, W., T. Hector-Rosen, J. Herrera, D. Iversen, D. Mengers, and J. Parada 2009	Outside	Outside
P-37-031717	–	Prehistoric isolate	Biface fragment	Not evaluated	Williams, B. 2010	Outside	Outside
P-37-031744	CA-SDI-20166	Prehistoric site	Bedrock milling feature	Not eligible for NRHP/CRHR~~Unknown~~	Piek, L., B. Williams, and B. Comeau 2011	Within	Within
P-37-031970	CA-SDI-20239	Prehistoric site	Lithic scatter	Not eligible for NRHP/CRHR~~Unknown~~	Justus, S. 2011	Outside	Outside
P-37-033363	CA-SDI-20984	Prehistoric site	Bedrock milling feature	Not evaluated	Justus, S. 2011	Within	Outside
P-37-033365	–	Historic site	Rock ring	Not evaluated	MacHardy, B. 2012	Outside	Outside

7.2 Cultural Resources Survey

SWCA conducted an intensive-level pedestrian survey of the 65.2-acre Cultural Resources Survey Area (Figure 4). Thirteen resources were recorded within the Survey Area (Table 4; Figure A-1): three previously recorded prehistoric archaeological sites (CA-SDI-19307, CA-SDI-20984, and CA-SDI-20166); three newly identified prehistoric archaeological sites (SUN-S-1004, SUN-S-1005, and SUN-S-1012); two newly identified historic built environment resources (SUN-BSO-1002 and SUN-BSO-1011); three newly identified prehistoric isolates (SUN-ISO-1006, SUN-ISO-1017, and SUN-ISO-1028); and two newly identified historic isolates (SUN-ISO-1001 and SUN-ISO-1016). Disturbances are generally limited to ~~the areas adjacent to~~ Bell Bluff Truck Trail and adjacent areas, as well as the former location of the Wilson Laydown Area, a temporary laydown yard for construction associated with the Suncrest Substation and currently the site of biological habitat restoration. The underground transmission line is located primarily within Bell Bluff Truck Trail, and~~;~~ the SVC location is located within the former laydown yard. Most of the Survey Area consists of slopes of varying steepness and is covered in dense vegetation, including brush, trees, and grasses. Ground visibility in the Survey Area is variable though generally very poor, ranging from less than 10 percent in undisturbed, highly vegetated areas to over 70 percent in disturbed areas that have been cleared of brush (Figures 6–9). SWCA identified 31 acres within the Survey Area as areas with very poor ground visibility; none of these are within the Proposed Project Area (Figure 5).

Table 4. Resources Recorded in Survey Area During Cultural Resources Survey

Primary Number	Trinomial or Temporary Number	Resource Type	Time Period	Description	Intersecting Project Components
P-37-030375	CA-SDI-19307	Prehistoric archaeological site	Prehistoric	Bedrock mortar with one milling slick	None
P-37-031744	CA-SDI-20166	Prehistoric archaeological site	Prehistoric	Bedrock mortar with two milling slicks	SVC underground tie-line
P-37-033363	CA-SDI-20984	Prehistoric archaeological site	Prehistoric	Bedrock mortar with one milling slick	None
–	SUN-S-1004	Prehistoric archaeological site	Prehistoric	Lithic scatter and quarry	None
–	SUN-S-1005	Prehistoric archaeological site	Prehistoric	Bedrock mortar with one milling slick	None
–	SUN-S-1012	Prehistoric archaeological site	Prehistoric	Lithic scatter	SVC location
–	SUN-ISO-1001	Historic isolate	Mid-twentieth century	5-gallon metal drum	None
–	SUN-ISO-1006	Prehistoric isolate	Prehistoric	Flake	None
–	SUN-ISO-1016	Historic isolate	Twentieth century	Metal can	None
–	SUN-ISO-1017	Prehistoric isolate	Prehistoric	Mano fragment	None
–	SUN-ISO-1028	Prehistoric isolate	Prehistoric	Flake	None
–	SUN-BSO-1002	Historic built environment resource	Early twentieth century	Bell Bluff Truck Trail	SVC underground tie line

Table 4. Resources Recorded in Survey Area During Cultural Resources Survey

Primary Number	Trinomial or Temporary Number	Resource Type	Time Period	Description	Intersecting Project Components
–	SUN-BSO-1011	Historic built environment resource	Early to mid-twentieth century	Water conveyance feature	None

Figure 5. Survey Coverage and Areas of Poor Ground Visibility

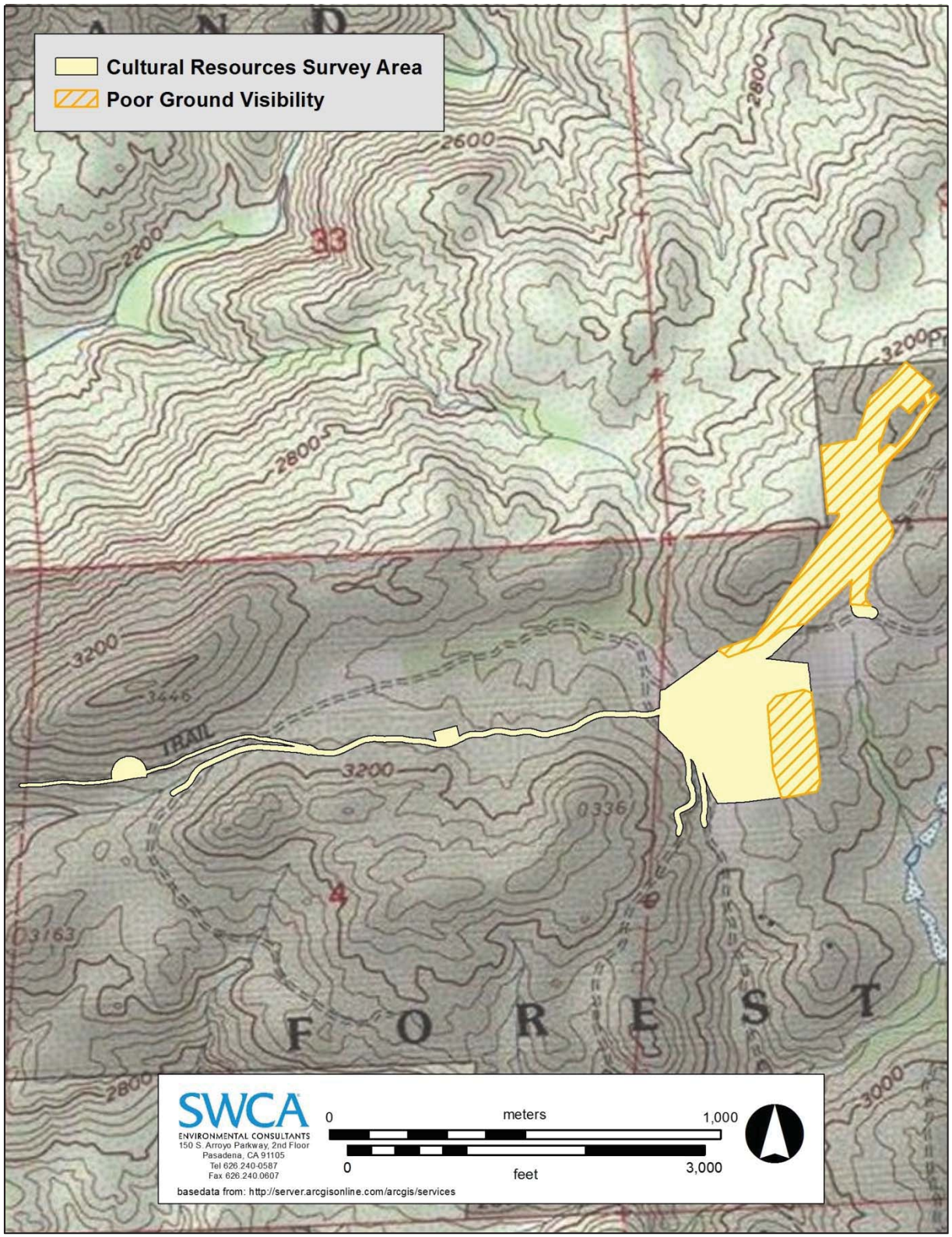


Figure 6. Overview of SVC Location, View to the East

Figure 7. Overview of Survey Area, View to the West

Figure 8. Overview of Survey Area with Dense Vegetation Outside of Proposed Project Area, View to the South

Figure 9. Overview of Bell Bluff Truck Trail within Proposed Project Area, View to the East

7.2.1 Previously Recorded Archaeological Sites

SWCA updated three previously recorded archaeological sites during the field survey: CA-SDI-19307, CA-SDI-20984, and CA-SDI-20166. All three sites are small bedrock milling stations with one or two slicks on granite outcrops. Only one of these, CA-SDI-19307, has associated artifacts.

7.2.1.1 CA-SDI-19307 (P-37-030375)

Temporal Affiliation: Prehistoric
Dimensions: 29 × 20 m (95 feet × 65.5 feet)
Proximity to Proposed Project Area: Outside

Site CA-SDI-19307 (P-37-030375) is a prehistoric bedrock milling station occupying a west-facing slope measuring 29 × 20 m (95 × 65.5 feet) (Figure 10). The site is situated on a granite bedrock landform with an unknown thickness of residuum and colluvium composed of decomposed granite and organic matter or duff. The topography of the vicinity is characterized by mostly flat terrain that slopes gently to the west and southwest toward a broad meadow. Additional, discontinuous granite outcroppings extend northeast of the site; some of these outcroppings are included within the original site boundary. An unnamed, intermittent stream is located approximately 225 m (738 feet) east of the site. Ground visibility is poor (approximately 10 percent) due to the presence of dense short and tall grasses and heavy accumulation of plant duff.

Figure 10. Site CA-SDI-19307, Overview of Milling Station, View to the South

The site was originally recorded in 2008 by Gallegos and Associates as a granite outcrop with a single milling slick and an associated piece of quartz debitage. The site was updated in 2010 by ASM Affiliates, Inc. (ASM), who confirmed that it was in the same condition as previously recorded. SWCA revisited and updated the site record during the current study. SWCA re-located the site in its recorded location and in the same general condition as described in the 2008 site form and in the 2010 updated site record.

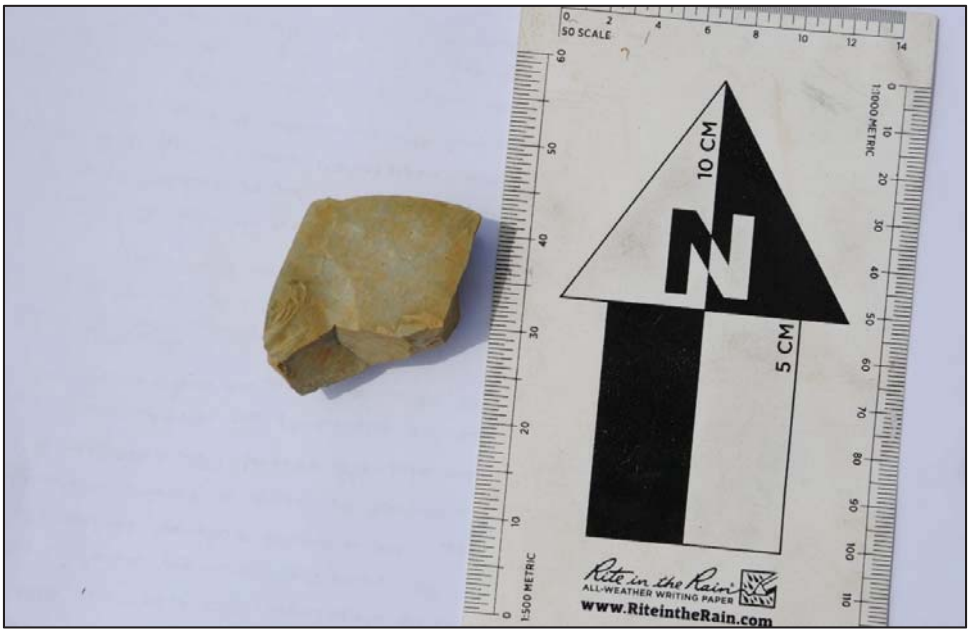
The granite outcrop is oriented north-south and was originally measured in 2008 to be 0.7 × 1.0 × 0.3 m (2 feet 3 ½ inches × 3 feet 3 $^{3}/_{8}$ inches × 1 foot). Upon measuring the outcrop for the 2015 site update,

SWCA observed that some residual deposition and accumulation of organic matter has occurred around the perimeter of the small outcrop; nonetheless, the current dimensions were approximately the same as the original measurements. The partially exfoliated milling slick or worked surface of the outcrop measures 8 × 20 centimeters (cm) (3 $^{1}/_{8}$ inches × 7 $^{7}/_{8}$ inches).

SWCA did not observe the piece of quartz debitage noted in the previous site record, possibly due to poor ground visibility. SWCA identified and recorded a flaked stone multi-directional core fragment composed of fine-grained, greenish-blue Santiago Peak metavolcanic material (Figure 11) within the site boundary approximately 14 m north of the milling slick. The core measures 5 × 3.7 cm (2 inches × 1 $^{7}/_{16}$ inches) and is 2.7 cm (1 $^{1}/_{16}$ inches) thick, and displays two negative flake scars originating from two different platform surfaces.

The site was likely utilized at low frequencies in the past by people travelling through the area on seasonal rounds. This type of site is relatively common within the Survey Area, and several new and previously recorded sites exhibit similar levels of utilization. It is unclear whether the milling slick and the associated flaked stone items were used contemporaneously.

Figure 11. Core Fragment Associated with CA-SDI-19307, Plan View



Site CA-SDI-19307 is in good condition with no observable disturbances. Some exfoliation is evident on the bedrock outcrop and worked surface of the milling slick. The area was used for cattle grazing in the past, which may have impacted it. Sediments within the site boundary are fine to coarse loamy sand with approximately 40 percent of the matrix composed of sub-rounded to sub-angular granitic pebbles and gravels (up to 2 cm [$^{13}/_{16}$ inches] in length). No observable indicators such as darkened, organic sediments, additional features, or diverse ranges or densities of surface artifacts were identified at CA-SDI-19307, suggesting little potential for the presence of subsurface cultural deposits at the site. However, the thin layer of colluvium present may conceal buried deposits.

7.2.1.2 CA-SDI-20166 (P-37-031744)

Temporal Affiliation: Prehistoric
Dimensions: 31 × 17 m (101 feet 8 ½ inches × 55 feet 9 $^{3}/_{8}$ inches)
Proximity to Proposed Project Area: Within

Site CA-SDI-20166 (P-37-031744) is a bedrock milling station measuring 31 × 17 m (101 feet 8 ½ inches × 55 feet 9 3/8 inches), comprising a cluster of granite outcrops with two partially exfoliated slicks (Figure 12). Site CA-SDI-20166 lies among a rather discrete grouping of granite bedrock outcroppings and boulders. The entire outcrop formation is generally northeast-facing and occurs on a gentle slope that is less than 5 percent. The topography of the vicinity is characterized by a series of small hilltops to the south and west, and slightly undulating terrain sloping downward toward the north and northeast. The area is punctuated by randomly distributed granite outcrop formations. Apart from exposed granite bedrock, ground visibility is poor (approximately 20 percent) due to the presence of dense vegetation and duff in and around the site perimeter.

Figure 12. Overview of Site CA-SDI-20166, View to the West

The site was originally recorded in 2011 by ASM as a prehistoric bedrock milling site consisting of a low granite outcrop measuring 15 × 8 × 1 m (49 feet 2 ½ inches × 26 feet 3 inches × 3 feet 3 3/8 inches) with one partially exfoliated slick measuring 33 × 19 cm (1 foot 11 7/8 inches × 7 ½ inches). In the 2011 site record, ASM refers to the granite outcrop with milling slick as Feature A; for the present site update, SWCA will refer to this feature as Feature 1019. ASM excavated two shovel test pits on the west and east sides of the outcrop and both were negative for cultural materials (Kyle and Williams 2013). The site was found ineligible for the CRHR by the CPUC and the Bureau of Land Management (BLM) and a portion of the bedrock outcrop was impacted during construction of the adjacent segment of Bell Bluff Truck Trail (Kyle and Williams 2013).

SWCA revisited the site as part of the current study, identified an additional milling slick, and expanded the site boundary. The site location is consistent with the original recording; however, an approximately 3-m portion of the bedrock outcrop south of the recorded milling slick location was impacted as a result of road construction (Figure 13). SWCA identified the granite outcrop and the location of Feature 1019. SWCA's measurements of Feature 1019 are consistent with ASM's measurements, and the feature appears to be in the same general condition as described in the original 2011 site record (Figure 14).

Figure 13. Site CA-SDI-20166, Overview of Outcrop Impacted by Road Construction, View to the North

Figure 14. Overview of Feature 1019, View to the Northeast

SWCA identified and recorded Feature 1021, an additional partially exfoliated milling slick measuring 1.2 × 1.2 m (3 feet 7 $^{11}/_{16}$ inches × 3 feet 7 $^{11}/_{16}$ inches) (Figure 15). Feature 1021 is located on the west end of a large, raised, and partially exfoliated granite outcrop that measures 14 × 3 × 2.3 m (45 feet 11 $^{3}/_{16}$ inches × 9 feet 10 $^{3}/_{16}$ inches × 7 feet 6 $^{5}/_{8}$ inches). The location of the slick atop Feature 1021 affords 360-degree visibility of the surrounding area.

Figure 15. Overview of Feature 1021, View to the Northeast

The site is a special purpose site and was likely utilized at low frequencies in the past by people travelling through the area on seasonal rounds. This type of site is common in the Survey Area, and several new and previously recorded sites exhibit similar levels of utilization.

Site CA-SDI-20166 is in poor condition. Road construction for Bell Bluff Truck Trail has damaged a portion of the granite outcrop comprising Feature 1019 and has disturbed the soils bordering the south and southeast edges of the site. Substantial exfoliation is evident on the bedrock outcrops and worked surfaces of the two milling slicks. Sediments within the site boundary are dark brown, sandy silt with some decomposed granite. No observable indicators such as darkened organic sediments, additional features, or diverse ranges or densities of surface artifacts were identified at CA-SDI-20166, suggesting little potential for the presence of subsurface cultural deposits at the site. Subsurface testing in 2011 did not identify any subsurface deposits associated with the site (Kyle and Williams 2013).

7.2.1.3 CA-SDI-20984 (P-37-033363)

Temporal Affiliation: Prehistoric
Dimensions: 9 × 7 m (29 feet 6 $^{3}/_{8}$ inches × 22 feet 11 $^{5}/_{8}$ inches)
Proximity to Proposed Project Area: Outside

Site CA-SDI-20984 (P-37-033363) is a prehistoric bedrock milling station measuring 9 × 7 m (29 feet 6 $^{3}/_{8}$ inches × 22 feet 11 $^{5}/_{8}$ inches) comprising a low granite outcrop with a single, partially exfoliated slick located in a generally flat and open area (Figure 16). An additional, discrete granite outcrop exists about 20 m south of the site. The topography of the greater vicinity is characterized by mostly flat terrain that slopes gently to the east toward a small hilltop. Ground visibility is poor (approximately 25 percent) due to the presence of dense short and tall grasses, heavy accumulation of plant duff, and new vegetal growth in the site's immediate vicinity.

Figure 16. Site CA-SDI-20984, Overview of Milling Station, View to the South

The site was originally recorded in 2011 by ASM as a prehistoric bedrock milling site consisting of one partially exfoliated slick measuring 50 × 40 cm (1 foot 7 $^{11}/_{16}$ inches × 1 foot 3 ¾ inches), located on a granite outcrop oriented north-south and measuring 1.20 × 0.80 × 0.05 m (3 feet 11 ¼ inches × 2 feet 7 $^{7}/_{16}$ inches × 1 foot 7 $^{11}/_{16}$ inches) with no associated artifacts. SWCA revisited the site as part of the current study. Although the site is located approximately 20 m (65 feet) north of the location indicated by the GIS data provided by the SCIC, it is in the same general condition as described in the 2011 site record. An unknown thickness of residuum and accumulated plant material has slightly altered the appearance of the bedrock outcrop, but SWCA's measurements were consistent with the previous recording. No other artifacts or features were encountered.

The site was likely utilized at low frequencies in the past by people travelling through the area on seasonal rounds. This type of site is relatively common in the Survey Area, and several new and previously recorded sites exhibit similar levels of utilization.

Site CA-SDI-20984 is in good condition with no observable disturbances. Some exfoliation is evident on the bedrock outcrop and worked surface of the milling slick. The area was used for cattle grazing in the past, which may have impacted the site. Observed sediments within the site boundary are medium reddish-brown colluvium with intermixed decomposed granite; approximately 20 percent of the matrix is composed of sub-angular granitic pebbles and gravels up to 2 cm ($^{13}/_{16}$ inches) in length. No observable indicators such as darkened organic sediments, additional features, or diverse ranges or densities of surface artifacts were identified at CA-SDI-19307, suggesting little potential for the presence of subsurface cultural deposits at the site. However, the thin layer of colluvium present around the perimeter of the site may conceal buried cultural deposits.

7.2.2 Newly Recorded Archaeological Sites

SWCA identified and recorded three new archaeological sites during the field survey: SUN-S-1004, Sun-S-1005, and SUN-S-1012, all of which are prehistoric.

7.2.2.1 SUN-S-1004

Temporal Affiliation: Prehistoric
Dimensions: 52 × 16 m (170 feet 7 $^{3}/_{16}$ inches × 52 feet 5 $^{7}/_{8}$ inches)
Proximity to Proposed Project Area: Outside

Site SUN-S-1004 is a prehistoric lithic quarry and flake scatter measuring 52 × 16 m (170 feet 7 $^{3}/_{16}$ inches × 52 feet 5 $^{7}/_{8}$ inches), comprising three distinct concentrations of lithics (Features 1025, 1026, and 1027), a scatter of both modified and unmodified quartz and granitic lithic materials, and an exposed quartz vein utilized as a quarry. The site is situated on an approximately 5 percent southwest-facing slope near the top of a small hill (Figure 17). The site is transected by a northeast-southwest-trending unpaved road, within which multiple fluvial channels occur. The topography of the general site vicinity is characterized by undulating terrain that slopes gently from a small hilltop to the northeast toward a relatively narrow, northeast-southwest-trending drainage to the southwest. Dense vegetation is present throughout most of the area, and identified artifacts are located either within the road or other areas that have been cleared of vegetation. Ground visibility varies from excellent (85 percent) within the unpaved access road and other areas cleared of vegetation to very poor in adjacent areas with dense vegetation.

Figure 17. Overview of Site SUN-S-1004, View to the Southwest

Artifacts outside the artifact concentrations consist of one core and at least 10 pieces of milky quartz and crystalline quartz debitage. The site surface is littered with small to large gravels and cobbles as well as small boulders composed of granite and quartz material types. An exposed vein of quartz that was likely used as a quarry for lithic tool production is located at the northeast end of the site within the unpaved access road.

Feature 1025 is located within a small clearing on the east side of the unpaved access road that transects the site (Figure 18). The concentration measures 3.5 × 1.5 m (11 feet 5.75 inches × 4 feet 11 inches), and consists of four pieces of milky and crystalline quartz debitage. Lithic debitage located inside of Feature 1025 is summarized in Table 5.

Figure 18. Site SUN-S-1004, Overview of Feature 1025, View to the Northwest

Table 5. Lithic Debitage Present in Feature 1025

Material Type	Flake Type	Size Class (maximum length of flake in centimeters)					Type Total	Material Total
		1	2	3	4	5		
Milky quartz	T				1		1	1
	S						-	
	P						-	
Crystalline quartz	T			1	1		2	3
	S			1			1	
	P						-	
Size Total				**2**	**2**		**4**	**4**

T = Tertiary, S = Secondary, P = Primary

Feature 1026 is a concentration of seven pieces of crystalline quartz flaked stone debitage in a small clearing on the southwest side of the unpaved access road, and measuring 1.5 × 1.0 m (4 feet 11 inches × 3 feet 3 $^{3}/_{8}$ inches) (Figures 19 and 20). Lithic debitage inside Feature 1026 is summarized in Table 6.

Figure 19. Site SUN-S-1004, Overview of Feature 1026, View to the West

Figure 20. Site SUN-S-1004, Flakes from Feature 1026, Plan View

Table 6. Lithic Debitage Present in Feature 1026

Material Type	Flake Type	Size Class (maximum length of flake in centimeters)					Type Total
		1	2	3	4	5	
Crystalline quartz	T		4	3			7
	S						-
	P						-
Size Total			**4**	**3**			**7**

T = Tertiary, S = Secondary, P = Primary

Feature 1027 is a concentration of three white and gray–colored chalcedony flakes and five crystalline quartz flakes located adjacent to the west side of the unpaved access road and measuring 2.0 × 1.0 m (6 feet 6 ¾ inches × 3 feet 3 $^{3}/_{8}$ inches) (Figure 21). Only two of the crystalline quartz flakes are complete; the remaining flakes are fragments. The debitage present in Feature 1027 is summarized in Table 7.

Figure 21. Site SUN-S-1004, Overview of Feature 1027, View to the Northwest

Table 7. Lithic Debitage Present in 1027 Lithic Debitage

Material Type	Flake Type	Size Class (maximum length of flake in centimeters)					Type Total	Material Total
		1	2	3	4	5		
Chalcedony	T			2	1		3	3
	S						-	
	P						-	
Crystalline quartz	T		1	4			5	5
	S						0	
	P						-	
Size Total			**1**	**6**	**1**		**8**	**8**

T = Tertiary, S = Secondary, P = Primary

Site SUN-S-1004 represents a locus of lithic procurement and reduction activity associated with prehistoric peoples' travel across the landscape. The flaked stone artifacts are manufactured from a narrow range of materials, consisting of milky quartz, crystalline quartz, and chalcedony; the quartz varieties were likely derived from local surface cobbles and vein deposits in the immediate vicinity. Chalcedony may be available from local geological deposits composed of weathered igneous parent material, but its origin is likely extra-local and was transported to the site from elsewhere. Only one core was identified within SUN-S-1004, suggesting that the site was the location of low frequency episodes of tool stone procurement and primary reduction. Most of the flaked stone debitage, however, reflects middle- to late-stage flake-core reduction, indicating that a low frequency expedient stone tool production took place at this site. Only one flake from the identified debitage assemblage retains any cortex, and the preponderance of artifacts is interior or tertiary flakes. Given the presence of potentially extra-local lithic materials, the site may also have been a location where people conducted minor tool maintenance activities and resupplied toolkits with local materials.

Site SUN-S-1004 is in poor condition, with moderate disturbances by construction, use, and maintenance of the unpaved access road that transects it, as well as the multiple fluvial channels present in the road. Many of the lithic artifacts at the site have likely been redeposited as a result of fluvial action along the road section. Site sediments are composed of dark red and brownish-red, poorly sorted loamy sand with approximately 60 percent of the matrix composed of small to large (up to 10 cm [3 $^{15}/_{16}$ inches] long) gravel and cobble inclusions and few boulder-sized rocks (up to 30 cm [11 $^{13}/_{16}$ inches] long). No observable indicators such as darkened organic sediments, features, or diverse ranges or densities of surface artifacts were identified at SUN-S-1004, suggesting little potential for the presence of subsurface cultural deposits at the site. Further, evidence of frequent, high-energy fluvial action observed at the surface of SUN-S-1004 indicates an unstable land surface, which is not conducive to the preservation of intact archaeological deposits.

7.2.2.2 SUN-S-1005

Temporal Affiliation: Prehistoric
Dimensions: 24 × 20 m (78 feet 8 $^{7}/_{8}$ inches × 65 feet 7 $^{7}/_{16}$ inches)
Proximity to Proposed Project Area: Outside

Site SUN-S-1005 is a prehistoric bedrock milling station consisting of one partially exfoliated milling slick located within a group of granite outcrops and measuring 24 × 20 m (78 feet 8 $^{7}/_{8}$ inches × 65 feet 7 $^{7}/_{16}$ inches) (Figure 22). The site is located near the base of a gentle, northeast-facing slope on the west

end of a large, open, and grassy meadow. A north-south-trending ephemeral stream is located approximately 100 m to the east. Ground visibility is low, at approximately 30 percent across the site.

Figure 22. Overview of Site SUN-S-1005, View to the Northeast

Feature 1023 is a milling slick located at the south end of a low, flat granitic bedrock outcrop that is oriented north-south and measures 5.5 × 2.7 m (18 feet ½ inch × 8 feet 10 $^{5}/_{16}$ inches). The worked surface of the feature measures 1.15 × 1.0 m (3 feet 9 ¼ inches × 3 feet 3 $^{3}/_{8}$ inches) and exhibits faint evidence of use. No additional artifacts or features were observed. The site was likely utilized at low frequencies in the past by people travelling through the area on seasonal rounds. This type of site is relatively common in the Proposed Project Area, and several new and previously recorded sites exhibit similar levels of utilization.

Site SUN-S-1005 is in good condition with no observable disturbances. Some exfoliation is evident on the bedrock outcrop and on the milling slick, and the area has been used for livestock grazing, which may have impacted it. Portions of the bedrock outcropping and milling slick are covered with dirt and duff from the immediate vicinity. Site sediments are composed of light to medium-brown, poorly sorted coarse sand derived from decomposing granite; sediment constituents also include small to large pebbles and small gravels (up to 2 cm [$^{13}/_{16}$ inches] long). No observable indicators such as darkened organic sediments, additional features, or diverse ranges or densities of surface artifacts were identified at SUN-S-1005, suggesting little potential for the presence of subsurface cultural deposits at the site. However, the thin layer of colluvium around the perimeter of the site may conceal buried cultural deposits.

7.2.2.3 SUN-S-1012

Temporal Affiliation: Prehistoric
Dimensions: 15 × 12 m (49 feet 2 ½ inches × 39 feet 4 $^{7}/_{16}$ inches)
Proximity to Proposed Project Area: Within

Site SUN-S-1012 is a prehistoric lithic scatter consisting of three pieces of flaked stone debitage measuring 15 × 12 m (49 feet 2 ½ inches × 39 feet 4 $^{7}/_{16}$ inches). The site is located on a gentle, west-facing slope (less than 2 percent) within the previous location of the Wilson Laydown Area (Figure 23).

The entire area of the former laydown yard is now the location of biological habitat restoration. Ground visibility is good, at approximately 85 percent across the site.

Figure 23. Overview of Site SUN-S-1012, View to the Southeast

The flakes are manufactured from a single metavolcanic material type known as Santiago Peak (Figure 24). The Santiago Peak Formation is a near-local source of lithic material; the metamorphosed volcanic material is fine-grained and exhibits a suitable conchoidal fracture (Pigniolo 2009). Lithic debitage present is summarized in Table 8.

Figure 24. Site SUN-S-1012, Dorsal Surface, Plan View.
Left to Right: Artifact Nos. 1033, 1031, and 1032.

Table 8. SUN-S-1012, Lithic Debitage Tally

Material Type	Flake Type	Size Class (maximum length of flake in centimeters)					Type Total
		1	2	3	4	5	
Santiago Peak Metavolcanic	T			1	1		2
	S			1			1
	P						-
Size Total				**2**	**1**		**3**

T = Tertiary, S = Secondary, P = Primary

Based on debitage type and artifact distribution and frequency, SUN-S-1012 likely represents a single-use reduction locus where people conducted core reduction and minor maintenance activities associated with their movement across the landscape. Debitage attributes indicate that middle- and late-stage core reduction took place, along with some core maintenance.

The site is in poor condition with significant disturbances and is impacted by past use of the area as a construction laydown yard and by current habitat restoration efforts. Multiple vehicle tracks likely associated with laydown yard or restoration activities are present within the site boundary. The lithic artifacts at the site were likely redeposited as a result of ground disturbances associated with use of the area as a materials storage and laydown area, including brush clearing and grading, topsoil salvage, ripping and re-contouring to a depth of 46–61 cm (18–24 inches), and habitat restoration efforts. Other disturbances include colluvial and alluvial processes, vehicle disturbances, pedestrian traffic, and bioturbation. Soils present consist of light brownish-yellow, poorly sorted fine to coarse sand with gravel-sized inclusions derived from colluvial slopewash. No observable indicators such as darkened organic sediments, features, or diverse ranges or densities of surface artifacts were identified at SUN-S-1012, suggesting little potential for the presence of buried cultural deposits at the site.

7.2.3 Newly Recorded Isolates

SWCA identified and recorded five isolated artifacts, consisting of three prehistoric isolates (SUN-ISO-1006, SUN-ISO-1017, and SUN-ISO-1028) and two historic isolates (SUN-ISO-1001 and SUN-ISO-1016). The prehistoric isolates are flaked and ground stone artifacts, and are consistent with regular use of the area by prehistoric peoples. The historic isolates are likely the result of use and casual dumping by local residents in the twentieth century. Isolated artifacts are summarized in Table 9.

Table 9. Newly Recorded Isolated Resources

Isolate Number	Time Period	Description	Date Range	References	Intersecting Project Components
SUN-ISO-1006	Prehistoric	Gray rhyolite medial fragment with simple dorsal topography	Prehistoric	–	None
SUN-ISO-1017	Prehistoric	Bifacial, granitic mano fragment	Prehistoric	–	None
SUN-ISO-1028	Prehistoric	Crystalline quartz tertiary flake fragment with single-facet platform	Prehistoric	–	None

Table 9. Newly Recorded Isolated Resources

Isolate Number	Time Period	Description	Date Range	References	Intersecting Project Components
SUN-ISO-1001	Historic	5-gallon metal drum	Twentieth century	ICC Compliance Center 2015	None
SUN-ISO-1016	Historic	Metal can; can opener–opened with welded side-seam	1904–1993	Rock 1987	None

7.2.4 Newly Recorded Built Environment Resources

SWCA identified and recorded two historic built environment resources during the field survey: SUN-BSO-1002 and SUN-BSO-1011.

7.2.4.1 SUN-BSO-1002 (BELL BLUFF TRUCK TRAIL)

Temporal Affiliation: Historic
Dimensions: Varied
Proximity to Proposed Project Area: Within

The current study identified and recorded three segments of SUN-BSO-1002, Bell Bluff Truck Trail, an access road located in unincorporated San Diego County (Figures 25–27). Historic maps and aerial photographs indicate that portions of Bell Bluff Truck Trail have been realigned several times since initial development of the road in the early twentieth century, most notably during the construction of the adjacent Suncrest Substation in 2012. The three segments that were recorded as part of the current study are identified portions of the historic road alignment that intersect the Proposed Project Area. All segments were historically unpaved, but two were graded and paved as part of the substation's construction and include drainage culverts, paved water channels, and other erosion control infrastructure.

Appearing to coincide with the original road alignment dating to at least 1903, the western segment is approximately 0.3 mile (0.48 kilometer [km]) long and 12 feet (3.7 m) wide. The middle segment begins approximately 0.5 mile (0.8 km) east of the western segment, and appears to have been constructed between 1960 and 1982, replacing an earlier alignment to the north. Also recently paved, it is approximately 0.2 mile (0.3 km) long and 30 feet (9.1 m) wide. The eastern segment comprises a small portion of a segment that was likely constructed between 1960 and 1982 and that has been recently paved, and a north-south-trending, unpaved spur that appears to have been constructed prior to 1944.

The subject property is located in a largely undeveloped area that is characterized by native vegetation. Due to the recent paving of two segments of the road and extensive grading and realignment, the subject property no longer retains integrity of design, materials, and workmanship.

Figure 25. Western Segment of Bell Bluff Truck Trail, View to the Northeast

Figure 26. Eastern Segment of Bell Bluff Truck Trail, View to the South

Figure 27. Middle Segment of Bell Bluff Truck Trail, View to the Northeast

Historic USGS topographic maps dating to 1903 identify an unpaved access road following a similar alignment of the western segment of the subject property (USGS 1903) (Figure 28). The road appears to have been developed to connect a building west of the termini of the western segment to more developed areas to the east. By 1944, the building appears to have been demolished and the road, now identified as Bell Bluff Truck Trail, had been extended further to west and north to connect to the community of Alpine (USGS 1942) (Figure 29). The road continued to operate as a recreational trail into the following decades and was intermittently realigned, including development of the current eastern segment between 1960 and 1983 (California Legislature 1951; USGS 1960) (Figure 30). Portions of Bell Bluff Truck Trail, including two segments of the subject property, were incorporated into an access road that was developed in support of the construction and operation of the Suncrest Substation in 2012 (Geocon 2015). As part of this effort, two of the three subject segments were graded and paved to connect to a newly developed segment of road.

Figure 28. Segments of Bell Bluff Truck Trail in the Survey Area on a 1903 USGS Topographic Map

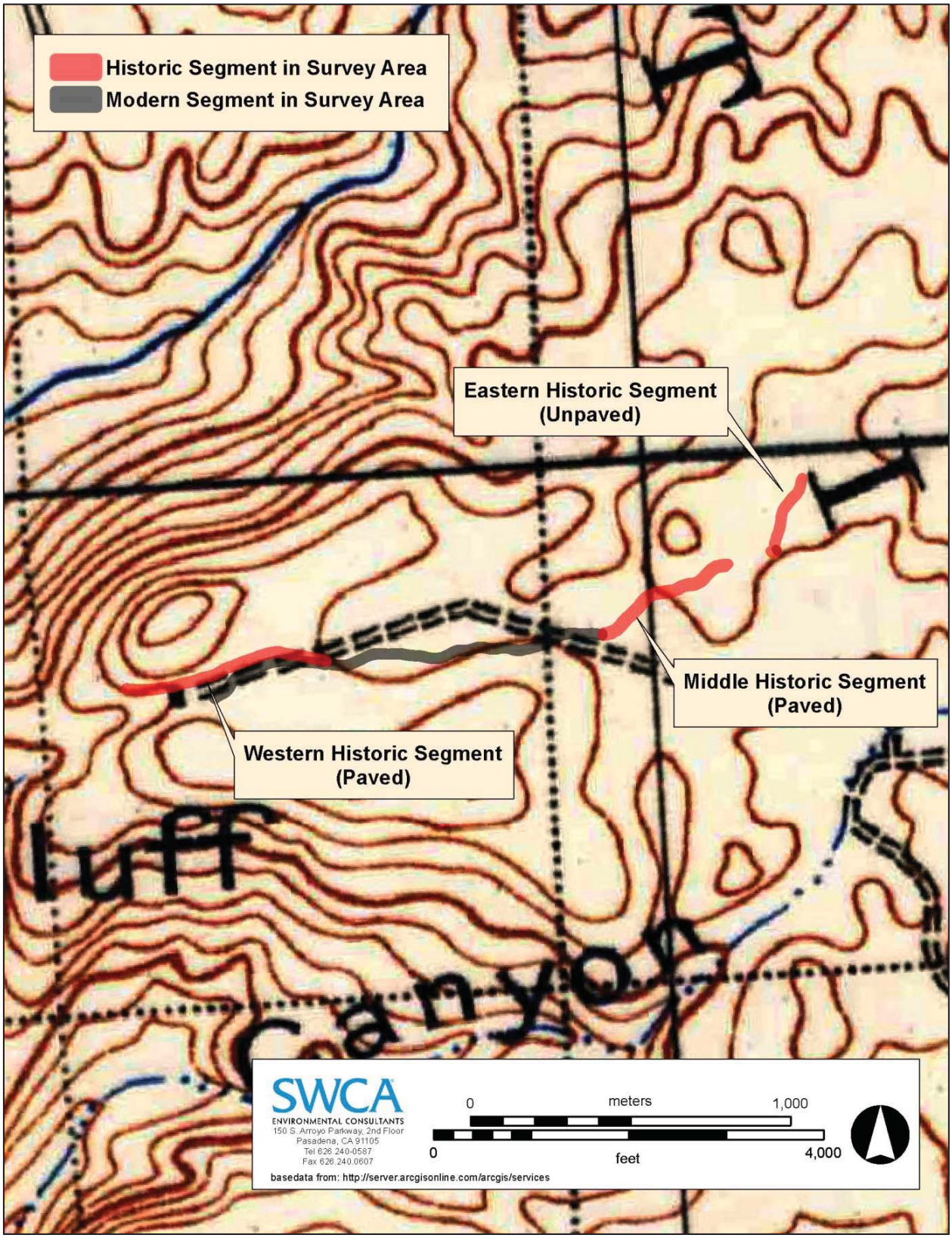


Figure 29. Segments of Bell Bluff Truck Trail in the Survey Area on a 1944 USGS Topographic Map

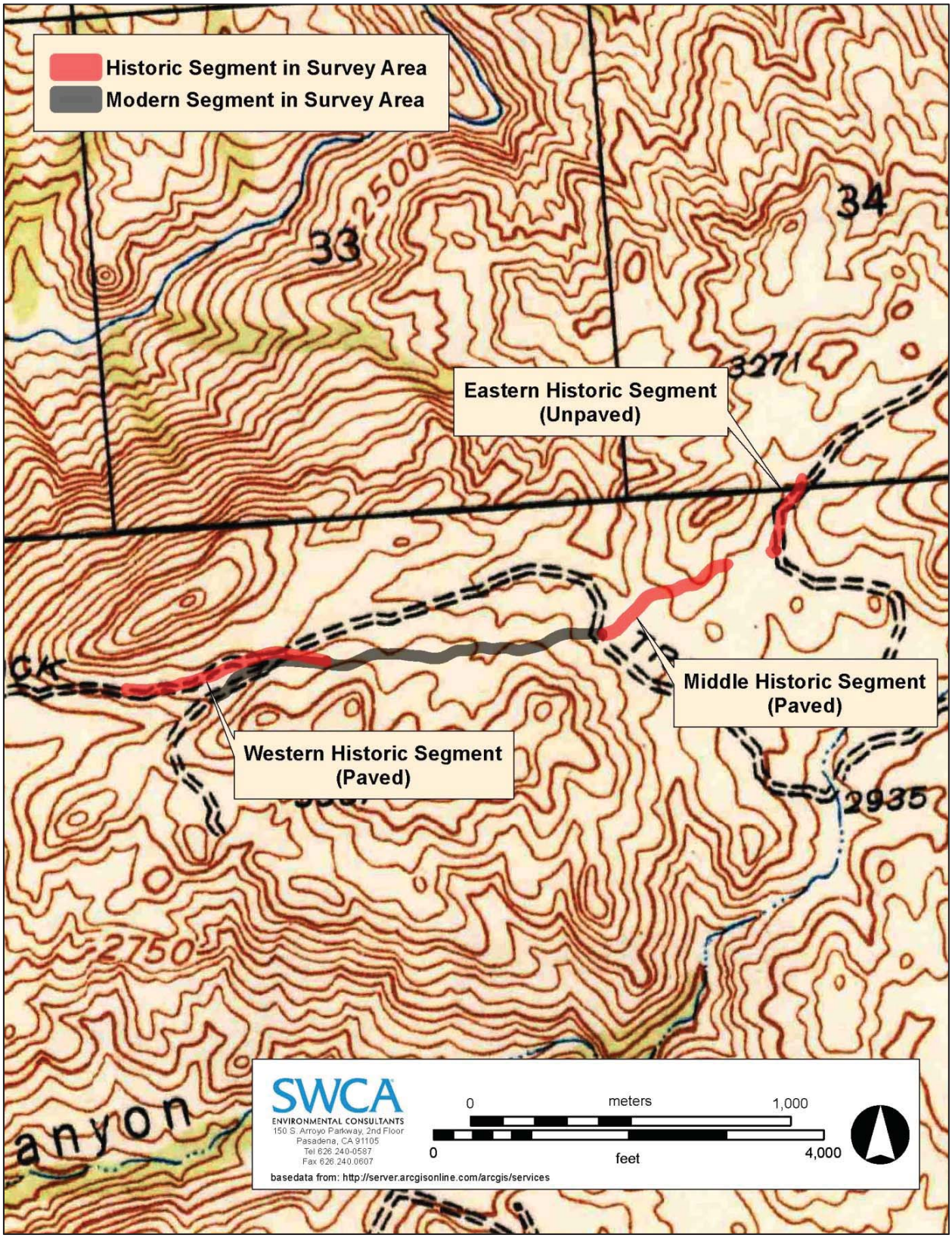


Figure 30. Segments of Bell Bluff Truck Trail in the Survey Area on a 1960 USGS Topographic Map; Photorevised in 1983

7.2.4.2 SUN-BSO-1011

Temporal Affiliation: Historic
Dimensions: 18 feet × 1 foot 6 inches (5.5 × 0.5 m)
Proximity to Proposed Project Area: Outside

SUN-BSO-1011 consists of a corrugated metal conduit and an associated rock alignment (Figure 31) within the previous location of the Wilson Laydown Area. Potentially a culvert for Bell Bluff Truck Trail prior to its realignment ca. 1960, the conduit is approximately 18 feet (5.5 m) long with a diameter of 1 foot 6 inches (0.5 m), and is partially buried under a built-up mound of sediments from the surrounding area. It is oriented east-west and is bordered to the east by a linear rock alignment composed of a single course of angular, granite boulders. Although the exposed southern portion has been slightly damaged from impact, the resource still retains overall integrity. It is situated in a small, narrow, north-south-trending valley that is undeveloped and characterized by high-density native and invasive grasses.

Figure 31. Overview of SUN-BSO-1011, View to the West

SUN-BSO-1011 appears to have been constructed at some point between 1903 and 1942 as part of a former alignment of Bell Bluff Truck Trail. Historic USGS topographic maps dating to 1903 first identify Bell Bluff Truck Trail following an east-west alignment south of SUN-BSO-1011 and leading to a building approximately 1 mile to the west (USGS 1903). Bell Bluff Truck Trail was realigned by 1942, crossing the location of SUN-BSO-1011 and extending to the community of Alpine approximately 6 miles northwest; SUN-BSO-1011 appears to have been constructed as a culvert for ca. 1942 alignment of Bell Bluff Truck Trail (USGS 1942). Bell Bluff Truck Trail was realigned again ca. 1960, resulting in the abandonment of SUN-BSO-1011 and the eventual erosion of the former road grading (USGS 1960).

8 SUMMARY AND RECOMMENDATIONS

The Proposed Project Area is in an unincorporated area of San Diego County, approximately 29 miles east of San Diego and 3.36 miles southeast of the community of Alpine. The Proposed Project consists of the SVC location, SVC tie-line, riser pole, and a single 300-foot-long overhead transmission span connecting the SVC tie-line to the Suncrest Substation. Because the cultural resources study was conducted prior to finalization of project plans, SWCA surveyed a larger Survey Area comprising approximately 65.2 acres that consisted of all land under consideration for the Proposed Project at the time of the survey; the Proposed Project Area is included in the Survey Area.

SWCA requested a CHRIS records search from the SCIC, which identified three prehistoric archaeological sites in the Survey Area; of these, site CA-SDI-20166, a bedrock milling station, is located in the Proposed Project Area. Qualified SWCA archaeologists conducted an intensive-level pedestrian cultural resources survey of the Survey Area. During the survey, SWCA revisited and updated all three previously recorded sites. In addition, SWCA identified and recorded three prehistoric archaeological sites, two historic built environment resources, three prehistoric isolated artifacts, and two historic isolated artifacts within the Survey Area. Of these, archaeological site SUN-S-1012, a prehistoric lithic scatter, and built environment SUN-BSO-1002, historic Bell Bluff Truck Trail, are located in the Proposed Project Area.

As discussed in Section 3, Regulatory Framework, above and in accordance with PRC Section 5024.1(c)(1–4), a resource is considered eligible for the CRHR and ***historically significant*** if it 1) retains "substantial integrity," and 2) meets at least one of the following 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 installation, 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.

Under CEQA, isolates are generally not eligible for the CRHR. The information potential of the five isolated artifacts identified during the field survey has been exhausted by their recordation and analysis as part of the current study, and relevant DPR forms will be submitted to the CHRIS information center. Although none of the isolates are located within the Proposed Project Area, no further work is necessary for these resources, regardless of future changes to the Proposed Project footprint.

Prehistoric archaeological sites CA-SDI-19307, CA-SDI-20984, SUN-S-1004, and SUN-S-1005 have not been evaluated for listing on the CRHR. All these sites will be avoided due to project redesign; if changes to the Proposed Project footprint occur, impacts to any of these sites should be avoided.

Prehistoric archaeological site SUN-S-1012 is located in the Proposed Project Area, within the former Wilson Laydown Area, a materials storage and laydown area for Sunrise Powerlink that is currently the site of biological habitat restoration. Ground disturbance in the vicinity of the site that occurred during site preparation, during its use as a materials storage and laydown area, and during restoration efforts was significant (SDG&E 2015). Construction activities associated with site preparation included brush clearing and grading; removal of native vegetation and incorporation of vegetation into the topsoil, and topsoil salvage to a depth of 6 inches (15.24 cm) (AECOM and RECON 2012). After the location was no longer used as a materials storage and laydown area, restoration efforts included re-contouring the land

and mechanically ripping the ground to alleviate compaction, resulting in substantial movement of sediments. The yard was ripped and cross-ripped to a depth of 18 to 24 inches (45.72 to 60.96 cm) prior to being re-contoured to the original topography. Salvaged topsoil was then re-distributed over the site and seeded (SDG&E 2015).

The ground surface surrounding site SUN-S-1012 is highly disturbed, with a visibly uneven surface consisting of a mixture of subsoil and topsoil. Information provided by SDG&E indicates that the disturbance related to the use of the area as a materials storage and laydown area for Sunrise Powerlink has thoroughly disrupted the horizontal position of materials and the stratigraphic relationships of the entire area to a depth of at least 45 cm, and as deep as 61 cm (SDG&E 2015). The site is not known to contain buried deposits, but if these exist, they are highly unlikely to retain integrity. SWCA thus finds prehistoric archaeological site SUN-S-1012 ineligible for listing in the CRHR due to a lack of integrity. In addition, SWCA prehistoric archaeological site SUN-S-1012 does not meet the criteria for a "*unique archaeological resource*" under CEQA. Thus, SWCA no further cultural resources work, including further research, avoidance, or additional mitigation measures, is necessary for this resource.

Prehistoric archaeological site CA-SDI-20166, located within the Proposed Project Area, was evaluated by ASM and found not eligible for listing on the CRHR by the CPUC and the BLM (Kyle and Williams 2013). As part of the current study, SWCA updated the site, identified an additional feature in the portion of the site outside the Proposed Project Area, and expanded the site boundary. The newly identified feature is the same type of feature as was identified in the original site record, and there is no evidence to suggest buried cultural deposits are present within the expanded site boundary. Thus, the new data do not change the previous finding that the site lacks the potential to yield important information (Criterion 4). In addition, there are no new data to suggest that the site may be eligible under Criterion 1, 2, or 3. SWCA finds the site ineligible for listing on the CRHR, and no further cultural resources work, including further research, avoidance, or additional mitigation measures, is necessary for this resource.

SWCA finds built environment resource SUN-BSO-1002 (Bell Bluff Truck Trail) not eligible for listing in the CRHR or as a historical resource in San Diego County, either individually or as a contributor to an eligible historic district for the following reasons:

- Research did not reveal any direct and important associations with the CNF, the early development of the area, or a significant event or patterns of development, nor with any individual significant in the history of the city, region, state, or nation (Criteria 1 and 2).

- Available sources also did not identify the structure's designer or builder, and it is a typical (but not distinctive or outstanding) example of a common property type; it does not embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, nor possess high artistic values (Criterion 3).

- Research does not suggest the property has the potential to yield information important in history or prehistory (Criterion 4).

The resource has been modified numerous times since it was initially developed in the early twentieth century, including recent grading, paving, and other alterations. Taken together, these modifications have affected the integrity of the subject property, and it no longer conveys any potential significance as an early unpaved access road. Because built environment resource SUN-BSO-1002 (Bell Bluff Truck Trail) is ineligible for listing on the CRHR, no further cultural resources work, including further research, avoidance, or additional mitigation measures, is necessary for this resource.

SWCA finds built environment resource SUN-BSO-1011 not eligible for listing in the NRHP or CRHR, or as a historical resource in the County of San Diego either individually or as contributors to an eligible historic district for the following reasons:

- It is unable to convey any associations with Bell Bluff Truck Trail following realignment of the road and the subsequent erosion of the grading, and research did not reveal any direct and important associations with the CNF, the early development of the area, or a significant event or patterns of development, nor with any individual significant in the history of the city, region, state, or nation (Criteria A/1/A and B/2/D).

- Available sources also did not identify the structure's designer or builder, and it is a typical (but not distinctive or outstanding) example of a common property type; it does not embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, nor possess high artistic values (Criteria C/3/C).

- Research does not suggest the potential to yield information important in history (Criteria D/4/D).

Because built environment resource SUN-BSO-1011 is ineligible for listing on the CRHR, no further cultural resources work, including further research, avoidance, or additional mitigation measures, is necessary for this resource.

Management recommendations for all identified resources within the Survey Area are summarized in Table 10.

Table 10. Summary of Management Recommendations

Primary Number	Trinomial or Temporary Number	Resource Type	Intersecting Project Components	Evaluation	Management Recommendation
P-37-033363	CA-SDI-20984	Prehistoric archaeological site	None	Not evaluated	Avoid or evaluate; if avoidance is not feasible, evaluate by conducting subsurface testing
P-37-031744	CA-SDI-20166	Prehistoric archaeological site	SVC underground tie-line	Not eligible	No further work needed
P-37-030375	CA-SDI-19307	Prehistoric archaeological site	None	Not evaluated	Avoid or evaluate; if avoidance is not feasible, evaluate by conducting subsurface testing
	SUN-BSO-1002	Historic built environment resource	SVC underground tie-line	Not eligible	No further work needed
	SUN-BSO-1011	Historic built environment resource	None	Not eligible	No further work needed
	SUN-ISO-1001	Historic isolate	None	Not eligible	No further work needed
	SUN-ISO-1006	Prehistoric isolate	None	Not eligible	No further work needed

Table 10. Summary of Management Recommendations

Primary Number	Trinomial or Temporary Number	Resource Type	Intersecting Project Components	Evaluation	Management Recommendation
	SUN-ISO-1016	Historic isolate	None	Not eligible	No further work needed
	SUN-ISO-1017	Prehistoric isolate	None	Not eligible	No further work needed
	SUN-ISO-1028	Prehistoric isolate	None	Not eligible	No further work needed
	SUN-S-1004	Prehistoric archaeological site	None	Not evaluated	Avoid or evaluate; if avoidance is not feasible, evaluate by conducting subsurface testing
	SUN-S-1005	Prehistoric archaeological site	None	Not evaluated	Avoid or evaluate; if avoidance is not feasible, evaluate by conducting subsurface testing
	SUN-S-1012	Prehistoric archaeological site	SVC location	Not eligible	No further work needed

In addition to the known presence of two prehistoric archaeological sites in the Proposed Project Area (SUN-S-1012 and CA-SDI-20166), archival research indicates that there is a moderate to high potential to encounter prehistoric materials in the Survey Area. Surface visibility was very poor (less than 10 percent) in portions of the Survey Area due to the presence of dense chaparral. Buried or obscured archaeological resources may be encountered during construction, if construction occurs in undisturbed sediments within of the Survey Area. However, ground visibility in the Proposed Project Area was generally good to excellent (over 70 percent). Further, nearly all sediments in the Proposed Project Area have been highly disturbed from construction activities associated with the Sunrise Powerlink, including road construction, the use of the proposed SVC site as a materials storage and laydown area (Wilson Laydown Area), and habitat restoration efforts. Nearly all of the Proposed Project Area that is located outside of the former Wilson Laydown Area, including the majority of the proposed underground transmission line, is located within the paved segments of Bell Bluff Truck Trail. Bell Bluff Truck Trail was widened, graded, and paved during construction associated with the Sunrise Powerlink.

Within the former Wilson Laydown Area, construction activities associated with site preparation included brush clearing and grading in 2011–2012; removed native vegetation was incorporated into the topsoil, and topsoil salvage to a depth of 6 inches (15.24 cm) was conducted (AECOM and RECON 2012). After the location was no longer used as a materials storage and laydown area in late 2012, restoration efforts included re-contouring the land and mechanically ripping the ground, resulting in substantial movement of sediments. The yard was ripped and cross-ripped to a depth of 18 to 24 inches (46 to 61 cm) prior to being re-contoured to the original topography, and the salvaged topsoil was then re-distributed over the site and seeded (SDG&E 2015). Biological habitat restoration efforts, including restoration maintenance activities, weed control, and monitoring, are currently ongoing (SDG&E 2015).

The results of SWCA's survey and research indicate that it is unlikely that intact, subsurface archaeological deposits are present in the Proposed Project Area. As noted above, the SVC location has

been disturbed down to a depth of 24 inches as part of recent construction activities. The majority of the proposed underground transmission line will be located within the paved roadbed of Bell Bluff Truck Trail. Further, with the exception of the SVC site, most of the Proposed Project Area is located on slopes where the depositional context is not conducive to sediment accumulation, reducing the possibility of encountering buried deposits. Prehistoric sites in the vicinity of the project consist primarily of lithic and ground stone scatters, bedrock milling stations, or a combination of these. These types of sites typically do not have buried deposits. Of the three sites in the project vicinity that have been evaluated, two (CA-SDI-20166 and CA-SDI-20239) did not have a buried component, and the buried component of the remaining site (CA-SDI-19036) was not significant.

Further, the survey coverage of the Proposed Project Area is excellent, and it is likely that any resources present have been identified. In addition to the current study, three cultural resources studies have been conducted within the Proposed Project Area since 2008: these include two cultural resources surveys (Garcia-Herbst et. al 2010 and Noah 2008) and one construction monitoring project (Kyle and Williams 2013).

Based on background research, survey results, and the highly disturbed context of sediments in the Proposed Project Area, it is unlikely that previously unidentified cultural resources, including intact buried archaeological deposits, occur within the Proposed Project Area. Proposed construction activities will be limited to the Proposed Project Area, and potential blasting will be limited to excavations for the underground electrical transmission line in areas where~~in~~ standard excavation methods are not feasible, such as within bedrock, which is highly unlikely to contain archaeological deposits. NEET West anticipates that majority of the site can be excavated by conventional methods, although a minimal amount of hydraulic hammering or blasting may be required. Further, the potential blasting will occur after other sediments have been mechanically removed through standard excavation methods and will be minimized to localize disturbance. Thus, proposed construction activities, including potential blasting, are unlikely to disturb previously unidentified cultural resources. The following applicant-proposed measures have been developed to avoid or minimize potential impact to cultural resources and ensure that impacts remain less than significant:

1. **Retain a Qualified Principal Investigator:** A qualified principal investigator, defined as an archaeologist who meets the Secretary of the Interior's Standards for professional archaeology, will be retained to carry out all applicant proposed measures related to archaeological and historical resources.

2. **Archaeological Construction Monitoring:** ~~A qualified archaeological monitor~~Qualified archaeological and Native American monitors will be retained to conduct ~~periodic spot-checking~~ full-time monitoring of initial ground disturbing activities within the Proposed Project Area. The archaeological monitor will work under the supervision of the principal investigator. ~~Spot checking will include but not be limited to: excavations below 24 inches (60 cm) within the former Wilson Laydown Area (previously used as a materials storage and laydown area for the Sunrise Powerlink); and in locations wherein blasting will occur, both prior to and after blasting.~~ The duration and timing of the monitoring will be determined by the CPUC, with recommendations provided by the principal investigator. If the principal investigator determines that ~~periodic spot-checking~~ monitoring is no longer warranted, he or she may recommend to the CPUC that monitoring cease entirely. In addition, if the principal investigator determines that an increase in the level of monitoring is warranted, he or she may recommend to the CPUC that full-time monitoring of ~~ground-disturbing activities be conducted in archaeologically sensitive areas~~ continue beyond initial ground disturbance.

3. **Inadvertent Discoveries:** In the event that unanticipated cultural materials are encountered during any phase of construction, all construction work within 50 feet of the deposit will cease,

and the principal investigator will be consulted to assess the find. Construction activities may continue in other areas. Ground-disturbing impacts to any newly-discovered eligible or potentially eligible resources should be avoided to the extent feasible. If avoidance of these sites is not feasible, CPUC's Energy Division will ensure that potentially impacted cultural resources are assessed for significance, as defined by PRC Section 21083.2 or State CEQA Guidelines Section 15064.5(a), through implementation of Phase II investigations. Should such testing exhaust the data potential of these resources, impacts from the Proposed Project would be reduced to less than significant. Resources found to be not significant will not require additional treatment. Impacts to resources found to be significant will be reduced to less than significant through a Phase III data recovery program. Prior to any ground-disturbing activities, a detailed archaeological treatment plan will be prepared and implemented by a qualified archaeologist for the data recovery program. Data recovery investigations will be conducted in accordance with the archaeological treatment plan to ensure collection of sufficient information to address archaeological and historical research questions, and results will be presented in a technical report (or reports) describing field methods, materials collected, and conclusions. Additional testing and/or data recovery phases may involve additional excavation and/or more detailed recordation of resources or more comprehensive archival research. Any cultural material collected as part of an assessment or data recovery effort should be curated at a qualified facility. Field notes and other pertinent materials should be curated along with the archaeological collection.

4. **Discovery of Human Remains:** If human remains are discovered, all work within 15 meters (50 feet) of the discovery shall cease and the San Diego County Coroner shall be notified. State of California Health and Safety Code Section 7050.5 stipulates that no further disturbance will occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The San Diego County Coroner and the CPUC will be notified of the find immediately. If the human remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a MLD. The MLD will complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

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Appendix A.
Confidential Cultural Resources Survey Results Map

This appendix has been redacted from the public version of this report because it contains confidential site information.

Appendix B.
South Coastal Information Center
Records Search Results Letter

Appendix C.
Native American Coordination Documentation

Appendix D.
Confidential California Department of Parks and Recreation 523 Series Forms

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