Historic Properties Management Plan/ Historic Properties Treatment Plan for the Cleveland National Forest Master Special Use Permit and Permit to Construct Powerline Replacement Projects

Prepared for:

San Diego Gas & Electric Company

Prepared by:

Susan M. Hector, Ph.D.
NWB Environmental Services
Principal Investigator

Brian Williams
ASM Affiliates
Principal Investigator

PN 23000.01
August 2016

TABLE OF CONTENTS

Chapter **Page**

LIST OF FIGURES

Page

LIST OF TABLES

Page

EXECUTIVE SUMMARY

This Historic Properties Management Plan (HPMP) was prepared in support of the Cleveland National Forest (CNF, Forest) Master Special Use Permit (MSUP) and Permit to Construct (PTC) Powerline Replacement Projects (Project). Under this effort, San Diego Gas and Electric Company (SDG&E or "Company") is proposing to combine multiple individual permits and easements for SDG&E electric facilities within the CNF into one MSUP to be issued by the United States Forest Service (USFS). SDG&E is also proposing to replace five 69 kV powerlines and six 12 kV distribution circuits located within and outside the CNF. Replacement would primarily include fire-hardening (wood-to-steel replacement), relocation, removal, reconductoring, and undergrounding that requires authorization by the USFS under the MSUP, as well as a permit to construct from the California Public Utilities Commission (CPUC).

The HPMP presents the measures that will be implemented to address the avoidance, minimization of impacts and mitigation of possible impacts to cultural resources for any operations and maintenance activities proposed by SDG&E for existing electric infrastructure under the MSUP on land managed by the USFS. Ongoing operations and maintenance activities within the CNF boundary are included in this document. This HPMP may be used as a guiding document for activities on lands not managed by the USFS.

This HPMP also addresses the proposed fire hardening effort for eleven powerlines and distribution circuits both within and outside the CNF and for ongoing Operations and Maintenance (O&M) of those specific facilities on land managed by the USFS.

This document was prepared in accordance with the Final Environmental Impact Report/Environmental Impact Statement (FEIR/EIS) for the Project and the *Programmatic Agreement among the Cleveland National Forest, San Diego Gas & Electric Company, and the California State Historic Preservation Officer Regarding San Diego Gas & Electric Company's Master Special Use Permit and Powerline Replacement Projects Powerline* (PA) between USFS, State Historic Preservation Officer (SHPO), SDG&E, and CPUC.

GLOSSARY OF TERMS AND ABBREVIATIONS

Glossary

The following terms are defined for describing the historic preservation program in the HPMP. The terms defined in Stipulation 1 of the PA, the definitions below, and others as appropriate, will comprise the glossary of the HPMP.

"**Consultation**" is as defined at 36 CFR §800.16(f). Any discussion relative to the activities of SDG&E contained in the Undertaking, and pertaining to historic preservation, that takes place among Forest managers, Forest qualified personnel, SHPO, SDG&E qualified personnel, tribes, Native American organizations and individuals, and other members of the public is considered to be part of the consultation process for meeting the requirements of NHPA §106. Formal consultation on a Government-to-Government basis between the Forest, including appropriately designated managers of the Forest, and federally recognized tribes in compliance with EO 13007 may also be considered as consultation per 36 CFR §800.16(f) when it addresses historic properties.

"**Cultural Resource**" means any property or location that was created, modified, or used by people at least 50 years ago.

"**Historic Property**" refers to any property that has been determined eligible to the NRHP and includes any property that has not yet been evaluated for its eligibility to be nominated to the National Register of Historic Places (NRHP) according to the criteria at 36 CFR §60.4, but is being treated as eligible until evaluated, determined ineligible, and the determination of ineligibility is concurred on by the SHPO; and any property that has been determined eligible to the NRHP.

"**Historic Preservation**" or "Historic Preservation Program" means any activity carried out per this PA to identify, manage, plan for, or avoid potential adverse effects to historic properties resulting from SDG&E's performance of activities in the Undertaking authorized by the SUP in accordance with NHPA §106 or §110, as addressed in the HPMP.

"**Native American Organization**" refers to the Kumeyaay Cultural Repatriation Committee.

"**Qualified Personnel**" means an individual who meets the appropriate professional qualifications defined at 36 CFR Part 61 for such roles as Architectural Historian, Historic Architect, Archaeologist, etc.

"**Master Special Use Permit**" or "MSUP" means that Forest land specifically authorized by the Special Use Permit as described therein and located according to the permit map and Geographic Information System (GIS) data provided by SDG&E.

"**Distribution Line**," "**Distribution Facility**," and "**Distribution Line Access Road**" are as defined in the MSUP document as those electric lines and facilities under 50kV or roads serving such facilities. In general, these terms refer to existing electric distribution lines including towers and poles and/or other overhead support structures, wires and cables, foundations, footings, cross-arms and other fixtures, as well as roads used by SDG&E to gain access to these facilities for maintenance and operation purposes.

"**Powerline**," "**Powerline Facility**," and "**Powerline Line Access Road**" are as defined in the MSUP document as those electric lines and facilities over 50kV or roads serving such facilities. In general, these terms refer to existing electric transmission lines including towers and poles and/or other overhead support

structures, wires and cables, foundations, footings, cross-arms and other fixtures, as well as roads used by SDG&E to gain access to these facilities for maintenance and operation purposes.

"**Tribe**" refers to the following federally recognized California Indian tribes consulted per 36 CFR §800.2(c)(3), 36 CFR §800.2(d), 36 CFR §800.14(b)(2), and 36 CFR §800.14(f)) in association with the development of this PA: Barona Band of Mission Indians, Campo Band of Mission Indians, Ewiiaapaayp Band of Kumeyaay Indians, Iipay Nation of Santa Ysabel, Inaja/Cosmit Reservation, Jamul IndianVillage, Juaneño Band of Mission Indians Acjachemen Nation, Kwaaymii Laguna Band of Mission Indians, La Jolla Band of Luiseño Indians, La Posta Band of Mission Indians, LosCoyotes Band of Cahuilla and Cupeño Indians, Manzanita Band of Mission Indians, Mesa Grande Band of Mission Indians, Pala Band of Mission Indians, Pauma Band of Luiseño Indians, Pechanga Band of Luiseño Indians, Ramona Band of Cahuilla Indians, Rincon Band of Luiseño Indians, San Luis Rey Band of Luiseño Indians, San Pasqual Band of Mission Indians, Soboba Band of Luiseño Indians, Sycuan Band of the Kumeyaay Nation, and Viejas Band of Kumeyaay Indians. .

"**Undertaking**" refers to the granting of Master Special Use Permit by the Forest to SDG&E and the terms and conditions in its Operation and Maintenance (O&M) Plan. The HPMP is incorporated as part of the O&M Plan for the Master Special Use Permit.

Abbreviations

ADI	Area of Direct Impact
AND	Avoidable New Discovery
APE	Area of Potential Effect
APM	Applicant Proposed Measures
ARMR	Archaeological Resource Management Report
ARPA	Archaeological Resources Protection Act
ASM	ASM Affiliates
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CEQA	California Environmental Quality Act
CM	Corridor Maintenance
CNF/Forest	Cleveland National Forest
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
FEIR/FEIS	Final Environmental Impact Report / Final Environmental Impact Statement
HPM	Heritage Program Manager
HPMP	Historic Properties Management Plan
HPTP	Historic Properties Treatment Plan
LMRA	Laguna Mountain Recreational Area
MLD	Most Likely Descendant
MM	Mitigation Measure
MSUP	Master Special Use Permit
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
O&M	Operations and Maintenance
PA	Programmatic Agreement
PI	Principal Investigator
PM	Pole Maintenance

PTC	Permit to Construct
RM	Road Maintenance
SCIC	South Coastal Information Center
SDG&E	San Diego Gas and Electric Company
SHPO	State Historic Preservation Officer
UND	Unavoidable New Discovery
USFS	United States Forest Service
WS	Wood to Steel

1.0 GENERAL INFORMATION RELATED TO THE HPMP

1.1 INTRODUCTION

The HPMP was prepared as a requirement of a PA that allows SDG&E to continue the operation and maintenance of existing electric powerlines, distribution lines, ancillary facilities and access roads within the CNF boundaries, and to address potential adverse effects from the replacement of existing wood poles with steel poles as part of the CNF MSUP and PTC Powerline Replacement Projects (Project). The authorization on CNF lands will be implemented through a MSUP which will contain conditions. An inventory of cultural resources within the utility line area of potential effect (APE) was a condition of issuance of the MSUP and FEIR/FEIS. The inventories were conducted by ASM (Hector, Kyle, Pallette, James, and Briggs 2009; Schaefer and Williams 2013). The inventory reports describe the goals and methods that were used to conduct archaeological surveys to support the Project. Cultural resources work during the Project will be conducted in compliance of this HPMP and any work done on SDG&E facilities on USFS Property outside of the above listed lines will continue to be done under the Forest's Regional Programmatic Agreement or 36 CFR 800, as appropriate.

The inventory projects included pedestrian surveys around existing and proposed SDG&E facilities on and outside CNF, site recordation, preparation of a technical report, meetings and consultation, supporting CNF with Native American consultation, development of an HPMP, and supporting consultation with the SHPO as necessary. Pursuant to MM CUL-1c, a Historic Properties Treatment Plan (HPTP) for unavoidable adverse effects is included in this HPMP document.

When the easement renewal process began in 1990s, SDG&E contemplated replacing existing utility poles as part of ongoing operations and maintenance activities. The Forest required Phase I and II cultural resource studies with this objective in mind. Concern with fire-hardening the powerlines and distribution circuits in CNF led SDG&E to propose converting existing wood poles to steel poles in 2009. The Forest then required a MSUP to replace the existing easement agreements. Since powerlines are regulated by the CPUC, compliance with the California Environmental Quality Act (CEQA) was also necessary for the MSUP.

Phase I of this study was conducted by Mooney and Associates (Carrico, Cooley, Barrie, Craft, and Jordan, 2003), and consisted of development of the sampling strategy used for the inventory project. Site location information based on records searches was used by Mooney and Associates to create a digitized database of point information on site location. For the Phase II inventory, ASM then obtained the relevant site records from CNF and South Coastal Information Center (SCIC). This inventory included all distribution and powerline corridors within the Descanso and Palomar Ranger Districts. The Wood-to-Steel inventory conducted by ASM consisted of specific surveys for locations where existing wood poles will be removed or replaced by steel poles. Routine operations and maintenance on Trabuco were not part of this inventory.

The HPMP follows, in general, the outline provided in the PA. Pursuant to MM CUL-1a the APE inventory phase has already been completed for the SDG&E Proposed Project, and avoidance measures have been developed by SDG&E. Pursuant to MM CUL-1c, historic properties where unavoidable adverse effects may occur will be identified in the individual HPTP portions of this document (unwritten).

Cultural resources on public lands administered by the Forest, Bureau of Indian Affairs (BIA), and Bureau of Land Management (BLM) are managed according to the National Historic Preservation Act (NHPA, P.L. 89-665, as amended), Archaeological Resources Protection Act (ARPA, P.L. 96-95, as amended), National Environmental Policy Act (NEPA, P.L. 91-190, as amended), American Indian Religious Freedom Act (P.L. 95-341, as amended), and Native American Graves Protection and Repatriation Act (NAGPRA,

P.L. 101-601), applicable regulations (e.g., 36 CFR §60, §63, and §296; 43 CFR §10), and applicable Executive Orders (e.g., 13007, 13175, and 13287). Any cultural resources encountered on California State, County or private lands were reviewed following guidelines and regulations set forth in the CEQA (see PRC §5024.1, Title 14 CCR, Section 4852 and §15064.5(a) (3)) and/or Local Ordinances. These regulations have been considered during development of the HPMP.
The HPMP is intended to:

- Describe activities necessary for ongoing operations and maintenance activities within the MSUP area,
- Define impact/adverse effect avoidance measures for performing operations and maintenance activities,
- Summarize the results of the pedestrian survey and identification of potential historic properties including any Traditional Cultural Properties (TCP) in the area of potential effects (APE) of the selected MSUP alternative project to fire-harden utility components,
- Develop ways to avoid, minimize, or mitigate adverse effects on historic properties in a manner consistent with the Final Environmental Impact Report/Environmental Impact Statement (FEIR/EIS),
- Comply with the Mitigation Measures (MM) and Applicant Proposed Measures (APM) identified in the Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) of the FEIR/FEIS developed jointly by the CPUC and USFS, specifically, MM CUL-1b and 1c, APM CUL-04 and -09,
- Address the assessment of effects and how adverse effects to historic properties will be resolved in consultation with SDG&E and other consulting parties,
- Describe a process for evaluation of cultural resources for eligibility for inclusion on the National Register of Historic Places (NRHP and/or CRHR),
- Develop a process for incorporating design changes to the powerline replacement projects to avoid or minimize adverse effects on historic properties,
- Determine the process for requiring on-site monitoring by cultural resource professionals and Native American participants,
- Establish the process for managing unanticipated discoveries,
- Determine the curation process for all recovered cultural resources as a result of the project,
- Confirm the process for managing discovery of human remains taking into account applicable state laws, local laws, and the Native American Graves Protection and Repatriation Act (NAGPRA; 25 U.S.C. § 3001) on federal lands, and
- Identify the requirements for Historic Properties Treatment Plans (HPTPs) for eligible historic properties that will be directly impacted and cannot be avoided through project design or avoidance.

1.2 PROJECT DESCRIPTION AND BACKGROUND

1.2.1 Project Description

SDG&E operates and maintains electric facilities and associated access roads on CNF land within the Descanso, Palomar, and Trabuco Ranger Districts (Figure 1). Since SDG&E held multiple license agreements with CNF to conduct these activities, SDG&E is in the process of obtaining a single MSUP to replace the multiple license agreements. The MSUP will allow SDG&E to conduct ongoing operations and maintenance activities on electric lines, facilities, and access roads on the CNF.

In addition to ongoing operations and maintenance activities under the MSUP, a fire-hardening project (collectively, "Project") is proposed to replace certain existing powerlines on and outside CNF lands. The CPUC will issue a PTC as a result of the completion of a joint EIR/EIS with CNF. This action is needed because: (1) the existing authorizations are expired, (2) the existing powerlines are needed to supply power to local communities, residents, and government-owned facilities located within and adjacent to the National Forest, and (3) improvements are needed to operate the system in a manner that minimizes the risk of powerline related wildfires. The Forest Service completed an Environmental Analysis (EA) for the proposal in March, 2009. Based on the risk of powerline related wildfires, the Forest Service determined that an EIS was necessary to support the agency action. A Final EIR/EIS was issued in June, 2015.

The proposed powerline replacement projects include three types of electric lines: overhead powerlines (TL#), overhead distribution lines (DL# or C#), and underground distribution lines. TLs include segments of 625, 626, 629, 682, 6923 and 6931, and DL/C include sections of 78, 79, 157, 440, 442 and 449. Powerlines are attached to power poles, carry 69 kilovolts, and generally have a 30-foot wide right-of-way (ROW). Most distribution lines are attached to power poles, they carry 12 kilovolts and generally have a 20-foot ROW. Underground distribution lines are buried, carry 12 kilovolts and generally have a 10-foot wide ROW. Exclusive-use roads include approximately 38 miles of roadways that are associated with the powerlines. These roads are typically 14 feet wide. The CPUC will issue a PTC as a result of the completion of a joint Environmental Impact Report/Environmental Impact Study (EIR/EIS) with CNF. Cultural resources work during the fire-hardening project will be conducted in compliance of this HPMP. This includes any typical O&M work conducted on a facility considered in the fire hardening project that will be built to final engineering standards for that alignment. Any work done on SDG&E facilities on USFS Property outside of the above listed lines and final engineering design standards will continue to be done under the Forest's Regional Programmatic Agreement or 36 CFR 800, as appropriate.

1.2.2 Geographic Setting and Master Special Use Permit Boundaries

As shown in Figure 1, the Project study area is located within the Trabuco, Palomar, and Descanso Ranger Districts of the CNF, Orange and San Diego Counties, California. The existing powerlines and distribution facilities proposed to be replaced are located within the central portion of San Diego County approximately 4.5 miles north of the U.S.–Mexico Border, 14 miles east of the City of El Cajon, in the vicinity of the unincorporated communities of Pauma Valley, Warner Springs, Santa Ysabel, Descanso, Pine Valley, and Campo. The proposed powerline replacement projects not only traverse the Palomar and Descanso Ranger Districts of the CNF, but due to the patchwork of land ownership in the project study area, also traverse public lands managed by the Bureau of Land Management (BLM); tribal lands on the La Jolla and Campo Indian reservations; Cuyamaca Rancho State Park lands; and private holdings within unincorporated San Diego County. Within the Trabuco District, activities will consist of routine operations and maintenance activities only.

As shown in Table 1, the MSUP would authorize approximately 100 miles of powerline and distribution lines, and approximately 34 miles of access roads on the CNF (Figure 1).

Table 1. SDG&E Electric Facilities to be included in the MSUP as part of the Proposed Project (Dudek 2013)

Alignment	Miles of Overhead Line	Miles of Underground Line	Total Miles of Circuit	Miles of Exclusive Use Access Roads
C67	0.0[1]	-	0.0	-
C73	6.0	0.0	6.1	-
C78*	1.7	-	1.7	0.0
C79*	6.2	-	6.2	-
C157*	2.5	-	2.5	0.3
C212	4.0	0.0	4.1	-
C214	1.3	-	1.3	-
C220	0.1	-	0.1	-
C236	-	0.0	0.0	-
C237	1.9	-	1.9	-
C240	0.5	-	0.5	-
C358	2.5	0.1	2.6	-
C440*	12.0	9.8	21.8	0.6
C441	4.9	0.3	5.2	-
C442*	10.6	-	10.6	3.0
C449*	2.7	1.5	4.2	0.4
C524	0.1	-	0.1	-
C970	-	0.1	0.1	-
C973	0.0	0.0	0.0	-
C1166	1.5	-	1.5	-
C1243	0.5	-	0.5	-
C1458	0.2	-	0.2	-
TL625*	6.5	-	6.5	11.0
TL626*	8.2	-	8.2	9.9
TL629*	9.6	-	9.6	6.9
TL637	0.4	-	0.4	-
TL682*	2.5	-	2.5	1.1
TL6923*	1.7	-	1.7	1.1
Glencliff Substation	-	-	-	-

Notes

* = proposed powerline replacement projects
[1] Values of 0.0 reflect very short segments (less than 250') of line that when rounded to a tenth of a mile round to zero.

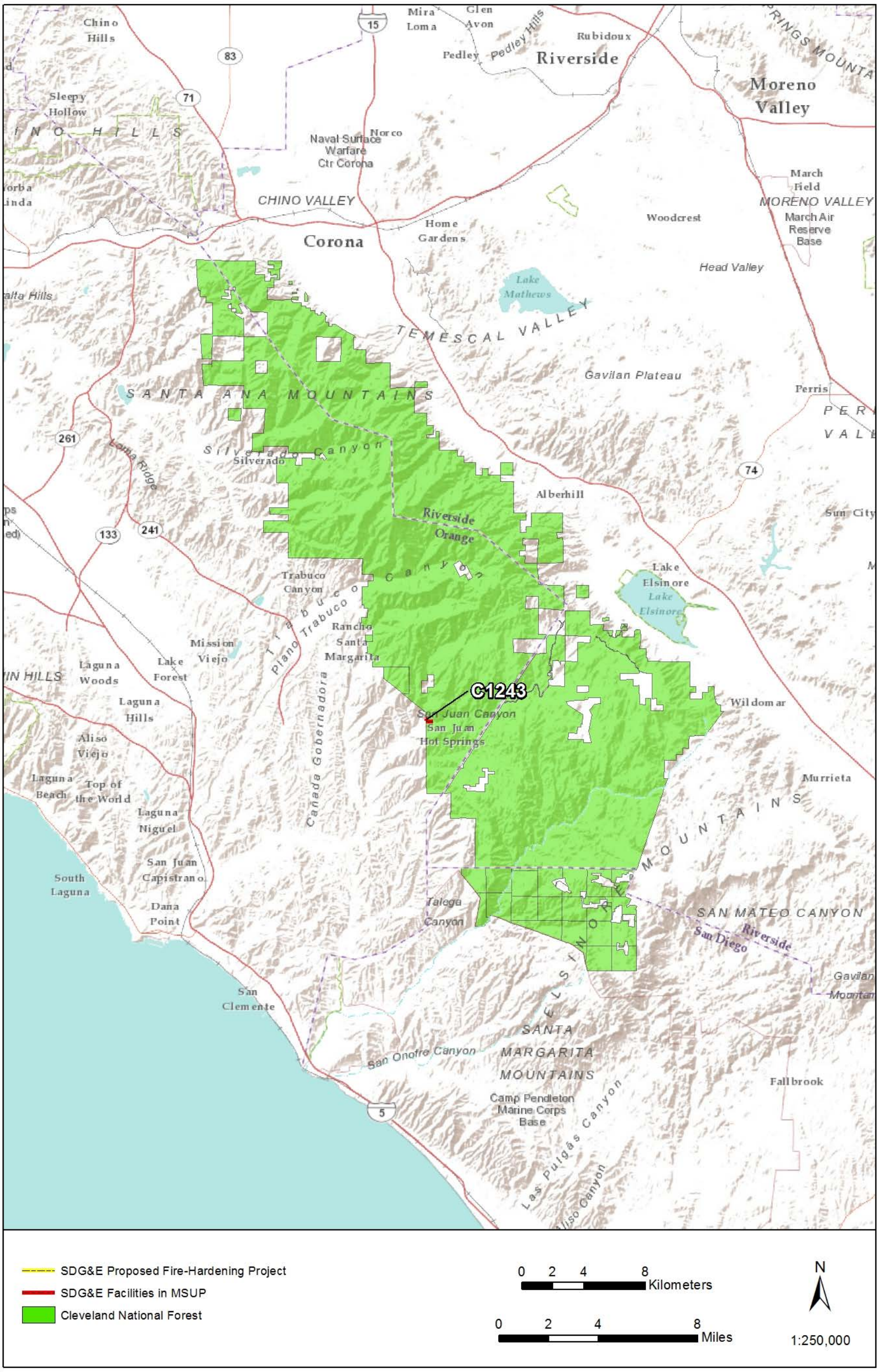

Figure 1. Trabuco District.

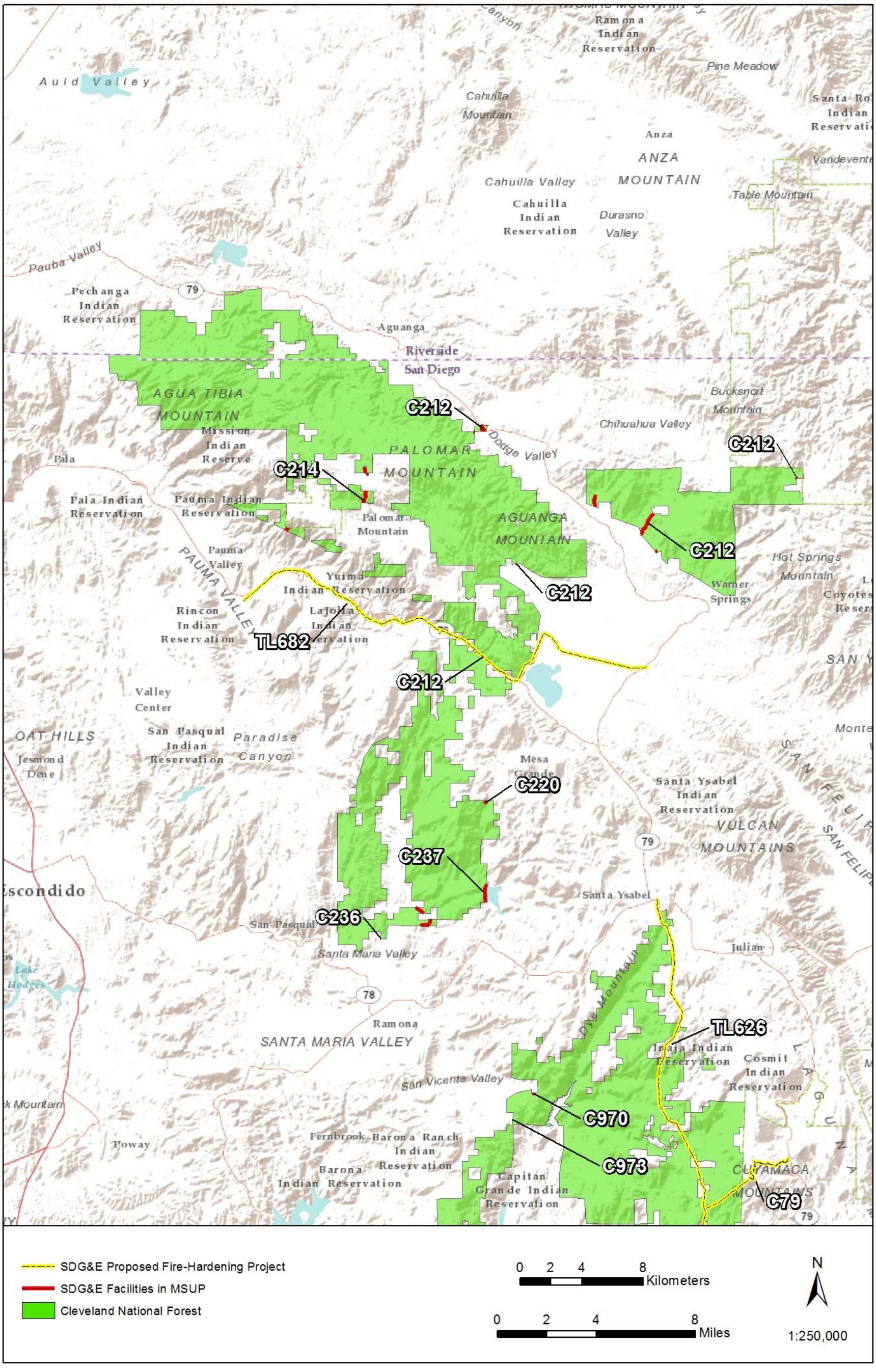

Figure 2. Palomar and Descanso Districts.

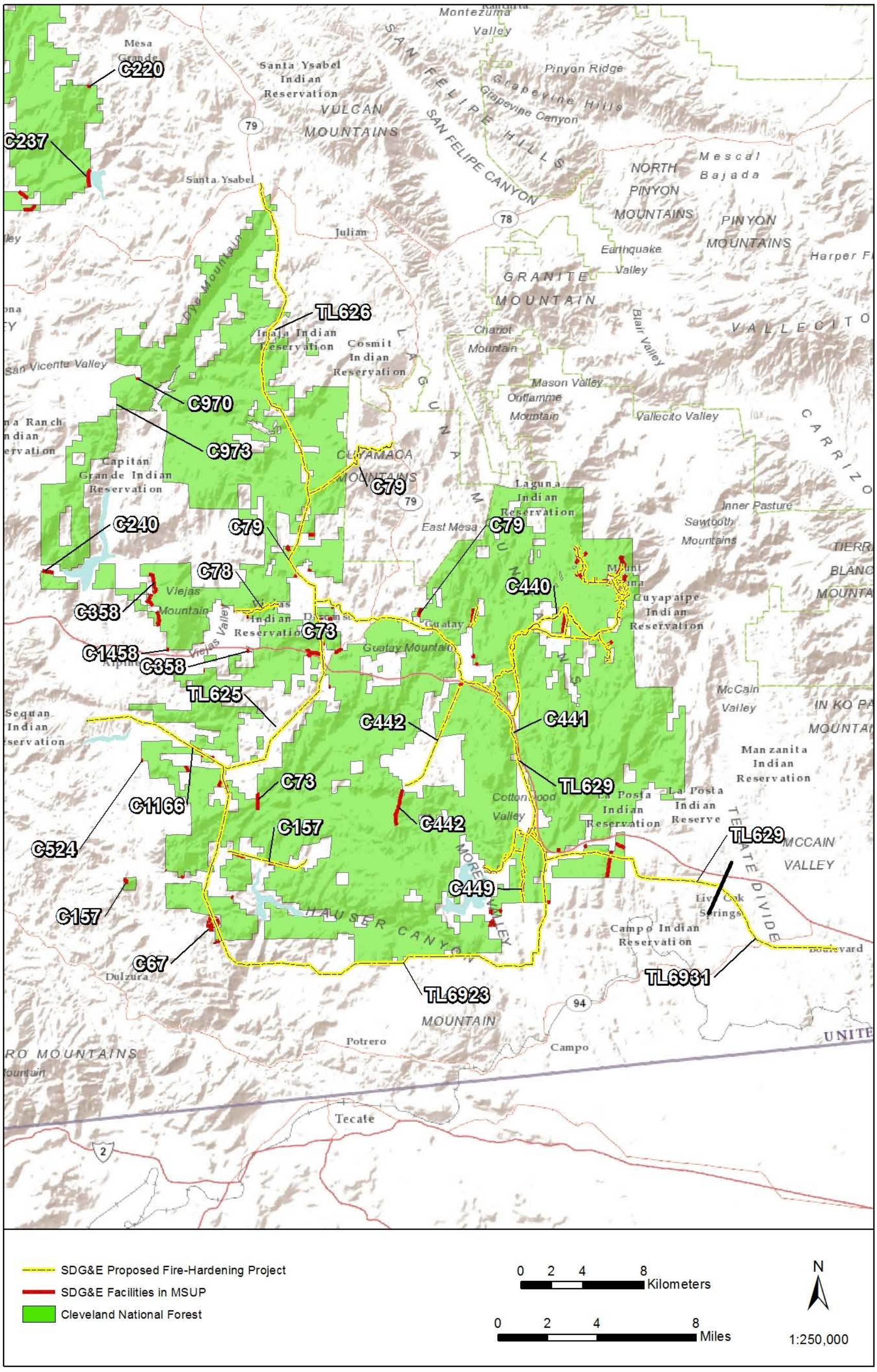

Figure 3. Descanso District.

1.3 OBJECTIVES AND RESPONSIBILITIES

1.3.1 Objectives of the HPMP

The Historic Properties Management Plan has two main objectives: to direct management of historic properties during routine utility operations and maintenance programs under the MSUP on CNF land (Section 2.0), and to address adverse effects from construction of the powerline replacement projects (Section 3.0). Following completion of the powerline replacement projects, all long-term work on CNF land will be conducted in consultation with the USFS and in accordance with the O&M Plan for SDG&E Electrical Powerline and Distribution Facilities Located on Federal Lands Administered by the USDA Forest Service-Cleveland National Forest (TBD) prepared by SDG&E and the Forest and to which the HPMP may be appended.

The HPMP addresses the elements defining the historic preservation program outlined in Attachment 1 of the PA. The HPMP has been written and organized in a manner so that sensitive information (e.g., archaeological site or traditional cultural property locations) regarding historic properties is kept confidential. The HPMP discusses the management of historic properties in a manner that can be summarized and provided for review and comment by the public. Per the stipulations of the PA, the treatment objectives presented in this HPMP address the following:

1) A process for survey and identification of potential historic properties including any Traditional Cultural Properties in the APE;
2) A process for evaluation of cultural resources for eligibility for inclusion on the NRHP, CRHR and/or Local Listing;
3) Address design changes to the Project to avoid adverse effects to historic properties;
4) Ways to avoid, minimize, or mitigate adverse effects on historic properties;
5) Conditions and stipulations set forth in the FEIS/FEIR for the Project to meet both CPUC and USFS requirements, specifically MM CUL-1b/1c, APM CUL-04 and -06;
6) A provision for curation of archaeological and historical items;
7) Support for the Forest program for interpretation of historic properties to the public and other public involvement in historic preservation;
8) Definition of the roles and responsibilities of the jurisdictional agencies and SDG&E in any long-term management of historic properties in the APE;
9) Preparation of a Historic Properties Treatment Plan; and
10) Provision of a list of the known cultural resources in the APE.

This management plan addresses various proposed methods to reduce adverse effects to these cultural resources including: minimization and avoidance through project redesign; the establishment of Environmentally Sensitive Areas (ESAs) that would be off-limits to all ground disturbing activities; and appropriate treatment for those resources that cannot be protected from direct impacts, and may require eligibility testing, and possibly, data recovery. Finally, this management plan defines the methods for curation of the archaeological materials recovered as a result of this project.

1.3.2 Roles and Responsibilities

SDG&E has developed this HPMP to provide a detailed historic preservation program to:

a) Inventory, evaluate, manage, and treat adverse effects to historic properties within the Project APE;

b) Consult and coordinate with government agencies, tribes, and the public;

c) Provide for curation of archaeological and historical items associated with the historic preservation program;

d) Support the Forest program for interpretation of historic properties to the public and other public involvement in historic preservation; and

e) Define the roles and responsibilities of the land management agencies and SDG&E in any long-term management of historic properties in the APE.

The USFS is the Lead Agency for Section 106 and the CPUC is the Lead Agency for CEQA. The USFS will apply all National Register Criteria at 36 CFR 63 and will make the final determination of eligibility and finding of effect, in consultation as appropriate with the signatories and concurring parties to the PA and local Tribes. In consultation with those parties and SHPO, the USFS will negotiate appropriate treatments or other actions to resolve adverse effects to historic properties. If there is no CEQA action, the CPUC has no involvement. For the powerline replacement projects, the USFS will be responsible for coordination with consulting parties to the PA and other jurisdictional land management agencies as appropriate and necessary.

The USFS will be responsible for consultation with the SHPO on the agency's eligibility determinations. Determinations of eligibility for archaeological sites will be based on a draft report of site testing to be prepared by SDG&E. The draft evaluation report is intended to provide sufficient detail to allow the USFS to evaluate the eligibility recommendations provided and concur with the findings. Prior to consultation with the SHPO on the eligibility of any cultural resource in the APE for inclusion in the NRHP, the USFS will also seek the views and comments, as appropriate, from the consulting parties to the PA on any such determination that the USFS may propose. The USFS will also consult with Indian Tribes irrespective of their decision to sign the Agreement as a concurring party and seek the views and comments of Tribal Organizations and individual tribal members regarding places to which they attach religious or cultural significance in order to ascertain the status of these places relative to NRHP, CRHR or Local Listing eligibility criteria. If any objections are made during this period, The Guidelines Stipulation 9.0 from the Project PA will be followed.

USFS will consult with SHPO only when the Project will result in a non-adverse effect where avoidance is not possible or an adverse effect to an historic property. The process for identification, evaluation and consultation as well as determinations of effect and mitigations for historic properties during planning efforts is outlined in Section 1.6.2. The process for resolving inadvertent effects and unanticipated discoveries during O&M procedures is outlined in section 2.2.2. The process for resolving inadvertent effects and unanticipated discoveries during construction activities is outlined in section 3.1.6.

Long-term management of resources on CNF land under the MSUP will be conducted in consultation with the USFS and in accordance with the O&M Plan for SDG&E Electrical Powerline and Distribution Facilities Located on Federal Lands Administered by the USDA Forest Service-Cleveland National Forest (TBD) prepared by SDG&E and the Forest and to which the HPMP will be appended. Where long-term operations and maintenance activities occur on non-CNF land, SDG&E will continue to consult with

jurisdictional land managers, as appropriate, in accordance with existing internal SDG&E policies and procedures.

1.3.3 Professional Qualifications

All historic preservation activities carried out pursuant to the PA shall be carried out by or under the direct supervision of a person or persons meeting at a minimum the Secretary of Interior's *Professional Qualifications Standards* for archeology or history, as appropriate (48 Federal Register 44739).]
The USFS and SDG&E shall implement any historic preservation activity subject to the Archaeological Resources Protection Act (ARPA) per regulations at 36 CFR Part 296, and 36 CFR §296.8(a)(1) pertaining to the professional qualifications of the ARPA permit applicant, and shall ensure that all work in the Undertaking authorized to SDG&E pursuant to this PA and HPMP regarding management of historic properties will be carried out, or conducted under, the supervision of individuals meeting the professional qualifications standards identified in *The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (36 CFR Part 61), i.e., "qualified personnel", as follows:

- All work in the Undertaking authorized to SDG&E pursuant to the PA regarding historic buildings and structures will be carried out or conducted under the supervision of a person or persons meeting the professional qualifications for Historian, Architectural Historian, or Historic Architect, as defined at 36 CFR Part 61.
- All work in the Undertaking authorized to SDG&E pursuant to the PA regarding prehistoric and historic archaeological resources will be carried out or conducted under the supervision of a person or persons meeting the professional qualifications for Archeologist, as defined at 36 CFR Part 61. Professionally qualified cultural anthropologists or ethnographers, minimally meeting Office of Personnel Management standards at the journeyman GS-190-11 level, may be used to supplement information for traditional cultural historic properties.
- SDG&E will ensure that all appropriate personnel responsible for making decisions regarding the planning, construction, maintenance, preservation, or rehabilitation standards for the performance of work on historic properties potentially affected by SDG&E activities in the Undertaking as authorized by the MSUP receive annual training in the application of *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (36 CFR Part 68).

The USFS or SDG&E or any agent thereof may use the services of persons who do not meet the Secretary of the Interior's professional qualifications standards as defined under 36 CFR Part 61 as long as they are properly supervised by someone who does meet professional standards.

1.3.4 Curation

Under 36 CFR 79, the Forest is responsible for the long-term management and preservation of any collections made during the Project. SDG&E or its qualified agent shall be allowed to temporarily retain artifacts, items, records, and other material remains collected, compiled, or otherwise obtained in the process of historic preservation activities associated with the Undertaking and that originate on public lands provided that:

- Such items are kept at a facility that is secure from theft, fire water damage, or other loss as in a typical, limited access, secure business office storage environment;
- Such facility is approved by the Forest and the Forest is provided with a complete inventory of all artifacts, items, records, and other material remains temporarily retained by SDG&E;

- Such artifacts, items, records, and other material remains are clearly marked in a manner that allows for their ready identification and alerts any person handling the materials that they are not to be discarded;
- Collections will focus on diagnostic artifacts/elements or will directly support research questions developed in the evaluation phase or the specific site HPTP, otherwise curation on site is the preferred method;
- No "cultural items" as defined by the Native American Graves Protection and Repatriation Act (NAGPRA) are to be included among the materials retained by SDG&E (described below in Section 3.1.7);
- The artifacts, items, records, and other material remains will be released to a curation facility approved by the Forest in coordination with SDG&E as the repository for the artifacts, items, records and other material remains associated with the Undertaking within ninety (90) days of the date of receipt by SDG&E of notification by the Forest that such a repository has been designated by the Forest and that the Forest wishes the artifacts, items, records, and other material remains to be transferred to the designated curation facility;
- Initial processing and one year of associated curation expenses will be paid by SDG&E, after which financial responsibility for curatorial needs will revert to the Forest;
- SDG&E may at any time notify the Forest that it intends to return the artifacts, items, records, and other material remains to the Forest and SDG&E may return the artifacts, items, records and other material remains any time after notification is given to the Forest;
- With the exception of those artifacts, items, records, and other material remains that are the legitimate private property of SDG&E or other persons, the artifacts, items, records, and other material remains associated with the Undertaking and originating from lands under the administration of the Cleveland National Forest remain the property of the United States government;
- SDG&E or its agent will not be obligated to incur any special costs associated with the temporary curation of the artifacts, items, records, and other material remains either in the form of insurance against loss, theft, or damage by fire, water, or by any other cause; security or other protective devices; or for any other reason except as may be incurred voluntarily by SDG&E.

1.4 CULTURAL CONTEXT AND ASSOCIATED PROPERTY TYPES

Multiple jurisdictional boundaries including CNF, BLM, BIA, and DPR, are intersected by the Project. What follows is a general overview and context of these areas followed by specific discussion of each CNF District. The CNF includes the Palomar, Descanso, and Trabuco Districts. The Palomar District consists of Palomar Mountain. The Descanso District consists of the Cuyamaca and Laguna mountain ranges and foothills. The Trabuco District is located within the Santa Ana mountain range.

1.4.1 Natural Setting

The Project extends from Pauma Valley to Hwy. 79 near Warner Springs, then south from Santa Ysabel, along the Peninsular Ranges in coastal San Diego County to the Barrett Lake and Cameron Corners areas. Landforms within the region typically consist of marine terraces transitioning into rolling hills to the east, extending to the Peninsular Ranges. Sediments accumulated through stream, wind, and gravitational activities characterize recent geologic deposits. The region is characterized by a Mediterranean semiarid steppe climate, moderated by coastal proximity (Bowman 1973; Hines and Rivers 1991:4). Precipitation averages 270 mm per year and falls primarily in the winter (from December to April). A series of major plant communities are present within the region, including coastal sage scrub, freshwater marsh, riparian, grasslands, oaks, and chaparral (Munz 1974). A wide range of small mammals, birds, and reptiles are

indigenous faunal resources of the region. Some of the mammals that occur in the area include several species of mice and bats, desert cottontail, California ground squirrel, desert woodrat, bobcat, coyote, and mule deer, among others. Waterfowl, geese, and ducks are also found in the region. In prehistoric times, the area would have also supported a wide range of terrestrial resources, pronghorn, and black bear.

Palomar Mountain is actually a series of mountains or a mountain range located in the northeastern portion of San Diego County. It contains the headwaters of the San Luis Rey River, and faces the Anza-Borrego Desert to the east. Its steep sides rise dramatically from the coastal mesas of North County. Several major creeks cut through the ridges and slopes of the mountain, and wide valleys and meadows are located near the summit and on its eastern flanks.

Palomar Mountain is the wettest and coolest location in San Diego County. It receives between 30 to 70 inches of annual rainfall; 48 inches is the average amount of rain. The mountain has up to 40 inches of annual snowfall. The average temperature in July is 85°F, and the January average is 32°F. The mountain's highest point is 6,140 ft. above sea level.

The high slopes and canyons of Palomar Mountain are covered with Montane Coniferous Forest vegetation (Beauchamp 1986). The forest contains large trees with thick understories. Tree species that are present include Bigcone Douglas Fir (*Pseudotsuga macrocarpa*), Jeffrey Pine (*Pinus jeffreyi*), Black Oak (*Quercus kelloggii*), Canyon Live Oak (*Quercus chrysolepis*), and Coast Live Oak (*Quercus agrifolia*). Sparkman (1908:193-194) stated that the Luiseño thought that the acorn of the Black Oak was the most palatable, followed by the Coast Live Oak. The Canyon Live Oak acorn was palatable but hard to grind. The Black Oak and Canyon Live Oak are abundant at the higher elevations of Palomar, although groves of Coast Live Oak are present on the mountain.

At lower elevations of the mountain, Mixed and Chamise Chaparral vegetation covers the hillsides; there are also some areas of Montane Meadow Grassland. The meadows contained ethnobotanically important grasses such as Deergrass (*Muhlenbergia rigens*), as well as rushes (*Juncus* spp.). Patches of Deergrass still exist in some of the meadows.

Palomar Mountain is part of the Peninsular Range mountain system. These mountains, which extend from Riverside into Baja California, are composed of igneous and metamorphic rocks that formed together in a batholith (Walawender 2000). The batholith dates to the Mesozoic era (approximately 100 million years ago), when the western part of the U.S. was the location of extensive volcanic activity. The batholith contains a multitude of smaller volcanic formations, each with its own geological signature. Its most notable feature is the abundance of granitic rock outcrops, which provided the original occupants of the county, the California Indians, with materials for processing plant and animal products. Bedrock outcrops, containing mortars, basins, and slicks, are often found at prehistoric archaeological sites located within the Peninsular Range; these types of archaeological features are common at sites on Palomar Mountain.

The Cuyamaca and Laguna Mountains are also part of the Peninsular Range mountain system.
Cuyamaca Peak, at 6,512 feet, is the second highest mountain in San Diego County. Two other nearby peaks rival this elevation. The climate in the mountains is classified as "Mediterranean/Cool," and varies between hot and dry, to snow. The average annual precipitation at Cuyamaca Rancho State Park is approximately 37 inches, some of which falls as snow. The average summer high temperature is 85°F, and the average winter low temperature is 28°F. This broad range of temperatures and relatively high amount of precipitation has resulted in a rich habitat for plants and animals.

The Cuyamaca and Laguna Mountains are covered with Montane Coniferous Forest vegetation (Beauchamp 1986:6-7). The conifers and broadleaf trees present in this plant community include many species. Conifers consist of white fir, incense cedar, Coulter pine, Jeffrey pine, sugar pine, and ponderosa

pine. The broadleaf trees include white alder, Arizona ash, California sycamore, Fremont cottonwood, coast live oak, canyon live oak, Engelmann oak, California black oak, interior live oak, and red willow.

In areas not covered by a dense forest, shrub vegetation blankets slopes and ridges. Larger shrubs include chamise, Eastwood manzanita, Cuyamaca manzanita, Mexican manzanita, cupleaf mountain lilac, whitebark mountain lilac, Palmer mountain lilac, mountain mahogany, creek dogwood, Parish goldenbush, yerba santa, Parish burning bush, toyon, California barberry, laurel sumac, hollyleaf cherry, western choke cherry, scrub oak, coffeeberry, western azalea, white sage, and elderberry. Many of these grow in large concentrations, creating a nearly impenetrable thicket.

The smaller shrubs in the region's mountains include California buckwheat, Wright buckwheat, chaparral honeysuckle, basketbush, California rose, creeping sage, snowberry, and poison oak. There are also many perennial and annual flowering plants that are found only in the mountains, and are considered very sensitive and rare.

The Trabuco District includes a portion of the Santa Ana Mountains, a relatively short range of mountains (61 miles) along the coast of southern California. The highest point is Santiago Peak, which is almost 5,700 feet in elevation. Plant communities include coastal sage scrub, chapparal, riparian woodland, and coniferous forest – much the same as the Cuyamaca and Laguna Mountains to the south. However, unlike the mountains to the south, the Santa Ana Mountains contain large complexes of vernal pool habitat. The terrain is generally very steep and rugged.

1.4.2 Cultural Setting

1.4.2.1 Archaeology

Archaeological investigations in southern California have indicated that there was a diverse range of human occupation extending over the past 10,000-12,000 years, until the time of contact with European civilizations (Byrd and Raab 2007; Erlandson and Colten 1991; Jones 1991, 1992; Moratto 1984). Archaeologists have divided this time period into sequential cultural phases or periods, each distinguished by specific material culture and occupation patterns.

Malcolm Rogers (1929, 1945) established the basic cultural sequence for southern California, and subsequent scholars have generally refined it by subdividing cultures, combining cultures, or renaming the sequence. The most enduring local culture historical classifications are those generated by Rogers (1945) with a later synthetic treatment by Wallace (1955) that integrated San Diego County with other portions of the southern California coast.

This HPMP uses the terms Paleoindian, Archaic, and Late Prehistoric to structure an overview of San Diego County and southern Orange County prehistory. These terms refer to assemblages of artifact and site types, and do not imply that different groups of people lived in the region over time. Rather, the terms are archaeological constructs that provide a way to discuss and describe the cultural traits observed throughout prehistory. The discussion begins with a brief mention of Early Man, a controversial element of regional prehistory.

1.4.2.1.1 Early Man: Human Occupation Prior To 11,500 B.P.

San Diego has become a focus of the controversy related to the earliest occupation of the New World. The antiquity of human occupation in the New World has been the subject of considerable debate over the last few decades and a number of sites have been proposed as representing very early occupation of the Americas (Owen 1984; Taylor 1991). The most widely accepted archaeological model is that humans first entered North America between 15,000 and 12,000 B.P.; no sites are reliably dated prior to 15,000 B.P.

(e.g., Haynes 1969; Jelinek 1992; Johnson, Stafford, Ajie, and Morris 2002; Meltzer 1993). Several notable Early Man sites have been reported in San Diego County (e.g., Buchanan Canyon and Texas Street; see Gross [2004] for a summary of George Carter's local work), but these locations have problems with context and provenience. Many reported Early Man sites are surface scatters of "ancient" tools, or are cobble tools extracted from geological contexts. Radiocarbon dates that supported Early Man presence in the region have been corrected with improvements in technology, with the result that these dates are now proven to be much more recent (Bada 1985). The reported presence of Early Man in San Diego remains controversial. The oral history of many local tribal groups attests to their presence in San Diego since the beginning of time.

1.4.2.1.2 Paleoindian Period (11,500 - 8500 B.P.)

The antiquity of human occupation in the New World has been the subject of considerable debate over the last few decades. The currently accepted model is that humans first entered the western hemisphere between 12,000 and 15,000 years before present (B.P.). While there is no firm evidence of human occupation in coastal southern California prior to 12,000 B.P., dates as early as 23,000 B.P., and even 48,000 B.P., have been reported (Bada et al. 1974; Carter 1980; Rogers 1974), although these dates are not generally accepted (Taylor et al. 1985). Despite intense interest and a long history of research, no widely accepted evidence of human occupation of North America dating before 15,000 B.P. has emerged.

As in most of North America, the earliest recognized period of California prehistory is termed Paleo-Indian. In southern California, this period is usually considered to date from at least 10,000 B.P. until 8500 to 7200 B.P. (Moratto 1984; Warren et al. 2008), and is represented locally by what is known as the San Dieguito complex (Rogers 1966). San Dieguito assemblages are composed almost entirely of flaked stone tools, including scrapers, choppers, and large projectile points (Warren 1987; Warren et al. 2008). Until recently, the near absence of milling tools in San Dieguito sites was viewed as the major difference between Paleo-Indian economies and the lifeways which characterized the later Archaic period.

Based upon rather scant evidence from a small number of sites throughout San Diego County, it has been hypothesized that the people linked to the San Dieguito complex lived within a generalized hunter-gatherer society with band-level organization (Warren et al. 2008). This portrayal is essentially an extension to the inland and coastal areas of San Diego County of what has long been considered a continent-wide Paleo-Indian tradition. This immediate post-Pleistocene adaptation occurred within a climatic period characterized by somewhat cooler and moister conditions than exist presently (West et al. 2007). The range of possible economic adaptations of San Dieguito bands to this environment are poorly understood at present, but it is typically assumed that these groups followed lifeways similar to other Paleo-Indian groups in North America.

This interpretation of the San Dieguito complex as the local extension of a post-Clovis big game hunting tradition is based primarily on materials from the Harris Site (Ezell 1983, 1987; Warren 1966, 1967). An unusually high percentage of large bifaces in the Harris assemblage seems indicative of a retooling station, a pattern not found at any other purported San Dieguito sites. Still, there does appear to be some evidence that large biface technology was typical of the earliest occupations of San Diego County, and that this pattern is shared by other complexes in the greater Southwest. What is less clear is how large a role these objects played in the day-to-day subsistence activities of their creators.

1.4.2.1.3 Archaic Period (8500 - 1500 B.P.)

The Archaic (also referred to as the Early Milling Period) extends back at least 7,200 years, possibly to as early as 9000 B.P. (Rogers 1966; Warren et al. 2008). Archaic subsistence is generally considered to have differed from Paleo-Indian subsistence in two major ways. First, gathering activities were emphasized over hunting, with shellfish and seed collecting of particular importance. Second, milling technology, frequently

employing portable ground stone slabs, was developed. The shift from a mostly maritime-based subsistence focus to a terrestrial focus is traditionally seen as marking the transition from the Paleo-Indian to the Archaic period. In reality, the implications of this transition are poorly understood from both an economic and cultural standpoint (see Warren et al. 2008 for a broader review).

Early Archaic occupations in San Diego County are most apparent along the coast and the major drainage systems that extend inland from the coastal plains (Moratto 1984). Coastal Archaic sites are characterized by cobble tools, basin metates, manos, discoidals (disk-shaped grinding stones), a small number of Pinto- and Elko-series dart points, and flexed burials. Together these elements typify what is termed the La Jolla complex in San Diego County, which appears as the early coastal manifestation of a more diversified way of life.

For many years, the common model has included what D. L. True (1958) termed the Pauma complex, an archaeological construct based upon a number of inland Archaic period sites in northern San Diego County that appeared to exhibit assemblage attributes different from coastal Archaic sites. Pauma complex sites were typically located on small saddles and hills overlooking stream drainages, and were characterized by artifact scatters of basin and slab metates, manos, some scraper planes, debitage, and occasionally ground stone discoidals. Further analysis suggests that the Pauma complex is simply an inland counterpart to the coastal La Jolla complex (Cardenas and Van Wormer 1984; Gallegos 1987). Given that the distance between the coastal and inland environments is only a few dozen kilometers, and that sites attributed to each complex appear to be contemporaneous, it seems more parsimonious to consider the differences in materials as seasonal manifestations of a mobile residence strategy using both coastal and inland resources. When similar environmental variability exists within Archaic complexes in other regions, such sites are usually considered to represent different aspects of the annual positioning strategies of a single hunter-gatherer culture complex (Bayham and Morris 1986; Sayles 1983; Sayles and Antevs 1941).

In recent years, local archaeologists have questioned the traditional definition of the Paleo-Indian San Dieguito complex as consisting solely of flaked lithic tools and lacking milling technology. There is speculation that differences between artifact assemblages of “San Dieguito” and “La Jolla” sites may reflect functional differences rather than temporal or cultural variability (Bull 1987; Gallegos 1987; Wade 1986). Gallegos (1987) has proposed that the San Dieguito, La Jolla, and Pauma complexes are manifestations of the same culture, that is, different site types are the result of differences in site locations and resource exploitation (Gallegos 1987:30). This hypothesis, however, has been strongly challenged by Warren and colleagues (2008).

In short, our understanding of the interplay between human land use, social organization, and material culture for the first several millennia of San Diego prehistory is poorly developed, although some progress has been made. Recent data collection has accelerated in the areas of paleoenvironmental analysis, paleoethnobotany, faunal analysis, and lithic technology studies. More importantly, efforts are being made to re-examine the assumptions surrounding existing artifact typologies and climatic reconstructions that form the basis of the standard systematics. Specifically, during work at SDI-7074 for the East County Substation project (ECSP), five features, all presumed earth ovens, produced a cluster of dates within the Archaic period (Williams 2014). These features from SDI-7074 are among the oldest in the western United States and are representative of the very beginning of the proliferation of “hot rock cookery” practices that occurred throughout much of North America in the early Archaic (Thoms 2009). These features also bear a striking resemblance to similar features and deposits of the similar age from coastal San Diego, including use of milling slabs in oven construction. The technological/cultural implications, then, support the concept that San Dieguito, La Jolla and Pauma may all be manifestations of the same culture.

1.4.2.1.4 Late Prehistoric Period (1500 - 200 B.P.)

The onset of the Late Prehistoric period in southern California is generally considered to have occurred approximately 1,500 years ago (Moratto 1984; Rogers 1945; Warren et al. 1993). The timing of this period may vary within the region (potentially earlier in the east and later in the west). In general, the Late Prehistoric period is characterized by the use of small, pressure-flaked projectile points indicative of bow and arrow technology, the appearance of ceramics, the replacement of flexed inhumations with cremations, and an emphasis on inland plant food collection and processing (especially of acorns) (Meighan 1954; Rogers 1945; Warren 1964, 1968). Late Prehistoric village or base campsites are relatively large, and contain internal activity areas attesting to the complexity of behavior of site occupants (Hector 1984).

In his later overviews of San Diego prehistory, Malcolm Rogers (1945) hypothesized that Yuman-speaking people from the Colorado River region began migrating into southern California around 2,000 years ago. This hypothesis was based primarily on patterns of material culture in archaeological contexts and his reading of ethnolinguistics. This "Yuman invasion" is still commonly cited in the literature, but some later linguistic studies suggest that the movement may have actually been northward from Baja California (Laylander 2010). It is plausible that the migration occurred from both areas simultaneously.

Assemblages derived from Late Prehistoric sites in San Diego County differ in many ways from the Archaic tradition. The occurrence of small, pressure-flaked projectile points, the replacement of flexed inhumations with cremations, the introduction of ceramics, and an emphasis on inland plant food collection, processing, and storage (especially acorns) are only a few of the cultural patterns that were well established by the second millennium A.D. The centralized and seasonally permanent residential patterns that had begun to emerge during the Archaic period became well established in most areas. Inland semi-sedentary villages appeared along major watercourses in the foothills and in montane valleys where seasonal exploitation of acorns and pinyon nuts was common, resulting in permanent milling stations on bedrock outcrops. Mortars for acorn processing increased in frequency relative to seed-grinding basins.

The Late Prehistoric period is represented by the Cuyamaca complex in the southern portion of the county (True 1970) and reflects the material culture of the Yuman ancestors of the Kumeyaay (also known as Diegueño or Kamia).

According to True et al. (1974), the Cuyamaca complex, is differentiated from other regional material cultures by greater frequencies of side-notched points and flaked stone tools, ceramics, and milling stone implements, a wider range of ceramic forms (e.g.,. Hakataya figurines; Hedges 1973), a steatite industry, and cremations placed in ceramic vessels. Assigning cultural significance to these patterns should be done with caution, however, since it is obvious that seasonal camps in upland areas would reflect a different economic focus and would involve a slightly different set of trade relations than would be expected for populations focused on the Pacific Coast or Gulf of California. Thus a good deal of the variation in artifact form might be attributable to functional differences or point of origin. Gross and others (1989) have suggested that these differences may not serve as indicators of cultural affiliation, and some may be due to different levels of organization. In regard to site structure, we might also expect occupational spans to differ between coastal and inland camps given the shorter summers at higher elevations.

1.4.2.2 Ethnography

1.4.2.2.1 The Kumeyaay

The people living in the southern part of San Diego County at the time of Spanish contact were called the Diegueño, after the mission at San Diego. However, as Hedges (1975:80) pointed out, many of the people living in the region were not affiliated specifically with the mission. In general, the term Kumeyaay has come into common usage to identify the Yuman-speaking people living in the central and southern part of

the county. Luomala (1978) uses the terms Tipai and Ipai to refer to the southern and northern Kumeyaay, respectively. The dividing line between the Tipai and the Ipai runs approximately from Point Loma to Cuyamaca Peak and Julian. The name Kamia has been used by anthropologists to refer to the Yuman-speaking people living in Imperial Valley. This report uses the generally accepted term Kumeyaay to refer to the people who lived in the Descanso District of CNF.

The Kumeyaay people established a rich cultural heritage that is described in detail by Waterman (1910), Spier (1923), Hohenthal (2001), and others. The Kumeyaay were organized into large groups, each having base camps and an extensive territory exploited for specific resources. Based on ethnohistoric and ethnographic information, a large number of village sites have been identified throughout San Diego County. Many of these villages were located along the coast, near river mouths; the varied environments offered by the ocean and riparian areas attracted large numbers of people to these areas (although a study by Christenson [1992] indicates that maritime resources were not as large a part of the diet as previously believed). The Kwaaymii band established several large villages in the Laguna Mountains. Other named locations for this band are given in Spier (1923: 303).

Examples of baskets and pottery dating from the nineteenth and early twentieth centuries indicate a high level of artistic achievement and craftsmanship. Many different types of stone material were used for manufacturing tools, and exotic material types were procured from other parts of the region. The remains of structures that were built at village sites can be seen in the archaeological record as stone foundations and circles. Many traditional cultural areas were recognized by the Kumeyaay, and these locations continue to be considered sacred today.

In California, Spanish explorers first encountered coastal villages of Native Americans in 1769 with the establishment of Mission San Diego de Alcalá. The missions “recruited” coastal Native Americans to use as laborers and convert them to Catholicism. This had a dramatic effect on traditional cultural practices. Missionization, along with the introduction of European diseases, greatly reduced the Tipai population. Most villagers, however, continued to maintain many of their aboriginal customs while adopting the agricultural and animal husbandry practices learned from Spaniards.

By the early 1820s, California came under Mexico’s rule, and in 1834 the missions were secularized. This resulted in a political imbalance and a series of Native American uprisings against the Mexican rancheros. Many of the Kumeyaay left the missions and ranchos and returned to their original village settlements (Cuero 1970). When California became a sovereign state in 1850, the coastal Indians were heavily recruited as laborers, and experienced even harsher treatment. Conflicts between Native Americans and encroaching Anglos finally led to the establishment of reservations for some villages. Other Mission groups were displaced from their homes, moving to nearby towns or ranches. The reservation system interrupted the social organization and settlement patterns, yet many aspects of the original culture still persist today including certain rituals and religious practices, along with traditional games, songs, and dances.

The diet of the Kumeyaay included both plant and animal foods. There was considerable seasonality in the relative importance of plant versus animal food, and also the types of plant and animal foods. Nutritionally, the plant foods were high in fat, carbohydrates, and protein, and thus provided a high-energy diet. Some of the plants exploited for food included acorns, annual grass seeds, yucca, manzanita, sage, sunflowers, lemonade berry, chia, and various wild greens and fruits. All of these plants are available were only seasonally available; none were available year-round. For example, elderberries are available during July and August, chia is available mainly in June, acorns in the fall only, and many grasses are summer and fall resources. Of course, if these resources were stored, they could be consumed throughout the year.

Given the general ethnohistoric accounts of the Kumeyaay, groups residing in the CNF could have utilized several ecological niches varying by altitude. During early and mid-summer, subsistence activities could

have focused on staple seed-bearing plants. Grasses would have been available in the valley and low hills, and open upland settings. Important plant resources such as elderberries, chia, manzanita, and sage were collected extensively during the summer months, while settlements may have focused on acorn harvests during the fall and winter months. Animal exploitation may have been most extensive during the months when plant resources were meager, and supplementary plant foods including yucca and cactus were also exploited seasonally as needed.

The Kumeyaay treasure their culture and their way of life. Even after roads and settlements had been built on their tribal lands, the Kumeyaay of San Diego County continue to gather basketry materials and acorns, hold ceremonies, and engage in traditional ways. They are described as "passionately devoted to the customs of their fathers" (Kroeber 1970:711). The Kumeyaay remain in the mountains of San Diego, decades after the coastal population had been removed to missions or ranches.

1.4.2.2.2 The Payomkowishum

Palomar Mountain and the southern portion of the Trabuco Ranger District are within the ethnohistoric Native American Payomkowishum (Luiseño) cultural group, according to Kroeber's study (1970:636; see also Rivers 1993). This group is a Shoshonean speaking population that has inhabited what are now northern San Diego, southern Orange, and southeastern Riverside counties through the Ethnohistoric period into the twenty-first century. They are linguistically and culturally related to the Gabrielino and the Cahuilla, and represent the descendants of local Late Prehistoric populations. They are generally considered to have migrated into the area from the western Great Basin possibly displacing the prehistoric ancestors of the Yuman speaking Kumeyaay (Ipai-Tipai) that during ethnohistoric times lived directly to the south.

The Mission of San Juan Capistrano, which initially had jurisdiction over the northern part of San Diego County, was subsequently established in 1776. Later, Mission San Luis Rey de Francia was founded in 1798. Native Americans were inducted into the mission system as laborers and religious converts. This had a dramatic effect on traditional cultural practices. Inland Payomkowishum groups were not as heavily impacted by Spanish influence until 1816, when an outpost of the mission was established 20 miles further inland at Pala (Sparkman 1908). At the time of contact, Payomkowishum population may have ranged from 5,000 to as many as 10,000 individuals. To the south, Kumeyaay population was at the same level or probably somewhat higher. Missionization, along with the introduction of European diseases, greatly reduced their populations. Most villagers, however, continued to maintain many of their aboriginal customs while adopting the agricultural and animal husbandry practices learned from Spaniards.

Territorial distribution of ethnohistoric groups is of critical importance in reconstructing adaptations and ethnohistoric modeling for prehistoric interpretation. The Shoshonean inhabitants of northern San Diego County were called Luiseño by Franciscan friars. They also named the San Luis Rey River and established the San Luis Rey Mission in the heart of Payomkowishum territory. Payomkowishum territory encompassed an area from roughly Agua Hedionda on the coast, east to Lake Henshaw, north into Riverside and Orange Counties, and west through San Juan Capistrano to the coast (Bean and Shipek 1978; Kroeber 1970). The Payomkowishum shared boundaries with the Tongva (Gabrielino) and Acjachemen (Juaneño) to the west and northwest, the Cahuilla from the deserts to the east, the Cupa (Cupeño) to the southeast, and the Kumeyaay to the south. All but the Kumeyaay (Ipai or Northern Diegueño) are linguistically similar to the Payomkowishum, belonging to the Takic subfamily of Uto-Aztecan (Bean and Shipek 1978).

The diet of the Payomkowishum included both plant and animal foods. There was considerable seasonality in the relative importance of plant versus animal food, and also the types of plant and animal foods. Nutritionally, the plant foods were high in fat, carbohydrates, and protein, and thus provided a high-energy diet. Some of the plants exploited for food included acorns, annual grass seeds, yucca, manzanita, sage, sunflowers, lemonade berry, chia, and various wild greens and fruits. None of these plants are available throughout the year; instead they were only seasonally available. For example, elderberries are available

during July and August, chia is available mainly in June, acorns in the fall only, and many grasses are summer and fall resources. However, if these resources were stored, they could be consumed throughout the year.

There are many Payomkowishum places on Palomar. Paauw means "mountain." The highest peak on Palomar is called Wikyo. There are many named ethnographic villages, but few have been identified archaeologically. For example, the Pala Indians had camps during acorn gathering season. The Pauma Indians established summer camps on Palomar. The Cuca and La Jolla Indians also camped on Palomar. True, Meighan, and Crew (1974) matched several named camps or villages with archaeological sites, based on conversations with tribal members.

The settlement pattern for Palomar Mountain reflects the general pattern of occupation and resource use of the Payomkowishum. Sparkman (1908:190) stated that each Payomkowishum band had a settlement in the San Luis Rey River valley, and one on Palomar for acorn gathering. Oxendine's (1983:46-50) analysis of the Luiseño settlement pattern consisted of group and individual ownership of resource areas. A village population might own or claim a large territory. Within that territory, there were several settlements, and several additional resource exploitation areas, owned by the group as a whole, by families, or by individuals. Extended families may have established both summer and winter campsites; True and Waugh (1982:34) believed that the same families reoccupied these over many years, creating a "formal" system of seasonal transhumance. Which of these types of settlement should be called a village? The traditional term "rancheria" more properly refers to a permanent territory or group settlement area that could include villages and seasonal camps, as well as claimed resource exploitation areas. Oxendine (1983:50) considered the village to be the largest occupation area within the territory; population size varied greatly from one village to the next. The average appeared to be 60. Within that village site, each family had an area for acorn processing, and each woman had her own grinding spaces. Oxendine (1983:53) suggested that the patterning of bedrock milling features could reflect the pattern of house construction within a village. Extended families created small clusters of residences within a larger settlement.

1.4.2.3 History

European contact with coastal southern California began as early as 1542, with the voyage of Juan Rodríguez Cabrillo. However, intensive interactions and contacts with interior areas only came after the establishment of the Spanish presidio and mission of San Diego in 1769. During the Spanish period, exploratory probes into eastern San Diego County were made by Pedro Fagés and others, and the southern immigrant trail came into use by colonists from Sonora. Thus, the mission culture may have begun to impact Aboriginal culture within the present APE.

With the achievement of Mexico's independence from Spain in 1821, California's administrators began to shift their focus away from the Franciscan mission system and toward Hispanic lay settlement of the province. Avenues for foreign trade were opened, and private land grants became more numerous and extended farther inland from the coast.

During the Mexican-American War of 1846-1848, California was occupied and subsequently annexed by the United States. Land ownership was complicated by this transition. The Treaty of Guadalupe-Hidalgo, signed in February 1848, obligated the U.S. government to recognize legitimate land claims in Alta California. While Mexicans initially made up the majority of the population, the Gold Rush after 1849 stimulated large-scale immigration into the region. With large land holdings and a strong cattle industry, many "gente de razon" or upper class nevertheless found themselves overextended when the northern California miners' demand for meat dwindled. In order to pay their taxes and bills, some were forced to offer up their lands at public auction (Garcia 1975:22). Many small farmers had difficulty maneuvering through the process and acquiring land (Garcia 1975:16). Settlers increasingly squatted on land that

belonged to Mexicans, citing their preemption rights, which was the tradition that squatters had the first opportunity to buy the unimproved, unclaimed land for a fair price before auction (Garcia 1975:22). Squatters increasingly challenged the validity of Spanish-Mexican claims through the Board of Land Commissioners created by the California Land Claim Act of 1851 (Garcia 1975:22-23). Most Californios did not retain their original land holdings by 1860, including Santiago Arguello, who was granted the former Mission San Diego land in 1846 and eventually lost $24,000 in property (Garcia 1975:24).

By 1860, most of the land in San Diego was unimproved farmland that included ranches (Garcia 1975:15). Settlement of the area primarily occurred through homesteading authorized by the Homestead Act during the Civil War by Abraham Lincoln on May 20, 1862. The Act offered 160 acres to settlers for a nominal filing fee in return for five years of residency and cultivation. At the end of five years, a settler would receive a land patent if the terms were met and the examiner was satisfied with the results (Robinson 1948:168-169). Another option for land settlement was the Timber Culture Act, passed on March 13, 1873. This act required a 10-year cultivation period of healthy trees, a requirement that was later amended to reduce the necessary time and acreage. Some speculators and ranchers used this law as a way to obtain land for purposes other than what the patent stated. In the 1870s and 1880s, small farming communities were quickly established throughout San Diego County as settlers took up homestead claims on government land or small holdings purchased from real estate developers.

The transcontinental railroad reached southern California in November 1885, resulting in an unprecedented real estate boom for the city and county of San Diego. Settlers poured into San Diego, lured by real estate promotions offering a salubrious climate, cheap land, and the potential to realize great profits in agriculture and real estate. The population of San Diego increased by 700 percent from a total population of 5,000 in 1885 to 40,000 in 1889 (Hector, Ni Ghabhláin, Becker, and Moslak 2004:18). Population continued to expand, irregularly but persistently, during the century that followed, approaching 2,000,000 by the year 2000. However, most of the growth was concentrated in the coastal areas and adjacent inland valleys.

A variety of themes characterized the history of the APE and its vicinity during the twentieth century (Pryde 2004). Road and rail transportation routes were created or improved to link urban San Diego with regions of the country farther east. Limited amounts of development for farming and grazing occurred in the inland valleys. Mining in the Peninsular Ranges was small to large scale and of varying economic importance. Substantial areas were set aside for resource protection or recreational use, as portions of Cleveland National Forest and Cuyamaca Rancho State Park. Large blocks of land in the Peninsular Ranges were given wilderness designation.

1.4.2.3.1 Trabuco (Santa Ana Mountains)

The Cleveland National Forest was created on July 1, 1908, when the Trabuco Canyon National Reserve was joined with the San Jacinto National Reserve; it is named after president Grover Cleveland. The Reserves were established in 1891 through the Forest Reserve Act. Historic sites consist of mining settlements and locations made famous as outlaw hideouts. The mountains were named by the Gaspar de Portola expedition, who camped nearby on Saint Ann's Day, July 26, 1769.

1.4.2.3.2 Palomar

The name Palomar Mountain means "place of the pigeon" in Spanish, and the mountain was referred to as Sierra del Palomar as early as 1840 (Stein 1978:96; Wood 1937:34). The Spanish obtained timber for Mission San Luis Rey and other structures from the mountain (Engelhardt 1921:53).

The mountain was called Smith Mountain for many years; the name appeared on county maps until the turn of the twentieth century. Joseph Smith was a prominent citizen who homesteaded on the mountain. He was a member of the County Board of Supervisors, and worked to support the mail road through the desert

(Wood 1937:47). He was murdered in the 1860s. The name Palomar was reestablished by the USGS in 1901 in response to a local petition.

Among the early farmers and ranchers who lived on Palomar was Nathan Harrison, the first permanent African-American resident of San Diego County. Usually referred to as Nate, he was a notable resident of the mountain. Sometime between 1848 and 1857, Harrison built a cabin halfway up the west slope of Palomar Mountain. Wisely, he did not claim the land legally until after the repeal of California's anti-black homestead law provisions. He worked on several of the farms and ranches in the region, because his own property was too rugged to farm. The road going up the west side of Palomar Mountain to his cabin is memorialized as Nate Harrison Grade. He died in 1920.

During the late 1800s and early 1900s, Palomar was a popular summer resort. Located close to both Los Angeles and San Diego, it featured seasonal hotels and a tent city that grew each summer in the Doane Valley. Stages brought visitors up the steep mountain roads to visit. Birch Hill was divided into camp sites in 1920 (Wood 1937:91).

The isolation of Palomar ended in the 1930s when the California Institute of Technology (Caltech) began a search for the ideal location for a new observatory. Mount Wilson was the home of large telescopes used by astronomers in southern California, but with the increased light pollution from a rapidly urbanizing Los Angeles, it was no longer an ideal site. Between 1930 and 1934, in affiliation with Caltech, George Hale searched for less populated areas for a new 200-in. telescope. Many sites were considered, including nearby Volcan Mountain, but the winner was a site at 5,600 ft. in elevation on Palomar Mountain. Close enough to Caltech for convenience, Hale bought 160 acres of land from the local ranchers and from the U.S. Forest Service.

Then, the road up to the mountain had to be improved to accommodate the large trucks that would carry the pieces of the telescope. In 1936, while roadwork was underway, water and electricity were installed. Residences were built for staff, and other workers lived on a nearby cattle ranch.

The dome was completed in less than two years. This required a substantial effort, since the telescope piers are anchored to the bedrock 22 ft. below, while the dome supports extend approximately 7 ft. into the granite.

On November 12, 1947, the 200-in. mirror was transported from Caltech in Pasadena to Palomar Mountain. The 40-ton cargo required three diesel tractors to push it up the mountain; the trip of 125 miles took 32 hours, with an early storm complicating the trip. Since then, Palomar Observatory has become a major scientific institution, as well as a popular local landmark and tourist destination. Trails and recreation facilities provided by the U.S. Forest Service, California State Parks, and San Diego County Parks and Recreation offer visitors an opportunity to experience Palomar Mountain and its history.

1.4.2.3.3 Descanso (Cuyamaca and Laguna Mountains)

In October 29, 1772, Colonel, at that time Captain, Pedro Fages passed through Cuyamaca searching for army deserters. He met with natives from three villages: Cuyamaca, Mitaragui, and Jamatayune. This event is marked by a plaque near the edge of Sunrise Highway near its intersection with State Route 79. Fages wrote of the mountain tribal groups as "… among those discovered is the most numerous, is also the most restless, stubborn, haughty, warlike and hostile towards us. Absolutely opposed to all rational subjections and full of the spirit of independence…" (Rensch 1950). Fages returned to the area in 1782.

After that, it was many years before the mountains again had the attention of non-Native settlers. It was the discovery of gold in Cuyamaca in 1870 that triggered a massive influx of people. Although this local gold

rush was brief, it resulted in the establishment of towns and settlements. The Julian and Banner mining districts contained a series of gold mines which were established between 1870 and 1880, although the majority were played out by the mid-1870s (Stewart 1958). At this time, stagecoach service was established between Julian and Ramona (LeMenager 2001:97).

Banner was settled in the early 1870s, named after a mining claim that used an American flag as its emblem (Stewart 1958:22). Initially, equipment and supplies were lowered from Julian to Banner by using a sled tied to a rope (LeMenager 2001:116). At that time, the population of Banner was growing and a road was built to improve access -- the precursor of State Route 78 down Banner Grade. Later, after the Relief for the Mission Indians Act in 1891, the Cuyapaipe Band of Mission Indians and the Laguna Band of Mission Indians reservations were established in the area as well.

Cuyamaca City was a major settlement near Julian that is now an archaeological site. This company town was established around the Stonewall Mine and prospered into the early twentieth century. The city and mine were taken down when Ralph Dyer bought the property in 1923 (LeMenager 2001:122). The town of Julian was left to dominate the Cuyamaca and Laguna Mountains as the major center of population. With improved road access and the growing population of San Diego County, people began to settle the back country. In the 1930s, there was a small revival in gold mining activities in the Julian area (LeMenager 2001:82). The second gold rush during the Depression created renewed interest in the region; it was this second gold rush that may be associated with small historic sites found along State Routes 78 and 79.

Permanent non-Indian settlers who grazed cattle and sheep entered the Laguna Mountains in the 1870s (Graham 1981:159-160); their numbers were very small into the early 1900s. In 1908, Cleveland National Forest was created, with the present boundaries established in 1915 (Graham 1981:167). Soon afterwards, the public demand for recreation resulted in the establishment of summer home sites. Additional facilities were added. Today, the Laguna Mountains are enjoyed by San Diegans as a cool green refuge in the summer, and for snow play in the winter. Vacation cabins on land leased from the Forest include many historic properties dating to the 1920s (Newland 2008).

1.5 CULTURAL RESOURCES STUDIES WITHIN THE APE OF THE PROJECT

1.5.1 Previous Studies within the Forest

The Forest Service database includes more than 2,000 cultural resource numbers, which consist of sites, isolates, historic properties, non-sites, areas important in Native American oral tradition, and basketry gathering areas. The various resources are located on, or near, National Forest system lands. At least 752 surveys have been completed for all three CNF districts (384 in Descanso, 156 in Palomar, and 212 in Trabuco). The earliest survey reports date to the 1970s (1970 through 1979), during which 49 surveys were conducted in all three districts (Trabuco, Palomar, and Descanso). During the 1980s, 357 surveys were conducted, and during the 1990s, 221 surveys were conducted in the three districts. Currently, there are less than 10 surveys listed for the years subsequent to 1999. This most recent trend clearly reflects a change in resource management as indicated by a reduction in the number of surveys completed, report completion, and/or the entering of data into the database. Because most of the surveys were conducted more than 10 years ago and were performed in an uneven fashion, these earlier surveys cannot generally be used for federal compliance purposes. Therefore, SDG&E did not use the surveys older than 5 years in lieu of conducting surveys for the current APE.

Portions of CNF have been surveyed by Forest personnel and consultants (Fulmer, Almstead, Noah, and Oetting 1979; Graham 1981), both for specific projects and as part of Section 110 efforts. Administrative structures and recreation structures were the subject of a survey and evaluation, resulting in eligibility

recommendations for many of the cabins on Laguna Mountain (Newland 1995a, 1995b). The Forest maintains detailed records on previous cultural resource inventories and results. Measures such as fencing and capping have been used in the Forest to limit public access to sensitive resources, and to protect the resources from inadvertent damage.

The effort to inventory cultural resources associated with utility lines operated and maintained by SDG&E has been in process for over a decade. The Phase I overview prepared for the Cleveland National Forest consisted of a study to compile, update, and synthesize the information and map data resulting from records and literature searches (Carrico et al. 2003). A cultural context for interpretation and evaluation was developed. Sites were classified by type: residential, multi-use temporary camps, special use, ceremonial, rock art, trails, isolates, and historic resources. Research questions related to each site type were generated in the overview. Some ambiguity exists in regard to these resources with variations in definition resulting in inconsistent categorization of site types and/or of site versus isolate status. Among federal and state agencies, there is no set standard or formula for the categorization of prehistoric and historic resources. For purposes of general consistency in the area, the taxonomy used in this document to categorize the sites for the CNF was adapted and refined from a site typology used by Carrico, Cooley, Barrie, Craft, and Jordan (1982:5-6) to perform a similar function in the nearby San Bernardino National Forest. Carrico et al. developed this typology based on typologies originally developed by Bettinger (1982). With minimal modification, this basic typology works well to categorize the functional settlement pattern of the prehistoric hunter-gatherers of these adjacent southern California mountain range areas. As with all models, this typology may or may not actually define the prehistoric lifestyle or settlement system.

The Forest Service Archaeological Reconnaissance Report (ARR) form provides six categories of cultural resource survey coverage methodology: complete, general, cursory, intuitive controlled, intuitive uncontrolled, and controlled sample. No precise definitions could be found, however, to distinguish between these survey approaches. Consequently, of the 129,236.61 acres and 120.84 linear miles previously surveyed, it is unclear in some instances what the level of coverage may have been. Therefore, surveys previously conducted on CNF lands were divided into either complete or other, with other encompassing the remaining five ARR headings.

Complete surveys are defined as intensive and systematic with the intention being to find all cultural resources within the overall boundary of the area covered. Other would include surveys conducted using methods that result in areas within the overall coverage boundary not being examined, leaving the possibility that undiscovered resources could be present in the unsurveyed areas. Examples of the latter survey type would be: a “sample” survey that may have been statistically generated; a “reconnaissance” survey, in which areas within an overall area are selectively or intuitively examined (e.g., surveying only along all drainages and/or ridgelines); or “cursory,” where only “likely” locations are examined. It should also be noted that a seventh term, “spot check,” not listed on the form for selection, was also used. The intention of this type of survey appears to have been only to revisit and examine previously recorded resources.

1.5.2 Phase II Cultural Resources Study

The Phase II cultural resources study conducted by ASM (Hector et al. 2009) consisted of an intensive field survey of all existing electric facilities, distribution pole locations, and access roads with the exception of those areas over 35 percent slope, areas with dense chaparral vegetation, areas distant from water sources, and areas previously surveyed -- all areas that were excluded by the sampling strategy. ASM conducted inventory surveys in compliance with the NEPA of 1969, as amended (42 USC 4321 and 4331-4335), the NHPA of 1966, as amended (16 USC 470 et seq.), and the requirements set forth in Protection of Historic Properties (36 CFR 800), implementing regulations of the NHPA. The content of the resulting technical reports are consistent with, and included information recommended in Archaeological Resource

Management Reports (ARMR): Recommended Contents and Format (Office of Historic Preservation 1990).

ASM also conducted a resurvey of approximately 12.5 miles of previously surveyed lines within the Laguna Mountain Recreation Area (LMRA) to confirm the presence or absence of sites, due to variances in site mapping of previously recorded resources. The survey included the APE defined as all federal land with the CNF with a 20-ft.-wide easement (10 ft. on either side of a centerline) for distribution lines, 30-ft.-wide (15 ft. on either side of a centerline) for powerlines, and 10 ft. on either side of access roads.

ASM updated previously conducted archival research to determine if archaeological studies have been conducted on or within one-half mile of the APE. Using this information, an intensive pedestrian survey was performed to verify previously recorded sites within the APE, if any, and to identify, map, and describe all new prehistoric and historic cultural resources encountered.

The project area was surveyed in systematic transects and those areas deemed to have higher potential were more extensively examined utilizing systematic transects spaced 15 m (approximately 50 ft. apart).

The following describes the field methods used for the Phase II study:

ASM conducted a review of existing survey and inventory reports for the project area. Most of the information on previous studies was provided by CNF. Site location in the vicinity of the project elements was obtained as point data from the Phase I study prepared by Mooney and Associates. Site records for those sites were obtained from CNF and the South Coastal Information Center. All site records were scanned and digital files were provided to CNF for their future use.

ASM/PanGIS prepared maps for implementation of the sampling strategy. PanGIS obtained information on site locations from CNF and SDG&E.

1) Implemented the sampling strategy to select areas for field survey. PanGIS provided ASM's Principal Investigator (Hector) with a set of 103 maps covering the project area. Each map showed SDG&E facilities, slope, and whether the area had been previously surveyed. Because the maps were on current aerial photographs, vegetation cover was visible. Previously recorded site locations, based on information from the Phase I study, were also shown on the maps. SDG&E GIS coverage divided the area into three slope categories: 0-25 percent, 26-35 percent, and >36 percent. As discussed previously, areas of >36 percent slope were not included in the survey. Previously surveyed areas were also eliminated from the areas included in the survey, although if a recorded site was present, the mapped site location was visited by the survey team. Areas of dense vegetation were eliminated from the survey; in most cases, these areas coincided with steep slopes.

2) Completed a field survey of the project area, as defined above. The pedestrian surveys complied with the Secretary of the Interior's Standards and Guidelines for Identification and Evaluation Guidelines for Local Surveys (Derry, Jandl, Shull, and Thorman, 1985). All prehistoric and historic sites were recorded. Sites were defined as any concentration of three or more artifacts in a 25-m2 area. Separate sites were recorded when artifact concentrations were separated by more than 50 m. Isolated artifacts were defined as fewer than three artifacts in a 25-m2 area. Cultural resources that met the definition of an archaeological site were assigned a temporary site number by ASM and Kyle Consulting in the field.

3) All cultural resources within the survey areas, both new and previously recorded (if relocated), were documented. Site documentation included definition of site boundaries, features, and diagnostic artifacts. A detailed sketch map was made, showing the relationship of the site's location to topographic features and other landmarks. More detailed information on environmental context, artifact content and density, cultural affiliation, and function was recorded on the site forms. Department of Parks and Recreation (DPR) forms were submitted to the South Coastal Information Center for assignment of Primary and Trinomial site numbers. Each site was plotted on a 7.5-minute USGS topographic quadrangle, and UTM coordinates were recorded to accurately locate the site and its relationship to the navigation points. Photographs were taken of each site.

4) GPS data were collected for each archaeological site, feature, and isolate. The Lambert Coordinate system of 1983 was used as the base coordinate system. The GPS instrument had a horizontal accuracy to within ±3 m of the object being mapped.

5) New site forms or updates for existing site forms for each site or isolate were completed. Standard DPR 523 forms were used; two copies were submitted to the South Coastal Information Center, in the case of new sites, for assignment of a Primary and/or a Trinomial site number. The final report included one copy of the new and updated site record forms as a Confidential Appendix.

The survey effort was undertaken by two teams, each consisting of two people. The northern section was surveyed by Del James and Steven Briggs (for Kyle Consulting). The southern section was surveyed by Drew Pallette, Michael Garnsey, and John Elford (ASM Affiliates). The field surveys were conducted between December 2005, and February 2006. Weather did not constrain the surveys.

Before the field survey could commence, the survey crews needed detailed maps of areas they were to survey within the CNF. To produce these maps, relevant GIS data for the CNF was obtained. Relevant data layers include: recent aerial photography, SDG&E pole locations, powerline structures, cultural resources, previous surveys, CNF boundaries, roads in need of survey (as designated by SDG&E), substations, circuits, and slope. PanGIS obtained DOQQ aerial images from Resource Strategies Inc. for the entire CNF. All other layers were obtained from the Forest Service.

The first step in data preparation was to clip the GIS layers to the CNF boundary so that only the resources within CNF would be considered. Once layers were clipped, a 20-ft. (approximately 6 m) buffer (40 ft. total) was created around poles, powerline structures, circuits, and roads. The buffered area is the potential survey area. The potential survey area was then intersected with previously surveyed areas and with the three slope categories available, based on existing GIS coverage (0-25 percent, 26-35 percent, and >35 percent). Previously surveyed areas, within past five years of Phase II effort, were eliminated, as were areas with a slope of >35 percent. Maps using the aerial photos as a base were then generated at a scale of 1:5,000. It took 103 maps and two additional key maps to cover the potential survey areas within CNF. Using these maps, final survey areas were selected and the crews were dispatched to the field. Crews were sent into the field with color aerial photographs showing previously recorded site locations, previously surveyed areas, poles, corridors, and roads to be surveyed.

SDG&E facilities included in the survey are listed in Hector et al. 2009, Table 1. This information has been omitted from the HPMP for reasons of confidentiality because archaeological site location information is included in the table. The table uses facility designations as shown on the GIS coverage provided to ASM. The designations included pole numbers without a prefix; pole numbers with the prefix of P; and facilities with the prefix of Z. The Z facilities are powerlines, and could be equipment on poles designated with P or without a prefix, or they could be individual poles with equipment mounted on them. In some cases, there

were separate corridors of Z poles parallel to P or unprefixed poles. Both sets of facilities could have the same number, with the only difference being the prefix. In other cases, the Z designations referred to equipment mounted on poles, and no other poles were present. All numbered facilities provided to ASM were included on the map to provide complete information to SDG&E.

Some challenges that could affect the results of the survey included inaccurate mapping of previously recorded sites; scaling error resulting in mistakes in the location of existing facilities; and errors in baseline data about the facilities.

1. Inaccurate mapping. On several occasions, the baseline data showed a previously recorded site located near or within a facility, when in fact there was no site in that location. If the site was nearby, the crews identified it during their transect surveys. However, sites located outside the survey corridor were not searched for. Site location errors can result from a number of factors, such as errors with the original site record, mapping errors during preparation of field maps for site form submittal and/or in transferring that information to maps maintained at the information centers. These errors in site location mapping do not affect the accuracy of the field survey. However, inaccuracies in plotting previously recorded sites in areas identified as previously surveyed could result in accidental adverse impacts to archaeological sites. This is because, with the exception of LMRA, ASM and Kyle Consulting did not resurvey areas identified by the USFS as previously surveyed. Therefore, there could exist a situation where a previously recorded site is mapped as being not near or within the SDG&E facility, but is in fact near or within the facility. Since ASM and Kyle Consulting would not have resurveyed these areas, this error would not have been corrected.

2. Scaling error in locating existing facilities. The field crews noted that the mapped location of powerlines and roads did not always match the actual locations. The crews always surveyed the actual locations in these cases.

3. Baseline data errors. In a few cases, there were no power poles or facilities in the field, yet they were shown on the maps. In one case, the poles had burned and been replaced nearby, with the new locations not shown on the maps provided. In another case, the poles had been removed entirely, yet were shown on the maps. In these cases, if the crew could tell where the poles had been, they surveyed that line. If the poles were completely gone, the general area was surveyed if a site was recorded in the vicinity.

The following paragraphs describe the sampling strategy developed during the Phase I study, and implementation under Phase II.

1.5.2.1 Powerline Corridors

There are approximately 69 miles of powerlines within the CNF including some overlap with distribution circuits. Of the 69 miles of powerline, approximately 10 miles are at a slope of greater than 30 percent and were excluded from the inventory. Approximately 7 miles of powerline have been previously surveyed and did not require re-survey. The sampling strategy for the remaining 52 miles of corridor was to conduct Phase II intensive survey of one-half (50 percent) of the corridor, comprising 26 miles of powerlines, at an interval of no more than 10 ft. (6 m).

The surveys focused on the areas with the highest archaeological potential including meadows, areas of low to moderate slope, corridors near water sources, and corridors below the conifer tree lines. The 50 percent of the corridor not surveyed at the Phase II level, was surveyed intensively during the 2009 and 2010 PEA Technical Support Study (Schaefer and Williams 2011) and is addressed in the PA and this HPMP with specific measures provided for future surveys and assessments (e.g., after a fire).

1.5.2.2 Distribution Circuits

There are approximately 327 miles of distribution circuits, of which 231 miles were surveyed using a 20-ft. radius as the APE. Survey for the presence of archaeological resources was accomplished for a 10 percent sample of the 6,549 distribution poles. The 10 percent sample was focused on those poles located in areas not previously surveyed, areas of less than 30 percent slope, areas with minimally dense chaparral, and areas below the conifer tree lines.

1.5.2.3 Authorized Roads

There are approximately 35 miles of roads within the project area that are used almost exclusively by SDG&E to service and maintain their structures, lines, and facilities. Phase II field inventory was conducted for 27 miles of these roads; the other 8 miles are at a slope of more than 30 percent and did not require survey.

1.5.2.4 Substations

There were five substations identified during Phase I as being within the CNF. Based on GIS information provided by CNF and SDG&E, none of these fell within CNF boundaries, and so were not surveyed.

1.5.2.5 Areas Excluded from the Phase II Surveys

Based on the results of past field surveys in the CNF and through application of the model provided by Carrico et al. (2003), areas that were on more than a 30 percent slope did not require field survey. The rationale for this was that few sites eligible for the NRHP are likely to be present at this degree of slope. The existing SDG&E GIS coverage available for the project grouped slope into three categories: 1-25 percent, 26-35 percent, and greater than 35 percent. It was not possible to obtain a layer for 30 percent slope, as specified in the model. Therefore, the survey strategy eliminated areas of greater than 35 percent slope, and the areas of 26-35 percent slope were evaluated individually based on terrain and vegetation cover. Approximately 10 miles of powerlines and distribution lines were not proposed for survey for this reason.

Areas containing distribution lines that are situated in heavily vegetated chaparral or dense coastal sage scrub (totaling approximately 96 miles) were excluded from field survey as ground visibility is extremely poor in these areas. Distribution lines within in-holdings were not to be surveyed if permission for access is denied. Every effort was made to obtain permission for access and areas where access was denied were mapped and noted.

The project entailed archaeological examination of 44.51 miles of powerline corridor, 717 distribution circuits (poles), and 35.62 miles of exclusive access road. This resulted in the relocation of 9 previously recorded sites and the discovery of 14 new sites within the surveyed areas. Sites types include historic refuse deposits, prehistoric use areas, and habitation sites.

ASM's survey strategy resulted in coverage of all areas identified by the sampling strategy as meeting the criteria for highest potential to contain archaeological resources. The Phase I study proposed that additional surveys would be needed in the future to cover the high probability areas not included in the Phase II survey.

1.5.3 Class III Wood to Steel Surveys

Subsequent to the completion of the Phase II study, SDG&E began the Wood-to-Steel (WS) cultural resources inventory effort. Five powerlines and six distribution circuits within and outside the Descanso and Palomar Ranger Districts were fully inventoried for potential adverse effects to historic properties from replacement of existing wood poles with steel poles (Schaefer and Williams 2013). There was some overlap with the Phase II study areas, although the WS effort did not include all areas covered during the Phase II

surveys. As a result of the WS survey project, SDG&E facilities outside the land ownership of CNF were also covered by a cultural resources inventory, and specific construction methods for pole replacement were evaluated to develop measures to avoid or minimize adverse effects to historic properties.

The ASM WS inventory (Schaefer and Williams 2013) included existing and proposed pole locations, proposed undergrounding of lines, powerline realignments, laydown yards, helicopter pads, and stringing sites for the SDG&E proposed powerline replacement projects. The Area of Potential Effects (APE) for the inventory included 90 feet on either side of the centerline, staging and equipment storage areas, 30 feet on either side of the center line for access roads including stringing sites, and the actual footprint of the proposed activity for laydown and staging areas, and for helicopter landing zones.

Approximately 2,450 acres were surveyed within the APE for five powerlines (119 linear miles) and six distribution circuits (42 linear miles). Lands within the La Jolla Indian Reservation were not surveyed due to absence of tribal permission. Based on the inventory results, 207 sites and isolates were identified within or adjacent to the Project as defined in January 2011. Of these resources, 23 sites and isolates are recommended as not eligible for NRHP-listing, based on their status as isolates or having limited quantity, quality, and variety of artifacts and cultural features. At 155 sites, investigation to determine the presence and integrity of a subsurface deposit would be required for a definitive determination of eligibility, meaning that additional evaluation beyond survey level assessment is necessary to determine their eligibility status. For the purposes of this project, these sites are categorized as unevaluated but are afforded the protection and management consideration of eligible sites until eligibility is ascertained. Twenty-eight sites within the project APE were previously recommended as eligible, and one site is listed in the NRHP/CRHR.

Historic built environment resources within the APE of the powerline replacement projects were addressed in a separate evaluation study that was reviewed by the SHPO (Gorman, Castells, and Ni Ghabhláin 2015). In summary, after documenting and evaluating the history of the 11 powerlines and distribution circuits, and careful consideration of the ability of the potential historic resources to reflect the historic contexts with which they are associated, ASM recommended that C78, C79, C157, C440, C442, C449, TL625, TL626, TL629, TL682, and TL6923 are not individually eligible for the NRHP, CRHR, the County of San Diego's RPO, or the Local Register under any of the applicable criteria. The USFS agreed with this assessment and received concurrence from the SHPO. Ineligible resources will not be considered Historic Properties for the purposes of NEPA/CEQA compliance.

ASM researched traditional cultural locations in the APE using available published information and archival materials. Traditional cultural locations are named landmarks that collectively constitute maps of indigenous groups' territories and use areas. Each set of landmarks guided its people through space and at the same time encapsulated their history, values, and beliefs (King 2003:67). None of the traditional cultural locations discussed below have been evaluated as Traditional Cultural Properties. A Sacred Lands search was also conducted for the Project and several of the lines returned "positive" for identified sacred lands within their proximity. The NAHC does not provide the forms prepared for these resources given their sensitive nature, so any sharing of the information is at the discretion of the local tribal groups. As such, the list prepared below does not constitute a complete list of potential traditional cultural places or tribal cultural resources, rather a review of just the public knowledge for these locations.

Protohistoric Kumeyaay (Ipai-Tipai-Diegueño-Kamia) territory extended from approximately the San Luis River mouth in the north to about Todos Santos Bay near Ensenada, Mexico in the south (Luomala 1978:593). From the Pacific Ocean, the Kumeyaay ranged inland across San Diego and Imperial counties to about Sand Hills. No list exists of all Kumeyaay settlements, names and locations (Luomala 1978:597). Many villages were only temporary campsites that a band occupied in its territory during a year. A campsite was selected for access to water, drainage, boulder outcrops or other natural protection from weather and

ambush, as well as abundant flora and fauna of that ecological niche. A concentration of campsites in an area was considered a permanent village, settlement or "Rancheria."

Specific Kumeyaay traditional cultural locations or places were identified on a map by Kroeber (1925: Plate 57) and include the following 27 locations (Appendix D):

- Along the San Dieguito River: Kuiaumai; Hapai; Sinyau-pichkara; Ahmukatlkatl; Pauha; Tukumak (near Mesa Grande); Setmunumin; and Atikwanon.
- Between the San Dieguito and San Diego Rivers: Pauwai and Pamo.
- Along the San Diego River: Kosoi; Nipawai; Sinyeweche; Witlimak; Anyaha; Kosmit; and Sinyau-tehwir.
- Between the San Diego and Sweetwater Rivers: Amotaretuwe.
- San Diego Bay and Sweetwater River: Totakamalare; Pauipa; Hamacha (Jamacha); Sekwan (Sycuan); Ekwianiak; and Tlokwih.
- Along the Otay River: Hamul (Jamul).
- Between the Otay River and Cottonwood Creek: Otai (Otay Mountain).
- Along Cottonwood Creek: Kwatai (Guatay)—see also Carrico et al. (1983) for an excerpt of an interview with Tom Lucas, Kwaaymii, of Laguna Reservation (or Lucas Ranch) regarding this village.

Delfina Cuero (1970) notes that the Kumeyaay had names for locations in their territory that referred to characteristics of that place (Shipek 1991:24). "Otay" refers to a kind of weed that grows at that location. "Jamacha" is the name of a wild gourd that grows abundantly in that named-area. "Jamul" was named after another weed that is common where water is abundant in that area. Point Loma was called "black earth" because of its appearance from a distance.

Shipek (1987:13-14) also notes that within the greater Kumeyaay territory, smaller band territories associated with a rancheria were well-defined with rocks marking group boundaries defended by sorcery and arms. The band territory included such things as trails within the area open to use by all members, general hunting territories, religious and ceremonial areas, band gathering areas, and locations with family or individual tenures. Most important to the Kumeyaay at both the "national" and band levels was the concept of sacred lands. The greater Kumeyaay lived within a territory encompassed by their creation stories. Often, specific locations and features are described in these stories. Kumeyaay holy places include Kuuchamaa or Tecate Peak (Shipek 1985) and Wee'ishpa or Signal Mountain (Gifford 1931). A holy place associated specifically with healing is Table Mountain (Shackley 1981; Shipek 1984; Welch 1984; Woods 1982).

Each band also had specific and individual sacred sites (Shipek 1987:13-14), such as a "sun watcher" mountain used by the band's sun shaman for ceremonies on the solstice and equinox. All bands had some central brush- or pole-enclosed structure used as an altar or worship area that only the shamans and leaders might enter. Each band also had a cemetery or cremation area that was used for sacred disposal of the dead and that was maintained as a restricted sacred area.

The band-specific cultural places of the Kwaaymii Laguna Band of Mission Indians are particularly well-documented (Cline 1979; 1984:12-18). Cline notes and maps the locations of permanent villages, temporary winter campsites and gathering areas provided by Tom Lucas. There were originally three main villages on

Mount Laguna: the largest was known as Iiahkaay, meaning "wooded area across a meadow;" three quarters of a mile to the south was Kwaaymii, the last occupied village (where Tom Lucas was born), named after the legendary Kwaaymii bird which lived at the spring common to all the villages; and about one-quarter mile to the southeast was Wiihanull ("flat rock"). The closest village to the north was Teshill and the neighboring village to the south was Kwatatl. The "Kwaaymii Homeland" was nominated to the NRHP as a Traditional Cultural Property/District (Lucas and Hector 2015) and was listed on the register in August 2015.

The Kwatatl people used Storm Canyon for their temporary winter migration and camped in the area of Spencer Ranch in the westernmost section of Vallecito Valley. There was also a permanent village there known as Amat Haapshuu.

Southeast of Kwatatl was the village of Wiiapaayp ("leaning rock"). The Wiiapaayp people moved down the Canebrake Wash to Palm Spring, not far from Vallecito Creek.

The village of Haawii ("water in rock") is at Agua Caliente Springs. In Mason Valley, the temporary winter campsites (ahktaa) were mostly at the base of the canyon in the southwest, while the permanent village and the people who lived there were called Amat Inuk. All of the groups mentioned above gathered on Hapaha Flat for their spring ceremony before returning to their permanent homes. Acorns (kapash) were gathered in the fall before the Kwaaymii began their long journey into the desert to their winter homes. Their gathering place was at the base of Sheephead Mountain.

The Cottonwood Canyon Trail to Mason Valley was named wiipuk uun'yaw ("desert path"). Two specific locations to this Kwaaymii trail are discussed by Cline (1979; 1984:20) and include a trail shrine and the Guardian of the Trail in Cottonwood Canyon. The Guardian of the Trail is a granite outcrop which looks like an old, shawl-covered woman, watching over the trail to Mason Valley. The Kwaaymii call this uun'yaw kuupsaw, "the guardian of the trail" or "Spirit of the Trail Guardian," which is a separate entity from the other trail shrines. The second location, a trail shrine, is about half-way down the canyon. A huge white boulder along the trail marks the border of this sacred area. A Kwaaymii custom was to lay bay leaves on the marker when passing. The shrine can be seen directly below the boulder. The shrine is a massive granite outcrop about 8 meters (25 feet) high. Erosion has formed a natural cave, which the Kwaaymii call wiitaawhiitl. A protruding ledge at its high northern entrance extends into the cavity forming the floor. It is on this ledge that travelers tossed thousands of small, rounded, granite stones in an appeal to the Trail Guardian for protection on their journey. The Cottonwood Canyon district has been recommended eligible for NRHP listing and is currently under review for determination and potential listing. The entire Cottonwood Canyon Trail area is considered sacred.

Sacred places within greater Kumeyaay territory encompassed by their creation stories include the following (Cline 1979; 1984:87-105; Johnston 1914):

- Corte Madera Mountain (Hilsh Ki'e or "Pine Tree"): The Battle of the Peaks
- West side of the south peak of the Cuyamacas (Hutstah' Tah-mil'tah): Hanging Head
- The cold spring on the high peak of the Cuyamacas (Ahaawiiahaa): Water Colder Water
- A huge white boulder with spots of red on west side of Cuyamaca Peak (Aakwerap): Disease Cure
- Another large boulder on west side of Cuyamaca Peak (Huulyaw Nimuuluukaa): Phantom Basket
- Mount Guatay near Descanso (Awaataay): Big House
- A spring at the edge of the river flat at Descanso (In-yar'en Ah-ha'): No Eyes in Water
- The Laguna Mountains (Siinyahaw Haawak): Old Woman's Twins

- The Laguna Mountains (Siinyahaw Hampuu): Old Woman's Whip
- The summit of Viejas Mountain (Kwut'ah Lu'e-ah): Kwut'ah Lu'e-ah-Song Dance
- Iron oxide deposit at the foot of the Coyote Mountains (Aakwer): Red Paint

In addition to the above mentioned unevaluated traditional cultural locations, there are several archaeological districts that have also not been evaluated as Traditional Cultural Places. Table Mountain was nominated for listing in the NRHP by the BLM as an archaeological district in 1982 because of its use by the Kumeyaay and other tribes as a prehistoric gathering and medical practice area (Iversen, Garcia-Herbst, Laylander, and Williams 2010; Woods 1982). According to the nomination form, archaeological evidence of prehistoric practices includes trade (Shackley 1981) as well as rites and rituals due to the presence of pictographs and prayer sticks. Several Late Prehistoric long-term habitation camps, as well as numerous short-term habitation camps, roasting pit features, and lithic reduction and extraction stations were documented throughout the district, for a total of 182 sites over 1,796 acres.

The Jacumba area was proposed as a discontiguous NRHP archaeological district by Wirth Associates, Inc. in 1981 and encompasses the town of Jacumba and its surrounding valley and hills. The district was recommended as eligible for listing because of its use by the Kumeyaay as a prehistoric gathering and trade area; the presence of many sacred sites such as springs, mountains and burial areas; as well as gathering areas, habitation sites and trails (Iversen et al. 2010; Wirth 1981; Woods 1982). Archaeological evidence of prehistoric practices includes trade and settlement sites. Three Late Prehistoric long-term habitation camps, numerous short-term habitation camps, lithic quarrying and tool manufacture sites, as well as a few cairns, ceramic scatters and a rock alignment, were documented throughout the district, for a total of 70 sites over 441 acres.

More recently, several other traditional cultural locations discussed below have been identified as part of consultation for the Sunrise Powerlink project that have also not been evaluated as Traditional Cultural Properties (Iversen et al. 2010). These places include the Plaster City area, Coyote Mountain, Sugarloaf Mountain and the Mountain Springs Grade area, the Jacumba Valley area, McCain Valley, the Border Patrol Station area near La Posta, the Long and Round Potrero valley areas, the Suncrest Substation area near Alpine, the Chocolate Canyon area nearest to El Capitan Reservoir and the El Capitan area (El Cajon Mountain). Also, as stated above, there are likely additional tribal cultural resources in these areas and ongoing communication with the local tribal groups is necessary.

In summary, although approximately 95 traditional cultural locations and two archaeological districts have been documented in greater Kumeyaay territory, none have been formally evaluated as Traditional Cultural Properties. Although not formerly designated, these locations are still considered Traditional Cultural Places because of their importance to the local tribal community. None of these identified Traditional Cultural Places are located within the current project APE. Additionally, pursuant to PRC Section 5097.9 the Project will not interfere with the expression or exercising of Native American religion nor cause knowingly cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require. If any future Project changes are found to have adverse effects to any of these resources or any as yet identified TCPs or tribal resources, then a non-archaeological (i.e. non-data recovery program) means to mitigate the effects will also be considered and consulted upon with local Tribal organizations.

1.6 IDENTIFICATION AND EVALUATION OF HISTORIC PROPERTIES

1.6.1 Regulatory Context

The regulatory context for the identification and evaluation of cultural resources during the Project is discussed in Section 1.1 above and detailed in depth below. In summary, cultural resources on public lands will be regulated according to the NHPA and resources on State, City and Private lands will be regulated in accordance with CEQA or Local Ordinances. These regulations have been considered during consultation for the PA and HPMP. Where adverse effects to properties cannot be avoided as provided for in Section 1.6.2, Section 2.2.2 below or Section 3.1.6, the Forest will consult with SHPO on eligibility of those properties pursuant to CFR 800.4(c)(2). The Forest shall ensure the views of any consulting parties are considered in their eligibility determinations submitted for SHPO concurrence.

1.6.2 Identification and Evaluation

Pursuant to MM CUL-1a, historic properties in the APE were identified as a result of cultural resource inventories (Hector et al. 2009; Schaefer and Williams 2013). The APE is defined in Stipulation 1.0 and depicted in Attachment 1of the Project PA. The APE is influenced by the scale and nature of the Undertaking and is defined as those lands that are incorporated into the area within the boundaries of the Master Special Use Permit and Power Line Replacement Projects. Specifically, the APE's defined in Schaefer and Williams 2011 and Shaver and Baksh 2012 will be followed. The APE shall also include the entire area of spatially discrete historic properties (e.g., archaeological sites), if any part of such a property extends into the boundary of the Master Special Use Permit and Power Line Replacement Projects; except that management of linear cultural resources (e.g., NRHP-eligible roads and trails) shall not cause the APE to be extended beyond the boundaries of the Master Special Use Permit and Power Line Replacement Projects. The APE will include contributing elements of NRHP-eligible historic districts that are within the boundary of the Master Special Use Permit and Power Line Replacement Projects. Following these Stipulations, the historic properties identification process included:

a) Reviewing existing published and unpublished literature, reports, archives and other writings and photographs that pertain to the ethnography, archaeology, and history of cultural resources in the APE and adjoining areas to determine the locations and nature of previously identified cultural resources and historic properties in the APE; and
b) Consulting with tribal representatives and other Native Americans prior to and during efforts, as well as other groups and individuals with knowledge of cultural resources in or immediately adjacent to the APE; and
c) Conducting an archaeological field inventory of existing SDG&E access roads, distribution and powerline tower and pole pads, and other areas of the Project APE to locate, describe, and record previously undocumented archaeological resources or to relocate and update records of previously recorded archaeological resources that could be affected by the Undertaking; and
d) Conducting field trips, informal group meetings, interviews, or formal public meetings with government agency staff, tribes, Native American organizations and individuals, and other groups and members representing the public and government agencies to solicit and record information regarding cultural resources in the APE and the historical or cultural significance of those resources to those interested parties, these would occur prior to and/or during any evaluation efforts.

Appendix B (Native American Consultation Requirements and Participation) describes the process for tribes to provide input on the MSUP and effects to historic properties. Any CRHR/NRHP evaluations will be conducted with a qualified and compensated Native American monitor.

Linear facilities such as access roads and that may extend beyond the limits of the ROW were inventoried and documented only for that portion of the linear facility that is within the Project APE. The entirety of linear facilities will be considered for any evaluation efforts. Adverse effects will be considered for the portion of the linear resource within the APE. Project redesign will be the preferred approach to any resources with rich midden or burial deposits, identified through surface survey or during previous evaluation and data recovery efforts, or that are identified as ceremonial or sacred places. Delineation of these resources may be achieved through noninvasive methods if deemed necessary and will be agreed upon through consultation efforts.

As SDG&E's consultant, ASM identified and will evaluate cultural resources within the APE that may be affected by the Undertaking authorized in the Project to determine the eligibility of those cultural resources for listing in the NRHP/CRHR according to the eligibility criteria for historic properties at 36 CFR §60.4. Historic properties for which there is documentation of prior consultation with the SHPO and/or Keeper of the NRHP regarding a determination of eligibility may or may not be re-evaluated at the discretion of the Forest. SDG&E and Forest qualified personnel shall consult pursuant to 36 CFR §800.4(c)(2) to seek agreement with any determination on NRHP eligibility. Any of these properties that do not have previous documentation of tribal involvement during the review of that resource's eligibility status may also be re-evaluated to include tribal participation.

1.6.2.1 Reporting (During Project Plan)

Resources recommended as not eligible will follow the process outlined below in Section 3.1.6. For resources recommended eligible the following will guide the reporting process. The Forest will invite consulting parties identified in the PA to participate in this process prior to proceeding with eligibility determinations. Consulting parties must indicate their desire to participate within 10 days. Additional consulting parties can join this process at any time by indicating their interest to the Forest.

- A draft eligibility report with recommendations for additional mitigation will be provided to participating consulting parties for a 30-day review;
- Upon receipt of comments, SDG&E and the Forest will have five days to respond and produce a final eligibility report;
- SDG&E/Forest will submit the final eligibility report to SHPO who will have 10 days to provide any additional comments on the final eligibility report;
- USFS shall notify all consulting parties regardless of their active participation in this process of eligibility determinations and make those available for public inspection. A notice posted on the Forest's website will be the primary method for notifying the public that eligibility determinations have been completed. These documents are confidential and will only be distributed to those with the appropriate qualifications;
- Following submittal of the final eligibility report, SDG&E will prepare a draft HPTP for any recommended eligible resources that cannot be avoided;
- The draft HPTP will be submitted to the consulting parties for a 30-day review;
- Upon receipt of comments, SDG&E and the Forest will have five days to respond and produce a final HPTP;
- SDG&E/Forest will submit the revised HPTP to SHPO who will have 10 days to provide any additional comments on the draft final HPTP;
- Absent any comments, the HPTP will be considered final and the Forest and/or CPUC will notify SDG&E that work can commence;

- Within five days of the completion of all fieldwork described in the HPTP, and prior to completion of any special studies or laboratory analyses, SDG&E will submit to the Forest a summary letter report documenting the field efforts and preliminary findings;
- The consulting parties will have 10 days to review the letter. Absent any comments, the fieldwork portion of mitigation efforts will be considered fulfilled and construction can proceed;
- A draft mitigation report will be submitted to the Forest within 90 days of completion of fieldwork;
- The Forest will submit the draft mitigation report to consulting parties for review; and
- Within 90 days of acceptance by SHPO of all draft final reports, SDG&E will prepare and submit to the Forest a final version of the reports.

The USFS will determine if shorter review periods are appropriate and necessary (required to address immediate health and safety concerns), whereupon consulting parties will be notified of the shorter review period. A shorter review period may be required.

1.6.2.2 Fieldwork Methodology

This section describes in more detail the methods used to conduct evaluations. These methods are the same as those used for site-specific evaluations. NHPA Section 106 is applicable to federal undertakings, including projects financed or permitted by federal agencies, regardless of whether the activities occur on land that is managed by federal agencies, other governmental agencies, or private landowners. Its purpose is to determine whether adverse effects will occur to significant cultural resources, defined as "historic properties" that are listed in or determined eligible for listing in the NRHP. The criteria for NRHP eligibility are defined at 36 CFR § 60.4 and include:

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 that:

a) Are associated with events that have made a significant contribution to the broad patterns of our history; or
b) Are associated with the lives of persons significant in our past; or
c) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
d) Have yielded or may be likely to yield, information important in prehistory or history.

The CRHR is a listing of State of California resources that are significant within the context of California's history, and includes all resources listed in or formally determined eligible for the NRHP. The CRHR is a state-wide program of similar scope to the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR. A historic resource must be significant at the local, state, or national level under one or more of the following criteria defined in the California Code of Regulations Title 14, Chapter 11.5, Section 4850:

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

history of the local area, California, or the nation.

The CRHR criteria are similar to NRHP criteria, and are tied to CEQA, as any resource that meets the above criteria is considered a historical resource under CEQA.

The Project undertaking may cross cultural resources that comprise districts or linear cultural resources (e.g., roads and trails) that are individually so geographically extensive that the properties extend well beyond the boundaries of the Project. Per Stipulation 1.0 B of the Project PA, the management of linear cultural resources (e.g., NRHP-eligible roads and trails) shall not cause the APE to be extended beyond the boundaries of the Master Special Use Permit and Power Line Replacement Projects. For such geographically extensive properties, SDG&E will:

a) Prepare historic contexts for the whole of any potential districts and cultural resources, except for historically known Native American trails for which SDG&E will collaborate with the Forest to prepare historic context statements;
b) Evaluate the NRHP eligibility of potential contributing elements of districts and linear resources that are within the APE; and
c) Evaluate the NRHP eligibility of individual cultural resources within the APE.

Where the resource protection measures in this HPMP cannot prevent adverse effects occurring to cultural resources resulting from the otherwise lawful performance of the Undertaking authorized in the MSUP, those resources that may be adversely affected by Undertaking activities must be evaluated for NRHP eligibility to determine effects to historic characteristics that make them NRHP eligible and to design reasonably feasible measures to mitigate adverse effects to historically significant characteristics.

It may be appropriate or necessary that the NRHP evaluation of historic properties be reconsidered. In which case:

- SDG&E shall re-evaluate the NRHP eligibility of historic properties previously evaluated within the APE if requested by the Forest or the SHPO, or if SDG&E believes that there is good reason to re-evaluate the significance of the properties in the context of this Undertaking and the Forest and SHPO agree.
- If the Forest or SDG&E objects to the re-evaluation of historic properties that extend outside the APE, the Forest and SDG&E may recommend assess the effects of the Undertaking on only those portions of the properties in the APE. The recommendation of the SHPO will be informally sought by the Forest and will be considered prior to any decision to limit a re-evaluation. To inform this recommendation the Forest will provide adequate background information, including a summary of potential site specific effects, consultation with Tribes and available new research as a justification for the limited re-evaluation.

Evaluation methods are essentially sampling methods geared toward recovering a reasonably-sized assemblage to estimate the density and diversity of the cultural deposit, and to expose enough of the site deposit to determine integrity. A general approach is described below, from surface inspection and collection, to the various kinds of subsurface investigation. Considerations of site-specific methods are described next, with particular attention paid to hypothetical plans for unit distribution relative to proposed areas of impact. The Principal Investigator will make recommendations on site-specific measures and a final approach will be made in consultation with the USFS and SDG&E. Any objections made to these recommendations will be resolved follow the procedures set forth in Stipulation 9.0 of the Project PA.

Fieldwork will be conducted exclusively within the Project APE. It will consist of an archaeological survey with 5-meter transects to establish the presence or absence of cultural resources within the APE, complete mapping of all cultural resources and the full recording of any prehistoric or historical features.

The cultural resource evaluation for archaeological sites will be conducted within the APE only and will establish the presence or absence of subsurface site components, within the APE. It will consist of a surface collection and detailed mapping of the resource with subsurface testing. The subsurface testing will be used to identify and define subsurface deposits and subsurface deposit integrity and variability. Any datable materials recovered during the testing program will be analyzed to provide temporal context to the resource. The testing program will be expanded if intact subsurface deposits are identified, however, if more than 4 cubic meters of soil or 5-percent of area of the site need to be examined then the Forest will consult on any further testing efforts with the SHPO.

The first step in site evaluation is to relocate datum points, artifact concentrations, features, and landforms noted on the original site forms. The next step is to conduct regular-interval sweeps of the site surface pin-flagging artifacts, concentrations, and features to confirm original mapped items and site boundaries and establish a real-time visual perspective of site properties. This phase is made more efficient with the use of color-coded pin flags representing diagnostic artifacts, features, etc.

After the site is defined with pin-flags, a surface collection strategy will be implemented; during this phase. At prehistoric sites, areas containing high enough densities of surface artifacts will be sampled with 15-by-15-meter, controlled surface collections (called a CSC). Each of these CSC units will be divided into a 5-by-5-meter grid, and each grid collected and labeled (A through I). Enough whole grids, and or portions thereof in some cases, will be collected to ensure the recovery of at least one half of all surface area in the dense artifact concentrations. The CSC units will be supplemented by collection of all formed artifacts identified outside the collected CSC grids. The pin flags will be left in place until site mapping is completed. On sites where there is either no artifact concentration sufficiently dense for the collection of a CSC, or the CSC collections are numerically small, a general site collection will be made to supplement the CSC collection, or in some cases to simply provide some data where the CSC units are not used. The general site collections are essentially random samples of the artifacts on the surface.

Four types of units will be used for subsurface excavation. All units have square corners to enable expansion of units to more thoroughly explore deposits. Shovel Test Pits (STPs) are small, 0.5-by-0.25-meter exploratory units excavated in 20-centimeter increments to depths of no more than 80 centimeters, and typically spaced at 10-meter intervals or subjectively placed. STPs are typically used to explore the edges of cultural deposits, providing a positive-negative indication with little reliability in terms of estimating depth of cultural deposits. The second type of excavation unit—Shovel Test Units (STU)—measures one by 0.5 meters in size; STUs can be excavated in 10-centimeter or 20- centimeter levels, generally to depths between 40 and 100 centimeters, and can provide a profile of sediments. The number and placement of STUs will depend upon the distributions of artifacts on the surface. In general, at least one STU will be excavated in each locus, with additional STUs excavated in the artifact concentrations. On most sites at least one STU will also be placed in the areas between the artifact concentrations. If an STU produces a high artifact yield, a larger Control Unit (CU) measuring one meter by one meter will be placed adjacent or near to the STU. CUs will be excavated in standard 10-centimeter levels. The third type of unit is the shovel scrape unit (SSU). Shovel scrape units are rectangular in shape, but vary in size depending on the deposit. Typically, a SSU will not be more than 10 centimeters deep, and usually even shallower. These units will be placed where the terrain or other excavations suggested that the depth of deposits is very shallow. As a result, these units will cover larger areas than the STU or CU, with the idea being to increase the excavated volume from the shallow deposits, thereby increasing the quantity of artifacts recovered.

All excavated matrix, regardless of unit type, will be screened through 1/8-in (3 millimeter) mesh. Typically, most of the excavated prehistoric sites will terminate between 40 and 80 centimeters below the surface, when either a calcareous B-horizon or bedrock is typically encountered. Where deeper deposits are discovered, an auger with a 4-inch diameter blade will be used to examine deeper, sub-cultural strata below excavation levels when artifact yields drop to trace quantities. Sidewall profiles will be drawn and photographed where appropriate, with small soil samples taken for Munsell color and constituent classification.

The site will be mapped using a Trimble Pathfinder global positioning system (GPS) receiver with real-time correction capabilities and down to 10-centimeter accuracy to plot all formed artifacts, CSCs, excavation units (STUs and CUs), and the boundaries of any defined loci and features. The GPS will also be used to record site boundaries, landform edges, drainages, roads, and other relevant surface information. In addition to the mapping, a series of overview photographs will be taken to show the site landscape situation. Photographs will also be taken of features or other site attributes when appropriate.

All recovered artifacts will be transported for laboratory analysis and cataloging at the completion of the fieldwork, and will be prepared for curation at a federally accredited facility per 36 CFR 79, unless other arrangements are required, such as, repatriation to local Tribal groups.

1.6.3 Evaluation of Prehistoric Archaeological Properties

This section briefly identifies themes to be addressed by analysis of prehistoric sites. Preliminary concerns are the chronological placement of the site and its contents, and an assessment of its depositional integrity. Potential contributions to regional archaeological research include defining patterns of resource utilization and assessing evidence of intercommunity exchange and travel.

Chronological Placement
Chronology is a prerequisite to effectively addressing regional phenomena. Radiocarbon dates, when they can be obtained, have traditionally provided the most reliable and precise method for dating archaeological sites in this region. Organic materials such as charcoal, bone, or shell have been previously identified in the sites identified along the proposed Project. Additionally, thermoluminescence dating offers a potential optional and promising chronometric alternative. Artificially fired materials, such as the ceramics and fire-affected rock that have been reported in the Project area and can be tested to determine the amount of time that has elapsed since their firing.

Obsidian artifacts may offer another potential chronometric tool. If obsidian is present, measurement of hydration rinds to arrive at rough relative or absolute dates may be possible. Relative dates associated with exposure of the Obsidian Butte source near the Salton Sea is also valuable. Type and trait analyses of ceramics offers the most promising artifact-based approach to determining the chronology of the site.

Specific research questions related to chronology may include:

- Is a Pleistocene “Pre-Projectile Point” pattern represented in the region?
- Is the Early Holocene “San Dieguito” pattern chronologically distinct from a preceding Pleistocene “Clovis” pattern and subsequent Middle Holocene “Archaic” patterns?
- When did mortars begin to be used with frequency in the region?
- When were small projectile points, indicative of bow-and-arrow technology, introduced into the region?
- When was pottery-making introduced in the region?
- When were various changes in buff ware pottery introduced into the region?
- When was the practice of cremation introduced into the region?

Can obsidian hydration be used as an effective regional chronometric method, and what is the precision that can be obtained with it?

Integrity
Another preliminary question concerns whether the archaeological remains are substantially in situ, in the locations where they were deposited prehistorically, or whether they have subsequently been redeposited. In the latter case, their value for addressing regional research issues may be substantially diminished.

Settlement Types and Patterns
Investigations should shed light on the function of any site, specifically whether it was a resource extraction area, temporary camp, or was used for a more extended period as a residential base. The functional range of artifacts present at the site may provide one clue: a residential base would be expected to contain evidence of more diverse activities than a temporary camp. Another line of evidence may be the amount and character of non-local items that are present in the assemblage. While some artifacts of exotic origin might well be carried along during a group's move to a temporary camp, the camp's occupants would not be expected to have made extended treks to bring in distant resources in a logistical manner. Another indicator might be the relative importance of resource processing and resource consumption; a temporary camp might see a substantial amount of processing of resources that were to be subsequently consumed elsewhere, whereas processing and consumption would probably be more evenly balanced at a residential base.

- Are the prehistoric settlement systems in various parts of the region and during various time periods better categorized as those produced by "foragers" or by "collectors"?

Resource Utilization
Some general inferences may be drawn from the types of artifacts and features that are present at a prehistoric site. However, more specific evidence would come from faunal remains and protein residues, if those are present and preserved. An issue of particular importance concerns the role, if any, of domesticated crops in this region. The introduction of agriculture is still very poorly known. If residues from agricultural crops are detectable and datable, they would potentially shed significant light on evolving regional adaptations. Specific questions may include:

- Did agave roasting (earth ovens) become substantially more important in the region during the latest prehistoric period?
- Did the exploitation of acorns and pine nuts become substantially more important in the region during the latest prehistoric period?
- What factors determined prehistoric choices of lithic materials to be used in the manufacture of flaked lithic artifacts?
- Are the prehistoric settlement systems in various parts of the region and during various time periods better categorized as those produced by "foragers" or by "collectors"?
- Was agriculture practiced prehistorically in the region?

Exchange and Mobility
How strong were the prehistoric trade and travel links at the specific resource and surrounding regions, and how widely did they extend? This issue may be addressable at through analysis of lithic materials and ceramics.

Previously reported lithic materials in the Project area include "metavolcanic" rock (i.e., volcanic rock, including volcanic porphyry), "chert" (cryptocrystalline silica), and quartzite. It is likely that all of these materials may have been available fairly locally, in the exposed volcanic plugs and dikes of the Peninsular

Range, and surrounding alluvial deposits. More geographically diagnostic materials that may possibly be encountered include obsidian and "wonderstone." Obsidian would potentially have been available from the Obsidian Butte source, with the closest alternative obsidian source located near San Felipe in northeastern Baja California (McFarland 2000). Wonderstone, a fine-grained, silica-rich material, has been reported at two Colorado Desert sources: Cerro Colorado, in northern Baja California and Rainbow Rock, in northwestern Imperial County (Pigniolo 1995). If these materials are present at the site, x-ray fluorescence studies may be able to match them with their sources. Steatite or soapstone is another material imperfectly understood in the region.

Pottery may also be geographically diagnostic, although with difficulty. Tumco Buff (or type BT), characterized in particular by the scarcity of its mineral inclusions, was previously argued as having been produced in the lower Colorado River valley, but recent observations at sites to the west of Lake Cahuilla suggest that it was also locally produced; the essential chemical identity of the clays deposited in the two areas and the scarcity of inclusions would make distinguishing such sherds' origins difficult (Waters 1983). Brown ware, as distinct from buff ware, has often been treated as a marker for pottery produced in the Peninsular Range rather than locally in the Colorado Desert. However, a Salton Brown type manufactured within the Salton Basin has been increasingly recognized, although it is difficult to distinguish macroscopically from the Tizon Brown type produced in the Peninsular Range (Gallucci 2001, 2004; Hildebrand et al. 2002). X-ray fluorescence analysis may be useful in distinguishing a mountain or desert origin for the brown ware sherds. Research questions that might be addressed include the following:

- What were the character and composition of communities in various parts of the region and during various prehistoric periods?
- What were the patterns of community mobility in various parts of the region and during various prehistoric periods?
- What methods, other than community mobility, were used to deal with spatial and temporal incongruities between resource availability, labor availability, and consumption needs?
- How was the intercommunity exchange of obsidian organized, and how did exchange patterns change through time?
- How was the intercommunity exchange of cryptocrystalline silica (chert, chalcedony, jasper, etc.) organized, and how did it change through time?
- What patterns of intercommunity exchange are evidenced by prehistoric ceramics?
- What patterns of intercommunity exchange do prehistoric shell beads and ornaments exhibit?

Any additional research questions developed through research for specific site assemblages will be reviewed and commented on by the consulting parties.

1.6.4 Evaluation of Traditional Cultural Properties (TCP)

According to National Register Bulletin 38, a TCP is a resource that is associated with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community. With sufficient integrity and importance to the community identity, TCPs may be considered historic properties that are eligible for inclusion in the National Register. TCPs include built or natural locations, features or landscapes considered culturally significant, such as sacred places or traditional gathering, hunting, and fishing areas. No TCPs have been identified within the direct Project area to date. However, several areas of concern have been identified through consultation and site visits and are summarized above in Chapter 4. At least one of these areas of concerns and potential TCP (Laguna Mountain) is bisected by the proposed Project along C440 and will need to be documented and evaluated to determine if adverse effects will be created by the Project. As the sacred lands files are not provided by the NAHC, the USFS will conduct additional Tribal consultation

throughout the identification of the properties, design avoidance process and eligibility determinations. Should a TCP be identified in an area that would be adversely or significantly affected by construction activities or indirect impacts, avoidance of the TCP is preferred (MM CUL-1b). The USFS will first consult with interested tribal groups and the consulting parties regarding the elements of the TCP that make it a significant resource and qualify it for the National Register. A qualified ethnographer will be retained by SDG&E. Qualifications for the ethnographer will be vetted and consulted on with the Forest, SDG&E and local tribal groups involved. Then the USFS will confer with the consulting parties regarding the methods for avoidance, which may be specific to the TCP in question. If the TCP cannot be avoided, the property will require a formal evaluation by a qualified ethnographer to determine its eligibility for listing on the NRHP/CRHR, and actions will be required to resolve the adverse effect. Evaluation of TCPs would include an assessment of the property's integrity of relationship and integrity of condition, and whether the property meets the criteria for inclusion on the Register in accordance with National Register Bulletin 38. The identification of new TCPs and the formal evaluations recommendations for any TCPs will be included in Appendix A of this document. Final eligibility determinations would be made by the USFS and/or CPUC in consultation with SHPO, the affected Native American Tribes or other affected stakeholders.

1.6.5 Evaluation of Historic Era Properties

Research themes relevant to the historical sites involve chronology; technology, subsistence and settlement organization; and the structure and integrity of cultural deposits (Iversen et al. 2010). The contextual history of an individual historic site is necessary to provide the basic framework for interpretation of the archaeological data. Essential information about the site should be established, such as the nature of the site, when was it established, by whom, and the extent and boundaries of the property. In addition to providing basic details that define the function of the site. Specific questions might include the following, however, this list is not exhaustive and additional questions and topics may be necessary to accurately assess a given resource.

Historic Site Formation and Context
The contextual history of an individual historic site is necessary to provide the basic framework for interpretation of the archaeological data. Essential information about the site should be established, such as the nature of the site, when was it established, by whom, and the extent and boundaries of the property. In addition to providing basic details that define the function of the site, research questions relating to site structure and land use would include:

- When was a particular site first constructed and by whom? How long was the site in use? Was the property owned and operated over several generations?
- Did site function change over time? Are changes in land use or site structure attributable to generational changes in the household? Can foundation and structural remains be identified with specific buildings or functional areas?
- Are specialized work areas present? Is there evidence of a high degree of specialization or more generalized use of the property? Was production specialized or diversified and did the focus of production change over time? How do changes in production relate to broader historical changes?
- Do foundations provide insight into construction methods and alterations?
- How were artifact deposits formed, and when did deposition take place?
- How did post-depositional processes, such as later construction, affect the degree of historical integrity of deposits and features?

Consumption Patterns
Consumer profiles for assemblages from working-class and middle-class lives, including small hotels, lodgings, and saloons, are available from recent studies in downtown San Diego. As such, intra-site comparisons can be made. Research questions relating to consumption patterns include:

- Can a subsistence pattern be defined?
- Do the consumer profiles for the assemblage differ from similar construction in other areas?

Changing Economic Conditions
Development within the region began in the late nineteenth century and has continued to the present day. San Diego has experienced several boom-and-bust cycles during this time. Periods of economic growth were generally followed by bust cycles when property values plummeted, production slowed, unemployment rose, and population dropped. Data analysis of material from the San Diego city dump (1908-1913) suggests that periods of boom were characterized by high ceramic and faunal economic values and a shorter time lapse between manufacture and discard of bottles (Christenson 1991; Van Wormer 1991, 1995). Analysis of deposits from the San Diego Justice Center site dating to the recession years of the 1890s had considerably lower ceramic and faunal economic values than deposits from the same site dating to the boom of 1900-1920 (Allen et al. 1996; Christenson 1996; Van Wormer and Manley 1997). Do these finds reflect conditions across the region?

In rural areas the economic strategies employed by property owners and farm workers to achieve basic subsistence or to produce income and meet household needs. Archaeological studies are ideally suited to the study of consumer behavior and economic strategies of rural households, and they provide an opportunity to examine how rural households adapted to economic conditions compared to households in other settings such as urban households.

The difference in household values between successful farm families and middle- and upper-middle-class urban residents is manifested through cross-site comparisons of functional profile and economic indexing data. Profiles of rural assemblages show higher frequencies of hardware, livery items, and equipment and machinery parts than those representing urban sites (Van Wormer 1991;1996). In addition, rural site assemblages tend to exhibit reduced ceramic index values (i.e. cheaper ceramic wares), that remain unaffected by fluctuating economic trends, as well as excessive ceramic and bottle manufacture-deposition lag time when compared to urban assemblages from the same period. These patterns indicate that rural households exhibited a different style of consumption from urban residents by spending less money on ceramic tableware and being more conservative about disposing of items only a few years old. Trash deposits from ranch and farmstead sites provide an excellent opportunity to test hypotheses relating to consumption patterns of rural versus urban dwellers. Remote rural dwellers survived in very difficult conditions and the rural consumer pattern may be further accentuated at these sites.

Archaeological data needs to address these questions include mapped locations of buildings and/or building foundations; structural remains of known function; sheet refuse indicative of specialized activity areas; intact archaeological deposits of known association containing residential and agricultural waste, including trash-filled cisterns, privies and trash pits; landscape features; environmental adaptations such as windbreaks; remnants of fencing and corrals; and presence of orchards and evidence of other land uses. Artifacts collected from defined contexts, a sufficient variety and quantity of materials, items associated with specific activities, and the frequency and proportion of items can assist in supporting any interpretations. Documentary data sources include land patent files; property and tax assessment records; property deeds; leases; probate records; census records; marriage and death records; financial and production records, if available; and oral history.

Research questions relating to changing economic conditions include:

- Are temporally diagnostic artifacts present in sufficient numbers to allow close dating of discrete deposits?
- Can specific adaptations to boom-and-bust cycles be detected? This question assumes that time-discrete archaeological deposits are available.
- Can a common culture for working-class, middle-class, and upper-middle-class residents be defined? How did successful rural farm families define wealth and spend money compared to middle- and upper-middle class urban dwellers. Research has indicated that after achieving a basic standard of living that included inexpensive ceramics and a few luxury items, farm families invested in equipment, land, livestock and outbuildings rather than in status symbols favored by urban dwellers such as fine furniture, table settings and clothes.

Archaeological data needs to address these questions include mapped locations of buildings and/or building foundations; structural remains of known function; sheet refuse indicative of specialized activity areas; intact archaeological deposits of known association containing residential and agricultural waste, including trash-filled cisterns, privies and trash pits; landscape features; environmental adaptations such as windbreaks; remnants of fencing and corrals; and presence of orchards and evidence of other land uses. Artifacts collected from defined contexts, a sufficient variety and quantity of materials, items associated with specific activities, and the frequency and proportion of items can assist in supporting any interpretations. Documentary data sources include land patent files; property and tax assessment records; property deeds; leases; probate records; census records; marriage and death records; financial and production records, if available; and oral history.

Specific research questions can be developed for historic agricultural and ranching sites, depending on the site function, variety and quantity of historic materials present and the availability of historical documentary data sources. Research topics specific to types of historic era resources (i.e. Water Conveyance Systems, Agricultural Properties, Mining Properties, Townsite Properties, Work Camp Properties, etc…) have previously been established in the California Department of Transportation's Historical Context and Archaeological Research Design series. Which will be utilized if those types of properties are encountered on the Project. The testing program will focus on determining if any subsurface deposits are present and on developing a land use history for this site.

The term "built environment" is a relatively new term used in its broadest sense to designate "the part of the environment formed and shaped by humans, including buildings, structures, landscaping, roads, signs, trails, and utilities" (www.co.tompkins.ny.us/planning/vct/glossary. html).

Section 8110 of the BLM Manual offers specific guidance for identifying and evaluating cultural resources, including historic built environment resources. According to the manual, "The same criteria and integrity standards are applied to all cultural properties, whether archaeological, historical, architectural, or traditional. In order to be listed in or found eligible for listing in the National Register, a property must have integrity and must meet one or more of the four criteria. No type of property is automatically eligible for listing in the National Register." Further, "In determining the National Register eligibility of a cultural property, an appropriately qualified cultural resource specialist must apply each of the four NRHP criteria for evaluation (36 CFR Part 60.4; see .32E). If a cultural property has integrity, meets one or more of the criteria, and is not ruled out by a criterion exception, the specialist should recommend to the responsible manager that it be considered an eligible 'historic property' as defined in the NHPA and related regulations. The National Park Service's National Register Bulletins provide guidance on applying the evaluation criteria and assessing integrity."

As a first step in identifying potentially eligible built environment resources historic maps will be consulted and conference with local archivists (e.g. local museums) will conducted in an effort to identify additional sources of history for the resource. Like other resource types, the Built Environment will be evaluated using the criteria for inclusion of both the NRHP and CRHR. In order to be eligible for listing in the NRHP or the CRHR, a property must also retain sufficient integrity to convey its significance. The seven elements of integrity defined by the NRHP are: location, design, setting, materials, workmanship, feeling and association (National Park Service 1991). To retain historic integrity, a property must possess several, and usually most, aspects of integrity.

> **Location**: "the place where the historic property was constructed or the place where the historic event occurred" (National Park Service 1991:44)
>
> **Design**: "the combination of elements that create the form, plan, space, structure, and style of a property" (National Park Service 1991:44)
>
> Setting: the "physical environment of a historic property" (National Park Service 1991:45)
>
> **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" (National Park Service 1991:45)
>
> **Workmanship**: the "physical evidence of the crafts of a particular culture or people during any given period in history or prehistory" (National Park Service 1991:45)
>
> **Feeling**: "a property's expression of the aesthetic or historic sense of a particular time" (National Park Service 1991:45)
>
> **Association**: "the direct link between an important event or person and a historic property" (National Park Service 1991:45)

1.6.6 Considering the Effects of the Undertaking on Historic Properties

No significant changes in the operation and maintenance of the electric distribution and powerline facilities and access roads serving those facilities by SDG&E are proposed in the MSUP. Operation and maintenance activities are described in the document Operation and Maintenance Plan for San Diego Gas and Electric Electricity Powerline and Distribution Facilities Located on Federal Lands Administered by the USDA Forest Service-Cleveland National Forest (TBD) prepared by SDG&E and the Forest and to which the HPMP may be appended. This HPMP may be incorporated into SDG&E's Operations and Maintenance Plan for the Special Use Permit, as appropriate.

SDG&E operations and maintenance activities are constrained by the Master Special Use Permit to the area within the Special Use Permit boundary as noted in Figure 1. Consequently, SDG&E's operation and maintenance activities will not directly affect any historic properties outside the Special Use Permit and on lands administered by the Forest as long as SDG&E complies with the terms and conditions stipulated in the Special Use Permit. Any past alterations to the characteristics or uses of historic properties within, adjacent to, or extending beyond the Special Use Permit APE are historical in nature and are not considered to be effects of operations and maintenance or the MSUP Undertaking.

The following examples may be effects of the Undertaking that may potentially alter the characteristics that qualify historic properties for listing in the NRHP and which may occur as the direct result of the otherwise lawful ongoing operation and maintenance of the electric facilities.

a) Physical damage to or destruction of cultural deposits, artifacts, or features associated with archaeological sites or districts determined to be historic properties.

b) Deliberate interruption, constraint, or other impediment to the use of traditional cultural properties, or ceremonial or sacred sites that qualify as historic properties.

SDG&E and Forest qualified personnel shall assess adverse effects of the Undertaking on historic properties in the APE in accordance with 36 CFR §800.5 and the PA. SDG&E shall have historic preservation responsibility only for SDG&E effects to historic properties in the APE resulting from the otherwise lawful performance of activities in the Undertaking. Potential effects may be both direct and indirect (e.g., increased vandalism resulting from SDG&E improved access where access roads are exclusive to SDG&E use).

2.0 OPERATIONS AND MAINTENANCE ACTIVITIES

2.1 DESCRIPTION OF SDG&E OPERATIONS AND MAINTENANCE ACTIVITIES WITHIN THE MSUP APE

The following and Table 2 is a detailed description of routine maintenance activities included within the scope of the MSUP. Though the list may not be exhaustive, the activities included herein have the potential to affect historic properties.

Table 2. Routine Maintenance Activities

Activity	Description	Equipment Used	Frequency
Aerial inspections	Aerial survey of powerlines or distribution lines	Helicopter	Powerline:12-months distribution: 5-year cycle or 2-year rural safety check or as required
Ground inspections	Visual & physical inspection	4WD truck, ATV, or on foot	Powerline: 36-months distribution: 5-year cycle or 2-year rural safety check or as required
Wood pole test & treat	Take bore samples and inject internally with chemical preservative	4WD truck, ATV, or on foot	Powerline:10-year except for radial feed lines re on 5-year cycle distribution: 10-year
Insulator replacement	Replacement of insulators	4WD truck, ATV, helicopter or boom or line truck	As needed
Cross arm replacement	Replacement conductor supports	4WD truck, ATV, helicopter or boom or line truck	As needed
Anchor/ guy replacement	Replace anchor or down guy	4WD truck, helicopter or line truck for digging anchor hole	As needed
Vegetation management	Removal of trees and brush from authorized area and hazard tree zone	4WD truck, ATV, or large truck, chainsaw, chipper or weed whip	Annual or as needed
Road maintenance	Vegetation removal, waterbar or culvert cleaning/repair, road grading	4WD truck, grader, excavator, or D8 CAT	Biennial or sooner as needed
Installation and maintenance of avian protection measures.	Placement of cover over conductor	4WD truck, ATV, or large truck,	As needed
Telecommunications and weather monitoring equipment	Placement of equipment on poles, grounding rod installation, upgrades for safety, paths to poles and facilities	4WD truck, boom or line truck	Installation on poles as needed for safety and communications requirements

2.1.1 Inspections

Inspections are done from the air using helicopters, and from the ground using 4x4 vehicles, ATVs or on foot, depending on the terrain. All vehicles are operated only on authorized roads. The frequency and scope of inspections are specified by the California Public Utility Commission (CPUC) General Orders (GO).

- **Powerline**: Powerlines have four different types of inspection, two aerial per year (visual and IR), a wood poles ground line inspection on a ten-year cycle (except for radial feed which are on five-year cycle) and a ground patrol on a three-year cycle.

- **Distribution**: Distribution overhead GO 165 inspections are on a five year cycle. (All distribution poles are inspected once every 5 years). SDG&E also has a GO requirement for patrol "safety checks" in rural areas (mountains etc.) every 2 years and in urban areas every year. In the mountain areas Company personnel may also patrol "at will" or when there is an urgent need to do so, due to weather, fire, etc.

2.1.2 Annual Routine Vegetation Management Work

Annual routine vegetation management work consists of removal of brush, trimming of trees and falling hazard trees in compliance with Public Resources Codes 4292 and 4293, and California Department of Forestry fire protection requirements. Work is identified during the annual inspections. Routine hazard trees are trees that will grow sufficiently within a year to compromise the regulatory mandated clearance between vegetation and the conductors. Removal of brush and grasses from the base of identified poles will be done bi-annually in spring or early summer and in the fall.

Vegetation management work is typically carried out by crews using chain saws and non-powered hand tools. Chippers are sometimes used depending on vehicle access and the volume of slash to be disposed of. Crews typically leap-frog each other as they work down the line. The crews reach the area by a truck and/or walking into work sites depending on accessibility and terrain. After the trees are fallen the slash is lopped and scattered to meet fuel loading requirements. It is the Company's intent that this work occur on an annual basis on every power and distribution line.

2.1.3 Routine Pole/Tower and Conductor Maintenance

Routine pole/tower and conductor work consists of wood pole test and treat, insulator replacement, cross arm replacement, anchor/guy or incidental pole replacement.

- **Powerline**: Inspectors classify the work from the most critical as "force out/perform work now" to perform work within 2 to 30 days, to perform work within 1 to 6 months, to perform work within 6 to 12 months and so on. This does not include wood pole replacement, which would require amended Forest Service authorization.

- **Distribution**: Inspection follow-ups are done within the next year. Typically, there is a 10-month backlog window to do the follow-up repairs after the initial inspection.

Wood pole test and treat work consists of taking pole bore samples and injecting the pole with chemical preservative. Insulator and/or cross arm replacement work requires the use of a truck, or helicopter to bring in and handle the required components for the work. Anchor/guy or incidental pole replacement also requires use of a truck or helicopter. The crews reach the area by a truck using Authorized Roads or walking into work sites not accessible by vehicles. On an annual basis only a small fraction of the total power and distribution lines would be subject to pole/towers or conductor work.

2.1.4 Authorized Road Access and Maintenance

The Company's Authorized roads consist of roads used for powerline maintenance. They are typically dirt surfaced, 14 feet wide and passable only by a truck or high ground clearance vehicles. Road maintenance includes vegetation removal on the road surface, stormwater Best Management Practices (BMPs) (e.g., water-bars) installation or maintenance (e.g., or culvert cleaning or repair), and road grading (i.e., to the original line and grade). Company road maintenance activities for Authorized roads are typically done to maintain minimum accessibility requirements, address problems that may prohibit access, prevent erosion and protect National Forest System resources. Watershed protection and erosion prevention are emphasized during road maintenance activities.

2.2. AVOIDANCE OF POTENTIAL EFFECTS TO HISTORIC PROPERTIES DURING OPERATIONS AND MAINTENANCE ACTIVITIES WITHIN THE MSUP APE

As appropriate, SDG&E will provide for archaeological (cultural) monitoring within the MSUP APE of SDG&E ground disturbing activities by a qualified archaeologist and Native American monitor within areas of known or possible archaeological sensitivity. Monitoring may not be recommended in areas where existing conditions preclude the potential to yield buried or obscured archaeological deposits, including currently improved areas, previously disturbed areas, land areas created by filling, utility trenches, areas subject to adequate previous archaeological survey with no discoveries, etc. Alternatively, areas of specific tribal concern where no archaeological component has been identified may require monitoring. SDG&E will document, record, and report on monitoring activities included in the Undertaking in reports submitted to CNF.

SDG&E will use the site forms and updates prepared by Hector et al. (2009) and Schaefer and Williams (2013) (including sites, buildings and structures) in the APE. This information will be used for future condition assessments to determine whether cultural resources are being adversely affected by otherwise lawful activities associated with the Undertaking.

SDG&E will avoid and minimize adverse effects to historic buildings, structures, and other historic era resources by ensuring that operation and maintenance personnel receive suitable training in the application of The Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR Part 68).

If previously unknown or inadequately documented cultural resources are encountered during monitoring of activities included in the Undertaking, SDG&E shall follow procedures defined in Unanticipated Discoveries (see Section 2.2.2 below). SDG&E will immediately notify the Forest upon the discovery that a cultural resource has been impacted during an otherwise lawful activity associated with this Undertaking.

2.2.1 Standard Resource Protection Measures

To the extent reasonably feasible for the management of historic properties, SDG&E has incorporated into the HPMP appropriate "Standard Resource Protection Measures" found in Attachment B of the Second Amended Regional Programmatic Agreement among the U.S.D.A. Forest Service, Pacific Southwest Region, California Historic Preservation Officer, and Advisory Council on Historic Preservation regarding The Process for Compliance with Section 106 of the National Historic Preservation Act for Undertakings on the National Forests of the Pacific Southwest Region.

The following protection measures shall be implemented as appropriate for all subject undertakings managed by SDG&E within the Forest. When these protection measures are effectively applied, the Forest will have taken into account the effect of SDG&E's undertakings on historic properties.

2.2.1.1 Avoidance of Historic Properties

Whenever feasible, historic properties shall be excluded from areas where activities associated with an undertaking will occur. Areas where exclusion may not be feasible may include but is not limited to facilities that could not be moved because of engineering standards, safety requirements, potential fire hazard, and/or land owner preference. All proposed activities, facilities, improvements, and disturbances shall avoid historic properties. Avoidance means that no activities associated with an undertaking that may affect historic properties shall occur within an historic property's boundaries, including any defined buffer zones. Portions of undertakings may need to be modified, redesigned, or eliminated to properly avoid historic properties.

For historic properties eligible for the NRHP under 36 CFR 60.4(d), or those that may be important only for the information they contain, the physical demarcation of historic properties, and their exclusion from an undertaking's proposed activity areas is a minimum requirement. Physical demarcation and avoidance during the implementation of an undertaking is also required for other historic properties eligible for the NRHP under other criteria. But minimum protection requirements shall also include the use of buffer zones to extend the protection area around historic properties where setting is an important attribute, and the proposed activity may have an effect on the setting's quality. Linear sites may be crossed or bounded in areas where their features or characteristics clearly lack historic integrity, that is, where those portions (taking into account any buffer zones related to setting) do not contribute to site eligibility or values.

All historic properties within the APE shall be clearly delineated prior to implementing any associated activities that have the potential to affect historic properties. Historic property boundaries shall be delineated with coded flagging and/or other effective marking (APM CUL-09). Activities within historic property boundaries will conform to avoidance measures in Section 3.0 with the exception of using developed Forest transportation systems when the Heritage Program Manager (HPM) recommends that such use is consistent with the terms and purposes of the HPMP. Historic property location and boundary marking information shall be conveyed to appropriate Forest Service administrators or employees responsible for implementation so pertinent information can be incorporated into planning and implementation documents, and contracts (e.g., clauses or stipulations in permits). Buffer zones may be established to ensure added protection where the HPM or other professional archaeologist determines that they are necessary. The use of buffer zones in conjunction with other avoidance measures is particularly applicable where setting contributes to the property's eligibility under 36 CFR 60.4, or where it may be an important attribute of some types of historic properties (e.g., historic buildings or structures; historic or cultural properties important to Native Americans). The size of buffer zones needs to be recommended by the Principal Investigator and determined through consultation with the Forest HPM and SDG&E on a case by case basis. Landscape architects may be consulted to determine appropriate viewsheds for historic resources. Knowledgeable Native Americans shall be consulted when the use or size of protective buffers for Native American traditional or cultural properties needs to be determined. During construction, the Principal Investigator will be responsible for implementing any avoidance measures determined through this process.

When any changes in proposed activities are necessary to avoid historic properties (e.g., project modifications, redesign, or elimination; removing old or confusing project markings or engineering stakes within site boundaries; or revising maps or changing specifications), these changes shall be completed prior to initiating any activities.

Monitoring may be used to enhance the effectiveness of protection measures in conjunction with other measures. The results of any monitoring inspections shall be included in the annual report (PA, MSUP, Stipulation 5.0, Annual Reporting).

2.2.1.2 Projects within the Boundaries of Historic Properties

The Forest HRM may provide written approval for the work specified below within the boundaries of historic properties, under carefully controlled conditions. A qualified, locally affiliated Native American monitor will be present within resource boundaries that have specific Tribal concerns. The following specified activity(ies) may be approved under the conditions detailed below:

1) Felling and removal of hazard, wind throw, and salvage trees within historic properties under the following conditions:
    a. Felled trees may be removed using only the following techniques:
        i. Hand bucking and carrying,

ii. Rubber tired loader,
iii. Crane/self-loader,
iv. Helicopter;

b. Equipment operators shall be briefed on the need to reduce ground disturbances (e.g., minimizing turns);
c. No skidding nor tracked equipment shall be allowed within historic property boundaries; and
d. All such activities must be monitored by qualified heritage specialists at the time of tree removal.

2) Placement of foreign, nonarchaeological material (e.g., padding or filter cloth) over an archaeological deposit to prevent surface and subsurface impacts. Such foreign material may be utilized on an archaeological deposit under the following conditions:

a. Engineering will design the foreign material depth to acceptable professional standards;
b. Engineering will design the foreign material use to assure that there will be no surface or subsurface impacts to the archaeological deposit;
c. The foreign material must be easily distinguished from and cannot mix with the underlying archaeological deposit;
d. The foreign material must be removable should research or other heritage need require access to the archaeological deposit at a later date; and
e. Native American or other public concerns about the use of the foreign material will be addressed prior to use.

2.2.1.3 Avoidance Measures for Operations and Maintenance with the SDG&E APE

Archaeological sites were identified within or adjacent to areas included in the MSUP. None of these are historic-era resources, and none are Traditional Cultural Properties. In most cases, the powerlines span the site, and no direct impacts to the site have occurred nor are likely to occur. In other cases, there is a pole directly in a site, or an access road to a pole that goes through a site. Implementation of the treatment recommendations presented below will stabilize the integrity of the resources. The objective of the treatment measures is to avoid any adverse effects to NRHP-eligible sites during operation and maintenance of the utility lines. The treatment measures presented herein reduce the potential for significant adverse effects to such resources. Although some of the sites identified during implementation of the MSUP project may be eligible for the NRHP, most have not been formally evaluated for eligibility. The Forest and SDG&E treat all sites as eligible unless determined otherwise. Hector et al. (2009) and Schaefer and Williams (2013) provided detailed information on the poles and facilities that affect these sites; this information has been omitted from this report to preserve confidentiality.

2.2.1.4 Pole Maintenance (PM)

These poles are maintained by weed abatement, or could be maintained in the future. The use of power equipment to control vegetation could result in erosion through the removal of the soil surface.

Treatment measure PM was developed to give SDG&E maintenance personnel a menu of acceptable options should weed or vegetation control be needed under any pole that is located within an archaeological site. Some of the poles located within sites are being actively managed, and others could be in the future depending on what kind of equipment is added to or removed from the poles. If equipment requiring vegetation control can be removed from the pole, and active maintenance of the ground around the pole is no longer necessary, the treatment measure is not needed.

2.2.1.5 Treatment Measure PM

Prior to application of any option, the area should be photodocumented by an archaeologist to establish a baseline for the condition of the site. Application of any material or implementation of any option listed below should be monitored by an archaeologist. The Principal Investigator shall recommend which option is appropriate to avoid adverse effects, informed by concerns of any consulting parties, and forward that recommendation to the Forest HPM for final approval. The Principal Investigator shall ensure the approved measures are properly implemented.

> **Option 1.** Apply 3-6" of decomposed granite to the managed area around the pole. Maintain vegetation control on top of this material. As the material erodes or decays until less than 3" to 6" remains, replace as needed.
>
> **Option 2.** Apply 3-6" of angular gravel to the managed area around the pole (this material may be desirable if the managed area is a slope). Maintain vegetation control on top of this material. As the material erodes or decays until less than 3" to 6" remains, replace as needed.
>
> **Option 3.** Install plastic erosion control material to the managed area (waffle or grid pattern), to hold the angular gravel or decomposed granite. Maintain vegetation control on top of this material. As the material erodes or decays, replace as needed.
>
> **Option 4.** With the approval of Cleveland National Forest staff, herbicide use may be approved under specific conditions. Apply pre-emergent, non-migrating herbicide to the managed area around the pole. This option may be preferred in specific circumstances when the above options are not viable. For example, this method may be acceptable if the managed area cannot be covered with other materials because bedrock milling features are present and could be damaged through the application of gravel or decomposed granite. Herbicide application must be pre-approved through the USFS, which has procedures for approval and use.

SDG&E has applied gravel at the base of poles at sites SDI-8492, SDI-8534, SDI-9392, and SDI-17878. An archaeologist monitored the placement of the gravel during April and May, 2007. Monitoring reports were prepared and submitted to the Forest.

2.2.1.6 Road Maintenance (RM)

Utility access roads run through known archaeological sites within the Forest. Maintenance of these roads by blading or grading will adversely affect the sites through the removal of cultural materials and the gradual destruction of the site. Treatment measure RM should be implemented to avoid adverse effects.

2.2.1.7 Treatment Measure RM

An archaeologist and Native American monitor should monitor initial road maintenance to develop a detailed impact avoidance plan for each road segment that goes through an archaeological site. Minimal maintenance is recommended on road segments that go across archaeological sites. Lift the blade within the site area unless active repair is needed. Hand tools can be used to level the roads and to fill gullies and washouts. All fill soils should be imported from outside the site areas. Placement of chips on the more erosive areas will assist in the maintenance of the road surface. If necessary, gravel may be used to cover an affected area. The installation and maintenance of gravel cover should be monitoring by a qualified archaeological and Native American monitor.

2.2.1.8 Corridor Maintenance (CM)

There is minimal potential for future adverse effects to sites within corridors (between poles), unless equipment is used to maintain the corridor.

2.2.1.9 Treatment Measure CM

Do not use equipment within the corridor segments where known archaeological sites are located. If pole replacement, vegetation removal, or other maintenance activities are needed that will result in the introduction of equipment into the site area, an archaeologist should develop an impact avoidance plan. This may include a requirement that equipment be hand carried into and out of the site areas.

2.2.1.10 Road Realignment

Roads may be realigned by other entities (i.e. private property owners, County of San Diego, United States Forest Service, and go through sites. SDG&E will use the existing access roads which avoid the site and will not construct new access roads unless formally approved. Construction of new access roads will trigger full environmental review.

2.2.1.11 Pole and Facility Replacement

Occasional replacement of utility poles has the potential to adversely affect cultural resources. Any proposed pole replacement should be reviewed and monitored by an archaeologist where sensitive resources are present. If the pole has the potential to impact a site, test excavation or archaeological excavation of the proposed pole location may be necessary. If the pole is replaced, the old pole stub should be left in place to avoid further impacts to the site. Pole and facility replacement will trigger environmental review.

2.2.2 Resolution of Inadvertent Effects and Unanticipated Discoveries

In the event that unrecorded or unanticipated cultural resources that may be eligible for inclusion in the NRHP are located during any SDG&E maintenance activity within the MSUP APE and subject to this HPMP, SDG&E qualified personnel will, as soon as reasonably feasible,

1) Stop all SDG&E activities within the APE having the potential to adversely affect the cultural resource, determine the geographic bounds of the cultural resource, and take all reasonable measures to avoid or minimize harm to the cultural resource. In an emergency situation, SDG&E activities will be stopped as soon as possible;
2) Consult with the Forest and SHPO regarding the NRHP eligibility of the cultural resource. The Forest will be responsible for consulting with affiliated tribes and individuals, as necessary.
3) If the cultural resource is determined to be a historic property, consult with the Forest and the SHPO to identify and resolve any adverse effect of the Undertaking consistent with 36 CFR §800.5 & 800.6.
4) Notify the Forest and the SHPO of any time constraints; SDG&E, the Forest, and the SHPO will mutually agree upon time frames for consultation. Where applicable, the time table provided in CFR §800.13(b) may be utilized.
5) Comply with all other appropriate Federal laws and regulations (e.g., Native American Graves Protection and Repatriation Act, Archaeological Resources Protection Act, CFR §800.13, etc.) that apply in discovery situations.

As discussed in Section 1.1, cultural resources work during the Project will be conducted in compliance of this HPMP and any work done on SDG&E facilities on USFS Property outside of the above listed lines will continue to be done under the Forest's Regional Programmatic

Agreement or 36 CFR 800, as appropriate. The Project PA is only applicable to construction of the Fire Hardening Project. Once that action is complete the Project PA will no longer apply and Operations and Maintenance review and treatment will reference the Regional PA with an option to adopt the procedures developed in this HPMP.

2.2.3 Emergency Situations

Emergencies are not exempt from the National Historic Preservation Act (NHPA). SDG&E would provide notification to CNF for any activity involving ground disturbance necessary for protection of life and property (pursuant to the Code of Federal Regulations [36 CFR 251.50(b)]. When the emergency is stabilized and staff may safely enter the area, the company will conduct environmental review in accordance with the MSUP. SDG&E will provide the results of the environmental review to the Forest and coordinate any remedial action if necessary.

3.0 POWERLINE REPLACEMENT PROJECT ACTIVITIES

3.1 HISTORIC PROPERTIES TREATMENT PLAN/HISTORIC PROPERTIES MANAGEMENT PLAN FOR ADVERSE EFFECTS WITHIN THE PROJECT APE

The Powerline Replacement Project maintenance and reconstruction, including structure replacements and reconductoring projects, as well as major vegetation management projects, major road maintenance or reconstruction and other ground disturbing activities are beyond the scope of routine maintenance activities. Table 3 summarizes the categories of major project maintenance and reconstruction.

Table 3. Major Project Maintenance or Reconstruction

Activity	Description	Equipment Used	Frequency
Metal or wood pole and tower installation replacement	Typically at same site as previous pole/tower	4WD truck, excavator, D8 CAT, boom truck, line truck, helicopter	20-year cycle (or more) or as necessary
Conductor replacement	Involves conductor pulling equipment located at distances of up to 1 mile apart	4WD truck, boom truck, line truck, D8 cat, helicopter	As needed
Road reconstruction or new construction	New roads, or realignment of existing roads, or other significant ground disturbance	4WD truck, D8 CAT, grader, excavator	As needed
Underground Conduit	Trenching and excavation for conduit, vaults and bore pits	Trencher, excavator	One time for ground disturbance
Temporary Work Space (Stringing Sites and Staging Yards)	Vegetation removal or crushing, possible minor grading to level	4WD truck, wire truck, skiploader, D8 Cat	Construction Phase for Staging Yards, life of conductor
Vegetation management	Major tree removals, TSS's, authorized area mowing	4WD truck, D8 CAT, logging equipment, hydro-ax, mulching equipment, etc.	As needed

3.1.1 Description of Project

The existing powerlines and distribution facilities proposed as part of the powerline replacement projects are located within the central portion of San Diego County approximately 4.5 miles north of the U.S.–Mexico Border, 14 miles east of the City of El Cajon, in the vicinity of the unincorporated communities of Pauma Valley, Warner Springs, Santa Ysabel, Descanso, Pine Valley, and Campo. The proposed powerline replacement projects not only traverse the Palomar and Descanso Ranger Districts of the CNF, but due to the patchwork of land ownership in the project study area, also traverse public lands managed by the Bureau of Land Management (BLM); tribal lands on the La Jolla and Campo Indian reservations; Cuyamaca Rancho State Park lands; and private holdings within unincorporated San Diego County.

3.1.2 Final Record of Decision

As described in the Final EIR/EIS Section E.6, the federal preferred alternative is a composite of three alternatives. The Federal Proposed Action is the basis of the preferred alternative; however, the TL626 relocation option has been replaced by the TL626 Removal from Service Alternative Option 1 (the upgrade to TL6931), combined with the off-grid solution for the Boulder Creek substation. The Federal Preferred Alternative also analyzed the conversion of TL626 to 12 kV to continue service to the Boulder Creek

substation if the off-grid solution was not feasible. The Federal Preferred Alternative would also convert a 6.8-mile section of TL626 that is co-located with C79 to a 12kV fire hardened line to serve local residences along Boulder Creek Road. The Federal Preferred Alternative adopts Option 2 for the C157 relocation out of the Hauser Wilderness. The Federal Preferred Alternative also incorporates the portions of the Partial Removal of Overland Access Roads applicable to TL626/C79, TL625, C442, and TL629. This alternative is described in the Final Record of Decision (March 11, 2016) for the Project. Appendix A will be updated to capture final engineering designs and agency decisions that may change this proposed alternative.

3.1.3 Avoidance Measures

Archaeological sites were identified during preliminary studies near proposed distribution lines, powerlines, underground conduits and related facilities. Avoidance measures were developed through field visits by ASM and SDG&E staff. The objective of these measures was to eliminate any adverse effects to sites during the removal of existing wood poles, the setting of new steel or wood poles and the excavation for an underground conduit. In some cases, an existing or proposed pole, work area or underground conduit is directly within or bisects a site boundary and additional measures should be employed to ensure avoidance of adverse effects. Implementation of the avoidance measures presented below provides constraints to work from during the engineering and design phase, as well as, will protect the integrity of the resources during construction of the Powerline Replacement Project. The avoidance measures presented herein reduce the potential for significant adverse effects to such resources to a less than significant level. Site specific measures for evaluations of resources that cannot be avoided are memorialized in Table 4, CRHR/NRHP Evaluations for Historic Properties. Facility and work area specific recommendations were provided in the tables referenced in MM CUL-3 of the Project MMCRP and were updated in the revised Class III study (Schaefer and Williams 2013). The recommendations and tables will need to be updated and supplemented during the Pole Replacement Project as alternatives are chosen and final engineering designs are provided.

3.1.3.1 Access Roads Across Sites

At any access road location identified as needing a monitor during maintenance an archaeologist will conduct a field check to ensure no resource changes are present (i.e. artifacts or features exposed in the roadbed) and make recommendations for detailed impact avoidance in the field for each road segment that goes through an archaeological site. Minimal maintenance during construction is recommended for these road segments to prevent further damage to the site. Where physical manifestations of the site are present within the access road, access should occur with rubber tired vehicles only. No tracked vehicles are allowed unless matting or other protective material is placed on the ground first. If the road is proposed for grading, lift the blade within the site area wherever safely feasible. Hand tools can be used to level the road bed and fill gullies and washouts with material not obtained within the site boundaries (documented clean fill). Water bars will be made from non-archaeological soils brought in from outside the site areas. Do not create water bars by excavating portions of the road and moving soil around within the site. The site area on either side of the roadbed will be flagged (APM CUL-09) or marked with temporary fencing by the archaeology monitor as an Environmentally Sensitive Area (ESA), described below. No access beyond the fencing or flagging is allowed. Do not store or stage equipment on sensitive bedrock. If a road is proposed for abandonment, do not rip the old road bed. Seeding on top of the existing road is acceptable, but digging to plant shrubs or trees is not allowed.

3.1.3.2 Work Pads on an Archaeological Site

Creation of a work pad by grading, cutting, and filling is a permanent impact to an archaeological site and will require mitigation through data recovery for impacts to any eligible resources (refer to MM CUL-1d), as well as potential offsite and noninvasive efforts to mitigate impacts if a tribal resource is present. The types of appropriate mitigation efforts required will be determined on a site-by-site basis and will be documented in the HPTP developed for that specific resource. Avoid the creation of a work pad by reducing

and reconfiguring the graded area needed to install the pole, or by installing a micropile pole. Other alternatives may include use of a helicopter to deliver the pole and installation equipment. Identification of the proposed work pad and grading plans will be reviewed by SDG&E cultural resources staff as part of the project.

3.1.3.3 Buried Site Deposit

Evidence for buried cultural deposits was opportunistically sought through inspection of natural or artificial erosional exposures and the spoils from rodent burrows. In the daily survey notes, the field director assessed the potential for buried sites on the basis of subregional geomorphology. For instance, the potential would be rated as high in large alluvial valleys and as low in areas with shallow bedrock. If pole replacements consist of a foundation pole or undergrounding in high potential areas (as defined in Schaefer and Williams 2013), a cultural monitor is recommended due to high sensitivity for buried cultural deposits.

3.1.3.4 Environmentally Sensitive Area (ESA)

Sites that can be protected from direct impacts, but are within close proximity of proposed construction activities will be identified and labled as ESAs. The ESAs will be designated by marking the boundaries of sites with appropriate buffer zones (generally a buffer of 5 meters beyond the outer limits of the site extent, as demonstrated by surface and/or subsurface indications) using temporary fencing or other easily recognizable boundary defining materials. Native American monitors will be present for establishment of any ESAs at tribal cultural site. These areas will be noted on plans, maps and/or drawings for the project as off-limits to construction activities. Once established, an ESA will define areas where construction cannot occur to prevent damage to archaeological resources within the marked ESA. ESAs will be established by a qualified archaeologist prior to initiation of ground disturbing activities in the vicinity of the resource and will be maintained for the duration of the work effort in the ESA vicinity, with archaeological and/or Native American monitoring of ground disturbing activities required near all ESA locations.

3.1.3.5 Vegetation Management – Trimming

All vegetation management activities within or near site boundaries between pole spans will be monitored by a qualified archaeologist and/or a Native American representative. The monitor will ensure that no branches are dropped or dragged across archaeological or cultural sites. Do not drop cut vegetation onto bedrock. In some cases, it may be necessary to hand carry out all trimmed materials. No vehicles will be allowed within the site boundaries; access will be on foot only. Existing ground duff and cover vegetation will not be disturbed within site areas wherever safely feasible. Do not remove or move any rocks or other non-fuel material from the ground surface.

3.1.3.6 Pole Brushing around the Pole in a Site

When feasible, the preferred avoidance measure is to place geotextile on the existing ground surface around the pole. Do not rake or clear the area before placing the geotextile. Photograph the ground surface before placing the geotextile to document its condition. Angular gravel will be placed with a shovel on top of the geotextile to a depth of 6 inches. Future vegetation management will be done on top of the gravel cover; if the gravel erodes or decays to less than 6 inches thick, more gravel will be added. If the pole is on a slope, install plastic erosion control material to the managed area (waffle or grid pattern) when feasible to hold the angular gravel. Maintain vegetation control on top of this material. As the material decays or erodes, replace as needed, keep a minimum protective layer on the site surface. If placement of gravel around the pole is not feasible or acceptable to the property owner, vegetation around the pole can be cleared using the following methods:

- Hand pull vegetation out of the clearance area; or
- Mechanically or manually cut vegetation to just above the ground surface, without disturbing the surface.

- Apply pre-emergent, non-migrating herbicide to the managed area around the pole.

3.1.3.7 Distribution Pole in Site

Replace the pole within the hole left after removal of the existing pole wherever safely feasible. If the existing pole cannot be removed without digging around the base, cut it off in place and leave it; do not attempt to remove the pole since this will cause disturbance to the site. The replacement pole can be placed adjacent to the existing pole if a same hole set is not feasible. The replacement pole should be placed within the previously disturbed areas (i.e. existing work pads) of the existing pole (APM CUL-05). If grounding wire trenches are required archaeological monitors will work with construction crews to align the trench away from any observable site components. Monitoring is required.

3.1.3.8 Power Pole in/near Site

Relocate the pole(s) out of the site if feasible. Span the site and restrict activity in the spanned area.
Direct embed steel pole. Replace the pole adjacent to or within 2-4' [direction] of the existing pole (APM CUL-05). Use a micropile pole to minimize disturbance if feasible. Excavate grounding wire trenches toward the existing pole to minimize disturbance. Monitoring is required for all ground disturbing work on or near the pole (APM CUL-04).
Foundation pole proposed in a site. Use a micropile pole to minimize disturbance if feasible. Place the pole within 2-4' [direction] of the existing pole. Excavate grounding wire trenches toward the existing pole. Monitoring is required for all ground disturbing work on or near the pole.

3.1.3.9 Poles Span a Site

No staging, stringing, or other construction activity is allowed within site boundaries between poles that span a site. Where necessary, footpaths to access the pole(s) will be flagged by the archaeology monitor (APM CUL-09). No tracked vehicle use is allowed within site boundaries. Rubber tired vehicle access will be on existing roads only. No expansion beyond the current edges of the road will be allowed.

3.1.3.10 Anchors or Guys in Sites

Do not remove existing anchors or guys below the surface of the ground. Cut or remove the portion of the anchor above the ground surface but do not disturb the ground.

3.1.3.11 Modification to Historical Structures

Per MM CUL-2 identified in the MMCRP of the FEIR/FEIS, in order to reduce adverse effects and significant impacts to historic resources along C79, C440, and C442 as identified in Table D.5-12 of the FEIR/FEIS, the original exterior materials on the cabins shall not be removed, modified, or covered. If equipment attached to the cabins must be replaced, the equipment shall retain its original appearance in terms of materials and size. If this cannot be met, then a cultural monitor is required to be present during the replacement of the lines to minimize modifications to the cabin exteriors.

3.1.4 CRHR/NRHP Evaluations for Historic Properties

Working from the recommendations provided above, engineers attempted to re-design and eliminate poles and proposed facilities from within recorded cultural resources and will continue to attempt avoidance wherever feasible as final designs are completed. Where redesign/avoidance and recommendations provided above are not feasible in final design, CRHR/NRHP evaluations are proposed. Evaluations will be conducted in accordance with the process outlined in Section 1.6 of this document. Based on preliminary design, approximately 39 resources are considered for this effort and may be adjusted as final designs are provided. Table 4 summarizes the resources, current eligibility status and property ownership.

Table 4. CRHR/NRHP Evaluations for Historic Properties

PNumber	Trinomial	Forest Service No,	TL Segment / Circuit	Description	Status	Land Ownership
37-000080	SDI-80	05025400055	TL629C	Multiple Component	Determined Eligible	Private, Cleveland National Forest
37-000521	SDI-521	None	TL682	Prehistoric Bedrock Milling	Not Evaluated	Private
37-004276	SDI-4276	05025400963	TL625C	Prehistoric Site	Not Evaluated	Private
37-004787	SDI-4787	05025400017	TL629C	Prehistoric Bedrock Milling	Not Evaluated	Private
37-005556	SDI-5556	05025400400	TL626A	Prehistoric Bedrock Milling	Not Evaluated	Private
37-008239	SDI-8239	05025400074	TL629C	Multiple Component Site	Not Evaluated	Private
37-008492	SDI-8492	05025400194	C440	Prehistoric Habitation	Recommended Eligible	Cleveland National Forest
37-008534	SDI-8534	05025400262	C440	Prehistoric Habitation	Listed on NRHP	Private, Cleveland National Forest
37-008855	SDI-8855	05025400825	TL629A	Multiple Component Site	Not Evaluated	Cuyamaca Rancho State Park
37-009075	SDI-9075	None	C79	Prehistoric Bedrock Milling	Not Evaluated	Cuyamaca Rancho State Park
37-009080	SDI-9080	None	C79	Prehistoric Bedrock Milling	Not Evaluated	Cuyamaca Rancho State Park
37-009713	SDI-9713	05025400504	C442	Prehistoric Bedrock Milling	Not Evaluated	Cleveland National Forest
37-010108	SDI-10108	05025400930	C440	Prehistoric Bedrock Milling	Not Evaluated	Cleveland National Forest, Private
37-010615	SDI-10615	05025400788	C157	Prehistoric Bedrock Milling	Not Evaluated	Cleveland National Forest, City of San Diego
37-012106	SDI-12106/12107	05025400958, 05025400959	TL625B	Multiple Component	Not Evaluated	Cleveland National Forest, Private
37-012108	SDI-12108	05025400977	TL625B	Prehistoric Artifact Scatter	Not Evaluated	Cleveland National Forest, Sweetwater Authority
37-012110	SDI-12110	05025400979	TL625B	Prehistoric Rock Alignment & Artifact Scatter	Not Evaluated	Cleveland National Forest, Sweetwater Authority
37-024261	SDI-16503	None	TL629A	Prehistoric Artifact Scatter	Not Evaluated	Private
37-024459	SDI-16227/16229	05025401406	C449	Multiple Component	Not Evaluated	Cleveland National Forest

PNumber	Trinomial	Forest Service No,	TL Segment / Circuit	Description	Status	Land Ownership
37-025430	SDI-16878	None	TL626B	Prehistoric Artifact Scatter	Not Evaluated	Private
37-025633	SDI-17041	None	C79	Prehistoric Bedrock Milling	Not Evaluated	Cuyamaca Rancho State Park
37-027355	SDI-17877	05025300646	TL626A	Prehistoric Bedrock Milling	Not Evaluated	Cleveland National Forest
37-027365	SDI-17887	05025300654	TL626A	Prehistoric Bedrock Milling	Not Evaluated	Cleveland National Forest, Private
37-030074	SDI-19169	05025300656	TL626A	Prehistoric Bedrock Milling	Not Evaluated	Cleveland National Forest
37-030283	SDI-19279	05025401665	TL6923	Prehistoric Bedrock Milling	Not Evaluated	Private
37-030452	SDI-19350	None	TL629A	Prehistoric Bedrock Milling	Not Evaluated	Private
37-030459	SDI-19355	None	TL625C	Prehistoric Site	Not Evaluated	Private
37-030460	SDI-19356	None	TL625C	Prehistoric Site	Not Evaluated	Private
37-030464	SDI-19359	None	TL626B	Prehistoric Bedrock Milling	Not Evaluated	Private
37-030467	SDI-19362	05025401668	TL625C	Prehistoric Site	Not Evaluated	Cleveland National Forest, Private
37-030484	SDI-19372	None	TL620A	Prehistoric Bedrock Milling	Not Evaluated	Private
37-031159	SDI-19738	05025300706	TL682	Prehistoric Bedrock Milling	Not Evaluated	Cleveland National Forest, Private
37-031160	SDI-19739	None	TL682	Prehistoric Bedrock Milling	Not Evaluated	Private
37-031163	SDI-19742	None	TL682	Prehistoric Bedrock Milling	Not Evaluated	Vista Irrigation District
37-031168	SDI-19747	None	TL682	Prehistoric Bedrock Milling; Prehistoric Pictographs	Not Evaluated	Private
37-031707	SDI-20140	05025401678	C442	Prehistoric Bedrock Milling	Not Evaluated	Cleveland National Forest
37-032777	SDI-20722	None	C79	Prehistoric Bedrock Milling	Not Evaluated	Cuyamaca Rancho State Park
37-032785	SDI-20725	None	C79	Prehistoric Bedrock Milling	Not Evaluated	Cuyamaca Rancho State Park
37-033441	SDI-21032	None	C79	Prehistoric Bedrock Milling	Not Evaluated	Cuyamaca Rancho State Park

SDI-80/FS-05025400055: The site was initially recorded in the 1940s by Treganza as a village site, with rock shelters, rock walls, bedrock mortars, and potsherds. An updated site record was prepared in 1973 by Adams, who noted numerous bedrock mortars and slicks (Features A to Z), two rock rings, a rock shelter, mano fragments, projectile points, hammer stones, potsherds, lithic debitage, shell and evidence of historic

activity. In 1991, Joyner and Beck incorporated the results of surface observations and excavations by May (1973-1975), Minor (1976), Laylander (1981) and Molnar (1984) into the site record. The site record notes the presence of hundreds of milling features, a cremation, manos and metates, projectile points, choppers, hammer stones, scrapers and scraper planes, drills, spoke shaves, reworked flakes, cores, thousands of potsherds, bone and shell ornaments, and bone and marine shell refuse. The resource was determined eligible for inclusion on the NRHP under Criterion D in 1991. In 1993, Ver Planck documented historical structures related to the Boulder Oaks Resort.

ASM visited the portions of the site that bisect TL 629 (immediately north of Old Highway 80) and C449 (the southwest portion of the 1993 site boundary). In the area surrounding TL 629, previous bedrock features C, D, and E (27 milling surfaces: 18 slicks, nine mortars) were identified as well as seven milling stations (34 milling surfaces: 29 slicks, five mortars) that could not be traced back to a previous study. Seven brown ware potsherds and a metavolcanic flake (felsite) were also noted in the site area. The Pacific Crest Trail has been delineated (north-south) through this region and it is probable many artifacts have been carried away by hikers. In the section of the site that C449 crosses, a milling station (three slicks), a brown ware potsherd, six metavolcanic flakes (predominately felsite), a bifacial mano fragment (granitic) and a historical component containing 13 cans (coffee and food with church-key openings) and a small, undistinguished cement and red brick foundation were observed. An unnatural dirt mound lies immediately to the west of the small foundation and the bedrock milling lines up with previously recorded Feature I.

SDI-521: This prehistoric bedrock milling site was originally recorded in 1959 by True as bedrock mortars and metates, as well as being the location of "Maria's Home". The site was not identified during pedestrian surveys at this location, however, the potential for a buried cultural deposits and affiliation with an historical personage is high.

SDI-4276/FS- 05025400963: This prehistoric site is located within the access road and 90 ft. radius for two poles. The site was previously documented in 1976 by Russ Kaldenberg, who noted that it was a portion of the village of Japatul. Kaldenberg reported the presence of bedrock milling areas, at least 1 foot of midden deposit, manos, metate fragments, scrapers, debitage, and Tizon brown ware, as well as historic ceramics and glass. In 2009, flakes and pottery were noted by ASM within the 90-foot radius for both poles.

SDI-4787/FS-05025400017: Three poles lie within this prehistoric site. The site was recorded initially at the San Diego Museum of Man, presumably by Malcolm J. Rogers in the 1930s. Gary Fink and Paul Ezell prepared a site record in 1970, noting the presence of bedrock mortars, rock walls, a rock shelter, a mano, a projectile point, a hammer stone, cores, potsherds, bone, and shell. Cari Ver Planck reviewed evidence concerning the site in 1996, noting two published articles on collections from the site (Hagstrum and Hildebrand 1990; Hildebrand and Hagstrum 1995). During ASM's 2009 survey, a hand stone fragment, pieces of debitage, a brown ware potsherd, and one buff ware potsherd were found at one pole; a brown ware rim sherd and volcanic debitage were also found at another pole; and three brown ware sherds were located near the third pole.

SDI-5556/FS-05025400400: One pole and its access road are located within this site. The site was recorded in 1977 by Scott Fulmer, who reported the presence of nine bedrock mortars, three basins, 21 slicks, and six cupules, as well as about 400 flaked lithic tools and pieces of debitage, manos, and more than 300 potsherds. A record prepared in 1978 by Gary Fink noted 10 mortars, 15 basins, five slicks, 10 pieces of debitage, and five potsherds, as well as midden soil. In 2009, the site was identified by ASM. Evidence of damage by construction activities was noted; some of the milling features were in vertical or inverted positions, and an apparent broken portion of one feature was present.

SDI-8239/FS-05025400074: Nine poles all fall within in the boundary of this prehistoric site. The site was recorded at the San Diego Museum of Man, presumably by Malcolm J. Rogers in the 1930s. The presence

of bedrock mortars, flaked lithic debitage, and potsherds was reported. Ken Hedges updated the record in 1980, noting the presence of cupules and historic buildings. Cari Ver Planck summarized information on the site in 1996, mentioning Forest Service records prepared by John Fleming in 1978. During survey for the CNF MSUP, a tin can scatter was found near one pole, and two brown ware sherds and a volcanic flake were observed at another pole. No cultural resources were found at the remaining poles which are located within the previous site boundary.

SDI-8492/15156/FS-05025400194: SDI-8492 was originally recorded in 1980 by Fenenga and Harley as consisting of two loci. Locus A has two rock-lined house pits and thirteen bedrock milling features (116 slicks, 15 basins, and ten mortars). The number of milling features in Locus B was not listed but milling surfaces included 67 slicks, 42 basins, and ten mortars. Artifacts in each area include brown and buff ware potsherds, pieces of debitage, fire-affected rock, metate fragments, hammer stones, manos, and pestles. In 1998, KEA Environmental, Inc. returned to the site and observed 28 milling features with 134 milling surfaces (58 slicks, 65 basins, 10 mortars and a cupule). Surficial artifacts consisted of brown and buff ware potsherds, a metavolcanic projectile point fragment (collected), pieces of debitage (quartz, quartzite, metavolcanic, basalt, chert, and obsidian), ground stone fragments and fire-affected rocks. Nineteen shovel tests and four 1 x 0.5 m units were also excavated at this time and the site was determined to be eligible for National Register listing. In 1998, KEA Environmental recorded SDI-15156 which corresponds with Locus A of SDI-8492. They noted two rock-lined pits, 16 bedrock milling features with 149 milling surfaces (10 mortars, 15 basins, and 124 slicks), brown and buff ware potsherds, two milling slab fragments, hammer stones, hand stones, pestles and fire-affected rocks. ASM visited the site and identified rock rings, an extensive midden deposit, and the associated milling complex.

SDI-8534/FS-05025400262: Fenenga originally recorded this site in 1980 as the ethnographic Lilac Village referred to by Spier (1923). The site consists of ten milling features with 120 milling surfaces (11 mortars, 12 basins, 50 slicks, and 47 cupules) and thousands of artifacts: brown and buff ware potsherds, ground stone, pieces of debitage, cores, hammer stones, and scrapers. Signs of pothunting were observed and cremations were reportedly removed from the site. ASM visited the site and noted bedrock milling features, cupule clusters and a well-developed midden deposit. Locally occurring Juncus grass, Chokecherry, Elderberry and other plants were important gathering materials and were included at this time within the sacred sites record. The site was determined eligible but is not listed on the National Register of Historic Places.

SDI-8855/FS-05025400825: This extensive prehistoric and historic site encompasses the areas around two poles. It was initially recorded in 1981 by Dan Foster, who reported the presence of at least 100 bedrock milling features (mortars, basins, slicks, and a cupule), manos, mano/hammer fragments, hammers, 50 pieces of debitage (volcanic, cryptocrystalline silica, granitic, obsidian), and at least 500 brown ware sherds. An update prepared by Michael Sampson in 1992 notes some recent disturbance. Another update in 1999 by Alexander D. Bevil documented the historic structures of the Merigan Ranch House at the site. Also in 1999, Rae Schwaderer reported the negative results of monitoring trenches for a leach field. Another site update was prepared in 2007 by M. Mealey, B. Bruce, and M. Sweet. They noted the presence at six loci of a total of 12 bedrock mortars, more than 85 basins and slicks, a mano, a mano/pestle, two drills, flaked lithic debitage (obsidian, quartz, and volcanic), potsherds, shell, and an historic dump with metal and glass. During survey for the CNF MSUP, a bedrock milling outcrop with a single basin was noted at one pole, and a bedrock outcrop with one mortar was noted across a driveway, and at the base of a tree, from another pole.

SDI-9075: This prehistoric bedrock milling site was originally recorded by Foster, Parkman, McAleer, and Hood in 1981 and Mealey in 2003. Recorded features consist of three grey granitic outcrops with a bedrock milling feature in the maintenance yard of the Paso Picacho Campground. One outcrop was identified as having three oval metates and two slicks while the other two outcrops were recorded as having one slick

each. During survey for the CNF MSUP, the recorded site area appeared heavily disturbed with evidence of extensive burning (likely due to the 2003 Cedar Fire) and logging was observed. A heavy layer of deposited ash obscured or buried several of the previously recorded features. A large, felled pine tree bisects a portion of the site. A number of milling features were re-located.

SDI-9080: This prehistoric bedrock milling site was originally recorded in 1981 by Parkman and Hood as a milling station with 12 oval metates, three round metates and three slicks with an associated lithic scatter (20 to 30 quartzite flakes) and three granitic hammer stones.

SDI-9713/P-37-014421/FS-05025400504: This prehistoric site is made up of both an historical and prehistoric component. The prehistoric site, SDI-9713, was originally recorded in 1983 by Phillips and Carrico as a single bedrock milling station with two mortars, more than 35 brown ware potsherds (one a rim with conically drilled hole), a unifacial mano fragment, a felsite chopping tool, a large unshaped metate and three flakes. The historical component, P-37-014421, is a cabin in Lot #23 of the Pine Creek Recreation Residence Tract; originally recorded and evaluated by Newland in 1995. Its unique construction, age and integrity led it to be recommended eligible for National Register listing. ASM identified the cabin and the milling station in the same location and condition as previously recorded. An additional milling station with five conical mortars and two milling slicks, 15 brown ware sherds, a looted milling slab with hand stone, a granitic hand stone fragment and a volcanic flake were also noted. Thirteen of the brown ware sherds were found together, eroding out of the cabin's dirt driveway.

SDI-10108/10115/10291/FS-05025400930: Polan and Whitten reported SDI-10108 in 1984 as more than 15 slicks, more than 10 mortars with an abundance of ceramics and lithics, three projectile point fragments, three metate fragments, one incised steatite shaft straightener, one drill and two scrapers (one obsidian, one jasper). The site was subdivided into two sections with the observation that there was a 60 m area in between both loci that lacked artifacts or features. SDI-10115 was originally recorded by Polan and Whitten in 1984 as ten slicks occurring on three boulders. SDI-10291 was originally recorded by Whitney-Desautels in 1985 as an historical homestead site. This site includes a barn, a hut, seven storage sheds, a workshop, a privy and two residences. Associated items include hand forged metal bars, glass, nails, and charcoal house debris. ASM identified each of these sites during the current survey and combined them due to their proximity to one another. At SDI-10108, ASM focused on Locus A as it is within the proposed project area. ASM found 17 slicks and four basins within the main outcrop area within vicinity of the existing powerlines. This area has been subject to disturbance and looting since its original recordation. The site itself was found to be within close proximity of modern and historical housing structures, and adjacent to the Sunrise Highway. A worn trail cuts through the center of the site and a collector's cache of lithic materials was found atop a granite boulder adjacent to one of the houses. At SDI-10115, ASM identified only one faint slick on a low-lying boulder. A dirt road lies adjacent to the site and the entire area appears disturbed by development, land clearance, and traffic. At SDI-10291, ASM noted that the previous record was fairly consistent with the present condition of the site, but the occurrence of more recent development within the area has moved or obscured the historical artifacts originally noted by Whitney-Desautels.

SDI-10615/FS-05025400788: This site was recorded by Noah as a prehistoric bedrock milling site with an associated lithic and ceramic scatter in 1986. It is located on the southern edge of the Barrett Honor Camp facility at the end of an unnamed road off of Lyons Valley Road. The site is separated from the main Barrett Honor Camp facilities by the northwestern pointing drainage of Barrett Lake. The site rests atop a ridge that directly borders this drainage. The original site report briefly describes the presence of some milling features on several boulders and an associated artifact scatter composed of Tizon Brown Ware and assorted lithic debitage. ASM noted the presence of two conical mortars, three oval mortars, and six slicks occurring on three boulders. The main feature is a triangular shaped boulder containing two conical mortars, two oval mortars, and three slicks. A second boulder adjacent to the main one contains one oval mortar and two slicks. A third boulder contains one slick and is located roughly 24 meters southeast of the other features.

All the boulders sit at the edge of a seasonal drainage. The previously described lithic and ceramic scatter was identified appeared to measure approximately 50 meters in diameter, with the main milling outcrop forming the northeast border. This concentration consists of approximately 38 potsherds, 41 pieces of debitage, 14 hand stones, one core, and a possible graver. The artifact scatter is bisected by a fence line and dirt road.

SDI-12106/12107/FS-05025400958/-05025400959: In 1991, Affinis recorded SDI-12106 as historic rock walls, a cistern, a paved road, and a concrete bridge foundation with refuse materials scattered over more than 200 m. SDI-12107 was recorded in the same general area but awarded a separate trinomial do its prehistoric make-up. At least two bedrock milling features, more than 100 fine-grained volcanic flakes and debitage, more than 20 quartz flakes, at least one mano and a scraper were observed. In 2010, ASM monitored the replacement of a power pole within the western portion of the site. During this time the prehistoric component was found to consist of 10 bedrock milling outcrops with 16 milling surfaces (12 milling slicks, three basins and one saucer mortar). Twenty-three volcanic flakes, more than 50 quartz flakes, and a granitic unifacial hand stone fragment were also recorded on the surface of the site. Previously undocumented milling features were observed approximately 60 meters to the east of structure near the historic component of the site. The subsurface excavations conducted by SDG&E, a 30-in diameter x 10-ft. hole and 6-ft. x 1-ft. x 18-in trench, revealed no archaeological deposit present within the existing work pad. During survey for the CNF MSUP, the site was revisited and exists as recorded during the previous monitoring effort.

SDI-12108/FS-05025400977: In 1991, Affinis recorded this prehistoric artifact scatter as more than 100 fine-grained metavolcanic flakes, 20 quartz flakes, a mano fragment, a scraper and a pottery sherd. In 2010, ASM monitored the replacement of overhead facilities on a power pole within the site. A portion of the previously recorded lithic scatter, fine-grained metavolcanic and felsite flaked material, was identified at this time. However, the locations of the mano fragment and pottery sherd were not revisited, as they were located on another property. ASM revisited the entirety of the site and eleven granite and quartzite hand stone fragments, five volcanic flakes, a reworked quartzite flake and a volcanic depleted core were observed. The potsherds and scraper in the northern portion of the site could not be identified.

SDI-12110/FS-05025400979: In 1991, Affinis recorded this prehistoric artifact scatter as more than 50 metavolcanic flakes and debitage, 30 quartz flakes, more than three mano fragments and a complete mano. ASM documented 12 volcanic flakes and debitage (one possibly fire-tempered), a chalcedony flake, a quartz crystal, two quartz flakes, a quartz core, a hammer stone, four granitic hand stone fragments and a possible rock ring feature. The rock ring consists of 11 rocks, an additional three apparently displaced nearby, in a 2-x-2 meter area. The potential fire-tempered volcanic flake and the quartz crystal were found in the center of the alignment and some of the rocks appeared fire-affected.

SDI-16503: This prehistoric site includes the areas around two poles. It was initially recorded as an isolate in 2001 by Carolyn Kyle, who noted the presence of two pieces of volcanic debitage. In 2003, Kyle updated the site record, recording a quartz projectile point tip, a chert biface fragment, a volcanic scraper, 128 pieces of lithic debitage, and three pieces of animal bone, as well as five historic glass fragments. During survey for the CNF MSUP, the surface of the site around the exiting poles was clear of cultural constituents.

SDI-16227/16229/FS-05025401406: This multiple component site consists of prehistoric bedrock milling and historic rock wall features. SDI-16227 was originally recorded in 1995 by Culbert and VerPlanck as four bedrock milling stations and fragments of a possible rock wall. Culbert, VerPlanck and Decker also recorded SDI-16229 in 1995 as five segments of a historic rock wall. The rock wall is intersected by large natural boulders. In 2007, Connell, Burkard, Linder, Lown and Covert identified and combined the two sites due to their proximity to one another. Six bedrock milling stations, one cottonwood projectile point, five potsherds, a ground stone fragment, midden deposits and 11 north to south trending rock wall segments

(approximately 700 feet total) were recorded at that time. During survey for the CNF MSUP, ASM recorded ten bedrock milling stations, five volcanic flakes, a piece of obsidian debitage, a quartzite flake, two brown ware sherds, four segments of the rock wall and a possible rock enclosure. The length of the rock wall segments encountered measure approximately 20 m, 40 m, 35 m and 10 m, respectively. The possible rock enclosure is made up of more than 30 stacked granite rocks and boulders in a circular alignment.

SDI-16878: Portions of this site are located within the direct impact area for one pole and are crossed by the dirt access road. The site was recorded in 2003 by Philip de Barros, who noted the presence of a projectile point, flaked lithic debitage, and ceramics, including an incised fired clay effigy resembling a whale. ASM identified additional debitage and ceramics that extended the site boundary to the proximity of SDI-7110, an isolated prehistoric scraper recorded by Thomas Banks in 1979.

SDI-17041: This site was recorded by Mealey in 2004 and consists of a single milling slick on a pink granitic bedrock outcrop. ASM re-identified the site and the milling slick appeared to be in the same condition.

SDI-17877/FS-05025300646: One pole and its access road are located near this site. The site was recorded in 2006 by Drew Pallette and Michael Garnsey, who observed midden soil, about 30 pieces of debitage (quartz, volcanic, and obsidian), and about 20 potsherds. ASM identified the site and enlarged the previously recorded boundary to include bedrock milling with a bedrock mortar, a basin, and a slick along with a scatter of flaked lithic debitage and brown ware sherds.

SDI-17887/FS-05025300654: One pole is located within this site. The site was initially recorded in 2005 by Del James, with a formal record prepared in 2006 by Drew Pallette. At least nine boulders with five milling basins and 12 slicks were noted, as well as a few pieces of quartz and volcanic debitage, and a few brown ware sherds. ASM observed three outcrops with a total of three mortars, four basins, and one slick along with two hand stones and three brown ware sherds. Also noted at the site were fragments of brown bottle glass and ceramic plates, together with shotgun and bullet shell casings, apparently the remains of target shooting.

SDI-19169/FS-05025300656: The boundary of this large site includes the location of one pole and its access road. The site was initially recorded by Susan Hector and Thomas Hector-Rosen in 2008. They observed two flakes and two potsherds in the existing access road. ASM re-identified the site and its boundary was enlarged to encompass a milling feature with two mortars and five slicks. An additional volcanic scraper was also noted.

SDI-19279/FS-05025401665: Gallegos & Associates originally recorded SDI-19279 as a lithic scatter encompassing a 108-x-18 meter area. ASM expanded the site considerably to include bedrock milling features, ground stone implements, flaked stone artifacts, and fire-affected rock in an area measuring roughly 450-x-120 meters. Bedrock milling features include a large, flat granite slab containing numerous mortars, basins, and slicks in addition to a boulder containing a basin and a mortar. A large fissure on the surface of one feature may represent intentional burning of and/or chipping/pecking away of the slab surface. Additionally, an almost completely buried ground-level granite outcrop in the western end of the site may contain buried milling elements. Ground stone implements noted at the site consist of hand stones, while identified flaked stone includes cores, bifaces, and a pestle or hammer stone, in addition to abundant pieces of debitage linking the features and outlying materials.

SDI-19350: Two poles are located within this prehistoric site. It was initially identified during the CNF MSUP surveys and consists of two basins on a single outcrop, midden soils, and several potsherds.

SDI-19355: This prehistoric site is located within the access road for four poles, on the east and west side of the road. The site was initially identified for the CNF MSUP by ASM and consists of three bedrock milling features with several milling surfaces on each outcrop, as well as quartz and volcanic flakes.

SDI-19356: This prehistoric site is located five meters east of one pole. The site was initially identified during the CNF MUSP and consists of a single bedrock milling feature with no associated artifacts on the surface.

SDI-19359. One pole lies within this site, and the proposed work area for a second pole is adjacent to it. The site was identified as a large habitation site for the CNF MSUP and contains twenty-one milling features, including mortars, Cuyamaca ovals, basins, and slicks. Surface artifacts included numerous flaked lithic debitage and brown ware potsherds.

SDI-19362/FS-05025401668: This prehistoric site is located at four poles. It was recorded by the San Diego Museum of Man, probably by Malcolm J. Rogers in the 1930s. The site contained steatite "curing slabs," identified and collected by Donal Hord, as well as cremated human bone. In 2009, ASM identified no cultural material was observed on the surface in the immediate area of the poles, although bedrock milling features, a hand stone, and flaked lithic debitage were noted elsewhere in the site.

SDI-19372: One pole lies within this prehistoric site, and another pole is adjacent to it. The site was recorded for the CNF MSUP and contains bedrock milling with an associated lithic scatter. Two milling features were observed, including five slicks and a basin. Surface artifacts include eight debitage.

SDI-19738/FS-05025300706: This prehistoric site is located at one pole. Two bedrock milling features (saucer mortars), a volcanic projectile point, a quartz projectile point, a quartz core, and 16 quartz flakes were observed by ASM. Possible midden soils were noted in small animal burrows across the site boundary.

SDI-19739: This prehistoric site encompasses one pole. In 2010, a bedrock milling feature with a conical mortar and slick remnant, three quartz flakes, 19 brown ware sherds, and a buff ware sherd, and were recorded by ASM. The site is probably related to the habitation site at SDI-789, which is along the same landform a short distance to the east.

SDI-19742: This prehistoric site is located east of one pole. In 2010, a bedrock milling feature with two saucer mortars was recorded by ASM in the foothills surrounding Lake Henshaw to the west. Some possible midden soils were observed around the milling outcrop.

SDI-19747: This prehistoric site encompasses two pole locations. ASM identified the site for the CNF MSUP and recorded 12 bedrock outcrops with 30 milling surfaces (conical mortars, saucer mortars, basins, and slicks), two pictograph panels on one outcrop, a volcanic projectile point fragment, a quartz projectile point fragment, two reworked quartz flakes, two quartz cores, 109 quartz flakes and pieces of debitage, four volcanic flakes, a chert flake, a whole granitic hand stone, 25 brown ware sherds, and midden soil. Burnt and butchered animal bones were found in the eastern portion of the site. East of the site is a burnt house and possible historic structure.

SDI-20140/FS-05025401678: ASM identified the site during survey for the CNF MSUP and recorded two milling stations containing five shallow mortars (possibly acorn huskers or cupules) and one shallow mortar, respectively. No artifacts were identified near the milling site, possibly due to a layer of wood chipping around the site.

SDI-20722: California State Parks originally recorded this site in 2005 after the Cedar Fire then updated it twice in 2009 for the Conifer Tree Planting Project. A bedrock milling station with a single slick, 15

volcanic pieces of debitage, a volcanic flaked stone tool, and three potsherds were recorded during the three visits to the site.

SDI-20725: California State Parks originally recorded this site in 2005 after the Cedar Fire then updated it in 2009 for the Conifer Tree Planting Project. The site consists of two bedrock milling stations with one milling slick each and a single volcanic piece of debitage.

SDI-21032: California State Parks originally recorded this site in 2009 as a milling outcrop with a single slick remnant.

3.1.5 During Construction Activities

Per MM CUL-3, during construction of the proposed power line replacement projects, all measures as identified in Williams and Schaefer 2011 and 2013 as well as Shaver and Baksh 2012 shall be implemented by a qualified archaeologist who is approved by the CPUC and USFS. Further, when on City-owned land (portions of C157, T625, and C449), the City's Land Development Manual – Historical Resource Guidelines per the San Diego Municipal Code, Chapter 14, Article 3, Division 2, Section 14.0201, shall be followed (http://docs.sandiego.gov/municode/MuniCodeChapter14/Ch14Art03Division02.pdf). Specific measures in Williams and Schaefer 2011 and 2013 are found in:

- Tables 3 and 6 for TL625;
- Tables 9 and 11 for TL626;
- Tables 14 and 17 for TL629;
- Table 20 for TL682;
- Table 23 for TL6923;
- Table 26 for C78;
- Table 29 for C79;
- Table 31 for C157;
- Table 34 for C440;
- Table 37 for C442; and
- Table 40 for C449.

These measures will be updated as final engineering designs are provided and will be captured in Appendix A of this HPMP.

3.1.6 Inadvertent Effects and Unanticipated Discoveries (During Construction)

Should any previously unidentified prehistoric or historic artifacts; indicators or examples of cultural, archaeological, or paleontological resources; or potential human remains or funerary items be discovered during the course of site preparation, grading, excavation, construction, or other activities, all operations within 50 feet of an inadvertent discovery during such activities shall cease and the PI will contact the USFS Heritage Program Manager (HPM) and SDG&E's Cultural Resource Specialist. If the find is suspected to be human remains a San Diego County Coroner's representative will be requested to make any assessment before any further work may commence.

In the event that unrecorded or unanticipated cultural resources that may be eligible for inclusion in the NRHP are located during any SDG&E construction activity within the powerline replacement projects APE, SDG&E qualified personnel will, as soon as reasonably feasible, ensure the following.

All ground-disturbing work at the work area will be temporarily suspended. The archaeological monitor will carefully inspect the ground surface around the discovery and the displaced dirt in order to determine whether the discovery constitutes an isolated find (fewer than three items) or a site (three or more items, or a feature). Inspection of the ground surface will consist of an intensive survey of the ground surface at one meter intervals radiating out from the identified artifacts to a minimum distance of 20 meters, or as limited by topographic features, and will include inspection of all trench sidewalls and spoils piles up to a distance of 20 m. The purpose of surveying around the newly discovered artifact(s) is to determine if other artifacts or features are associated, thereby constituting an archaeological site. If no other artifacts or features are identified within 20-m of the find it will be determined to be an isolate (with the exception of human remains). All isolated artifacts will be documented, reported, and described in the final monitoring report, but no additional agency notifications shall be required and work may resume in those areas.

If the discovery is determined to be a site, after securing the work area from additional disturbance, in concert with the Construction Foreman or Field Supervisor, the archaeological monitor will notify the Principal Investigator (PI), who will notify the appropriate HPM, federal agency overseer or CPUC representative, depending on the location of the discovery (MM CUL-1e). To the degree possible, the construction and engineering teams will be included in discussions to avoid or minimize potential damage to the discovered resource. Notification/coordination with other jurisdictional land management agencies will be conducted by the USFS and/or CPUC as appropriate.

If a newly discovered site can be avoided, it will be designated as an avoidable new discovery (AND), explained in depth below. When unanticipated discoveries cannot be avoided, the site will be designated as an unavoidable new discovery (UND) and evaluated. Consultation between the PI, SDG&E, and the USFS will determine what additional fieldwork, such as limited test excavation, is necessary to recommend the site's potential eligibility for the NRHP, CRHR or Local Listing. Pursuant to 36 CFR 800.13(c), the Forest may assume any discovery to be a historic property and continue consultation to resolve adverse effects. The Forest/CPUC will be responsible for contacting the consulting parties and interested Tribal groups, if necessary. It may be determined that a site visit by the USFS, CPUC and/or relevant jurisdictional agency is necessary to make that determination. Avoidance and protection of the site is the first strategy; if avoidance is not possible, evaluation will be necessary.

In accordance the schedule in CFR 800.13(b)(3), the Forest will be responsible for contacting the consulting parties within 48 hours, as appropriate. The consulting parties will have 48 hours to respond to the notification. The agency official shall take into account their recommendations regarding National Register eligibility and proposed actions, and then carry out appropriate actions.

If test excavation is required to evaluate a discovery, the PI in coordination with SDG&E and the USFS, will formulate and implement a testing program. In general, any evaluation effort will be focused on the area of discovery within the area of impact including a reasonable buffer (not more than 10 m from the maximum extent of the find). The focus will be to determine the nature of the archaeological resource and to assess the quantity, quality, and variety of preserved archaeological items that are or may be present. Evaluation will include Shovel Test Pits (STPs) of a sufficient number to characterize the extent of subsurface archaeological deposits and, if necessary, a Control Unit (CU) to evaluate the condition of the discovery and acquire a controlled sample of any preserved cultural materials. The testing program will be conducted in accordance with Section 1.6 of this HPMP.

After the site evaluation, the PI will have five business days in which to prepare a summary letter report assessing the site's eligibility and recommending appropriate treatment measures, such as the need for archaeological data recovery, if the site is recommended eligible. The letter report will be submitted to the USFS and/or CPUC, as appropriate, who will have 10 business days to review the report and evaluate the proposed treatment measures, if deemed necessary. If site areas within the area of direct impact (ADI) meet

the following conditions, they may be determined not contributory to the NRHP/CRHR/Local Listing of the larger site as a whole, by the USFS if:

1. The Area of Direct Impact (ADI) lacks intact subsurface archaeological deposits;
2. The ADI lacks chronological data;
3. No human remains are present within the ADI or known on the site as a whole;
4. No intact features are present within the ADI other than bedrock milling stations, lithic chipping stations or historical refuse scatters, determined to be single incident refuse dumps. In addition, surface artifact densities within the ADI shall not exceed 0.5 archaeological specimens per meter square or contain more than three artifact types indicating a diverse assemblage.

No further SHPO consultation will be required for eligibility determinations for site areas that meet the above conditions. Findings that exceed these criteria will be submitted to the SHPO for concurrence for a 10-day review period. If the determination is that the discovered resource does not qualify for nomination to the NRHP/CRHR/Local Listing, the USFS will issue written notice-to-proceed for all USFS land, and in consultation with the CPUC and other land management agencies on non-USFS land as appropriate.

If a discovered site is recommended to be eligible for the NRHP, CRHR or Local Listing and cannot be avoided or protected, further treatment measures will be required. In consultation with the USFS, SHPO, and SDG&E, the PI will prepare an HPTP within five days of recommendation of eligibility for review and approval by the USFS, and for review by the CPUC on non-federal land. The USFS will ensure consulting parties that respond during the 48-hour notification period are invited to contribute during the development of the HPTP. The USFS and/or CPUC will have 48 hours to review the HPTP and provide comment. The PI will then have 24 hours to address comments and submit a final draft to the USFS. The USFS will provide the final draft to the consulting parties for a review period of 30 days. The USFS will determine if a shorter review period is appropriate and necessary, whereupon consulting parties will be notified. Based on the nature of the comments, the USFS and/or CPUC, SDG&E and PI will have 48 hours to address any comments received during that period. Review by other jurisdictional land management agencies may be required and will be coordinated within the timeframe above by the USFS and/or CPUC as appropriate. After review and concurrence, the USFS will notify SDG&E that the proposed mitigation can proceed. Any mitigation in the form of data recovery efforts will be focused only on that portion of the site within the area of direct impact with a reasonable buffer.

The level of effort required for mitigation will be dictated by the nature and extent of the discovery and on the results of the initial evaluation effort and the specific activities being implemented in the UND. The focus will be on recovering a sufficiently large sample to characterize the discovery and to address regional research questions, as appropriate. Upon completion of any required fieldwork, the PI will prepare a brief interim letter report summarizing the excavation results and prior to completion of any special studies or laboratory analyses. Within 24 hours of submittal, the USFS will distribute the letter report to the consulting parties. The USFS and consulting parties will have five business days to review the report and determine whether or not construction work at the discovery can resume or if additional sampling is required. If any comments are received during the review period, the USFS, SDG&E and PI will have 48 hours to address any comments from the consulting parties. The USFS will notify SDG&E when work can resume. A final data recovery report will be prepared after laboratory studies and analyses. This report will not be automatically distributed to consulting parties but will be retained at the CNF Supervisor's office and will be provided upon request. The Forest will provide the final data recovery report to those consulting parties who requested to be involved in the resolution of adverse effects to the discovery.

The category of AND applies to sites that are identified by the cultural resources monitors during monitoring, that are in proposed work areas but can be avoided by potential direct impact. These avoidable

new sites may be an expansion of a previously recorded site or may be a wholly new resource. If the AND is part of a previously recorded site, it will be mapped and described and the boundary of the site will be modified using a DPR Site Record Update. If the increased site size results in the new site boundary encroaching into a Project work area or into a portion of the Project with the potential for direct impacts, the first alternative will be to explore establishing or modifying the existing ESA to protect the enlarged site area from damage. Indirect impacts to these resources will also be explored to ensure other contributing elements to the site's eligibility are accounted for. The Forest will notify the consulting parties within 24 hours of a determination of avoidance, including consideration of indirect impacts, and the consulting parties will have 48 hours to make comment on those findings. Absent any comments work will resume at the location. If impacts to the newly described resource cannot be avoided, it will be treated as an UND and the processes described above will be implemented, as appropriate.

Alternatively, if the AND is not within a Project work area or an area that is vulnerable to direct ground or indirect Project impacts, the data pertaining to the AND will be acquired by the cultural resources monitor and a DPR Site Record or Site Record Update, as appropriate, will be prepared and submitted to the South Coastal Information Center and the appropriate agency for inclusion in their respective database. It will also be described and presented in the final Monitoring Report. If the AND is within 100 feet of the Project, an ESA will be established to ensure protection during construction. ANDs would not require immediate reporting or consultation with the SHPO or other agencies or consulting parties, but will be memorialized as part of the Project data record.

If a previously recorded or newly discovered site is inadvertently damaged, or unanticipated effects to a site due to a project change may occur, the site will be evaluated following the procedure described above for UNDs.

3.1.7 Treatment of Human Remains

Human remains encountered on federal property will be treated in accordance with all appropriate Federal laws and regulations (e.g., NAGPRA, ARPA, etc.) that apply in discovery situations. If human remains are encountered on property not owned by the federal government, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to State Public Resources Code Section 5097.98. Following the provisions and guidelines of State Public Resources Code Section 5097.98, the County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric (either inhumation or cremation and in any state of decomposition or skeletal completeness), the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the descendant may inspect the site of the discovery. The descendant shall complete the inspection within 48 hours of being granted access to the site. The MLD may recommend several approaches including but not limited to scientific removal and nondestructive analysis of human remains and items associated with Native American burials or reburial of human remains in a location on or adjacent to the property they were identified at and in a location that will not be subject to future disturbances. It is the policy of the state of California that Native American remains and associated grave artifacts shall be repatriated (State Public Resources Code Section 5097.991). If cultural materials are discovered during any excavation, a qualified archaeologist should be notified to assess the significance of such material.

4.0 BIBLIOGRAPHY

Allen, Rebecca, Scott Baxter, Jerry Schaefer, Sinéad Ní Ghabhláin, and Drew Pallette
2005 *Archaeological Investigations on Block 138 (CA-SDI-16,822): Location of the Heernander Planing Mill and Residence, The Eureka Hotel/Ocean House Hotel, and a Lodgings House, Downtown San Diego*. Report prepared for Centre City Development Corporation.

ASM Affiliates (Schaefer, Jerry, and Brian Williams)
2011 *Inventory, Evaluation, and Treatment of Cultural Resources in the Cleveland National Forest Transmission and Distribution Line Increased Fire Safety Project.*
2013 *Revised-Inventory, Evaluation, and Treatment of Cultural Resources in the Cleveland National Forest Transmission and Distribution Line Increased Fire Safety Project.*

Bada, Jeffrey, Roy Schroeder, and George Carter
1974 New Evidence for the Antiquity of Man in North America Deduced from Aspartic Acid Racemization. *Science* 184:791-793.

Bada, Jeffrey L.
1985 Aspartic Acid Racemization Ages of California PaleoIndian Skeletons. *American Antiquity* 50(3):645-647.

Bayham, Frank, and Donald Morris
1986 Episodic Use of a Marginal Environment: A Synthesis. In *Prehistoric Hunter-Gatherers of South Central Arizona: The Picacho Reservoir Archaic Project*, edited by F. Bayham, D. Morris, and M. Shackley, pp. 359-382. Anthropological Field Studies No. 13, Arizona State University, Tempe.

Bean, Lowell J., and Florence C. Shipek
1978 Luiseño. In *California*, edited by Robert F. Heizer, pp 550-563. *Handbook of North American Indians, Vol. 8*, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Beauchamp, R. Mitchel
1986 *A Flora of San Diego County, California.* Sweetwater River Press, National City, California.

Bettinger, Robert L.
1982 Explanatory/Predictive Models of Hunter-Gatherer Adaptation. In *Advances in Archaeological Method and Theory 3*, edited by Michael B. Schiffer, 189-255. Academic Press, New York.

Byrd, Brian F., and L. Mark Raab
2007 *Prehistory of the Southern Bight: Models for a New Millenium*, edited by Terry L. Jones and Kathryn A. Klar, pp. 215-227. Altamira Press, Walnut Creek, California.

Bull, Charles S.
1983 Shaking the Foundations: The Evidence for San Diego Prehistory. *San Diego State University Cultural Resource Management Casual Papers* 1(3):15-64.
1987 A New Proposal: Some Suggestions for San Diego Prehistory. In *San Dieguito-La Jolla: Chronology and Controversy*, edited by Dennis Gallegos, pp. 35-42. San Diego County Archaeological Society Research Paper No. 1.

Cardenas, D. Sean, and Stephen Van Wormer
1984 Archaeological Investigations of SDI-4648 and SDM-W-348. RBR and Associates, San Diego.

Carter, George
1980 *Earlier Than You Think: A Personal View of Man in the Americas*. Texas A&M University, College Station.

Carrico, Richard L., Theodore Cooley, Laura Barrie, Andrea Craft, and Stacey Jordan
1983 A Brief Glimpse of the Kumeyaay Past: An Interview with Tom Lucas, Kwaaymii, of Laguna Ranch. *The Journal of San Diego History 29(2)*. Available online at https://www.sandiegohistory.org/journal/83spring/kumeyaay.htm
2003 *Final Archaeological Overview for the Cleveland National Forest.* Prepared by Mooney and Associates for the United States Department of Agriculture.

Carrico, Richard L., Allan Schilz, Frank Norris, and Richard Minnich
1982 *Cultural Resource Overview of San Bernardino National Forest, California*. *Volume 1*. Prepared by Westec Services for the United States Forest Service.

Christenson, Lynne E.
1990 *The Late Prehistoric Yuman People of San Diego County, California: Their Settlement and Subsistence System*. Ph.D. dissertation, Arizona State University.
1991 Subsistence Studies in Early 20th Century San Diego. In *Even the Kitchen Sink: Archaeological Investigations of SDi-10,258, the 1908 to 1913 San Diego City Dump,* by Stephen R. Van Wormer, Appendix A. Regional Environmental Consultants (RECON), San Diego. Prepared for City of San Diego Development and Environmental Planning Division.
1992 The Late Prehistoric Yuman Settlement and Subsistence System: Coastal Adaptation. In *Essays on the Prehistory of Maritime California*, edited by T. Jones, pp. 217-230. Center for Archaeological Research at Davis Publications No. 1.
1996 Economic Analysis of Bone from Selected Historic Sites. *Proceedings of the Society for California Archaeology* 9:324-329.

Cline, Lora L.
1979 *The Kwaaymii: Reflections on a Lost Culture*. IVC Museum Society, El Centro California.
1984 *Just Before Sunset*. J and L Enterprises. Jacumba, California.

Cuero, Delfina
1970 *The Autobiography of Delfina Cuero, A Diegueño Indian, As Told to Florence C. Shipek*. Malki Museum Press, Morongo Indian Reservation, Banning, California.

Dudek
2013 Final EIR/EIS for the Master Special Use permit and Permit to Construct Powerline Replacement Projects.

Derry, Anne, H. Ward Jandl, Carol D. Shull, and Jan Thorman
1985 Guidelines for Surveys: A Basis for Preservation Planning. *National Register Bulletin 24*. Revised by Patricia L. Parker. U.S. Department of the Interior.

Engelhardt, Zephyrin
1921 *San Luis Rey Mission*. The James H. Barry Company.

Erlandson, Jon M., and Roger H. Colten
1991 An Archaeological Context for Early Holocene Studies on the California Coast. In *Hunter-Gatherers of Early Holocene Coastal California*, edited by J. M. Erlandson and R. H. Colten, pp. 1-10. Perspectives in California Archaeology, Vol. 1, Jeanne E. Arnold, series editor. Institute of Archaeology, University of California, Los Angeles.

Ezell, Paul H.
1983 A New Look at the San Dieguito Culture. *San Diego State University Department of Anthropology Cultural Resource Management Casual Papers* 1(3):103-109.
1987 The Harris Site – An Atypical San Dieguito Site or Am I Beating a Dead Horse? In *San Dieguito – La Jolla: Chronology and Controversy*, edited by D. Gallegos, pp. 15-22. San Diego County Archaeological Society Research Paper Number 1.

Fulmer, Scott, Ruth F. Almstead, Ann Noah, and Albert C. Oetting
1979 *Archaeological Reconnaissance Laguna Mountain Recreation Area*. San Diego State University Foundation.

Gallegos, Dennis R.
1987 A Review and Synthesis of Environmental and Cultural Material for the Batiquitos Lagoon Region. In *San Dieguito – La Jolla: Chronology and Controversy*, edited by D. Gallegos, pp. 23-34. San Diego County Archaeological Society Research Paper Number 1.

Gallegos, Dennis R., Susan M. Hector, and Stephen R. van Wormer
1987 San Dieguito-La Jolla: Chronology and Controversy, *San Diego County Archaeological Society Research Paper No. 1.*

Gallucci, Karen L.
2001 From the Desert to the Mountains: Salton Brownware Pottery in the Mountains of San Diego. Unpublished Master's thesis, Department of Anthropology, San Diego State University.
2004 Ceramic Analysis at Wikalokal, San Diego County (CA-SDI-4787). *Proceedings of the Society for California Archaeology* 14:119-123.

Garcia, Mario T.
1975 Merchants and Dons: San Diego's Attempt at Modernization, 1850-1860. In *The Journal of San Diego History 21(1):52-80.*

Gifford, Edward W.
1931 The Kamia of Imperial Valley. *Smithsonian Institution Bureau of American Ethnology Bulletin No. 97.* U.S. Government Printing Office, Washington, D.C.

Gorman, Jennifer, Shelby Castells, and Sinéad Ní Ghabhláin
2015 *Historic Evaluation of Electrical Transmission and Distribution Lines in the Cleveland National Forest (CNF) for San Diego Gas and Electric's (SDG&E) Master Special Use Permit (MSUP).*

Graham, William R. (Principal author)
1981 *Final Report - Cultural Resource Survey of the Laguna Mountain Recreation Area, San Diego County, California*. Archaeological Systems Management, Inc.

Gross, G. Timothy
2004 Obituary: Dr. George Francis Carter. *SDCAS Newsletter* 32(3):14-15. San Diego County Archaeological Society.

Gross, G. Timothy, M. Steven Shackley, and Constance Cameron
1989 *Archaeological Investigations at CA-ORA-910A: A Late Prehistoric Hunting Field Camp in Southern Orange County, California.* Brian F. Mooney Associates, San Diego.

Hagstrum, Melissa B. and John A. Hildebrand
1990 The Two Curvature Method for Reconstructing Ceramic Morphology. *American Antiquity* 55 (2):388-403.

Haynes, C. Vance
1969 The Earliest Americans. *Science* 166:709-715.

Hector, Susan M.
1984 *Late Prehistoric Hunter-Gatherer Activities in Southern San Diego County*. Ph.D. dissertation, University of California, Los Angeles.

Hector, Susan M., Sinéad Ní Ghabhláin, Mark S. Becker, and Ken Moslak
2004 *Archaeological Evaluation of 19 Sites on Marine Corps Air Station Miramar, San Diego County, California.* ASM Affiliates, Inc. Prepared for U.S. Marine Corps, Miramar, California.

Hector, Susan M, Carolyn Kyle, Drew Pallette, Delman James, and Steven Briggs
2009 *Cultural Resource Support Phase II Project for Cleveland National Forest, San Diego County, California.* ASM Affiliates.

Hedges, Ken
1975 Notes on the Kumeyaay: A Problem of Identification. *Journal of California Anthropology* 2:71-83.

Hildebrand, John A. and Melissa B. Hagstrum
1995 Observing Subsistence Change in Native Southern California: The Late Prehistoric Kumeyaay. *Economic Anthropology* 16:85-127.

Hines, Philip, and Betty Rivers
1991 A Re-evaluation of the Prehistoric Archaeological Sites within the Pendleton Coast District. In *The Cultural Resources of the Pendleton Coast District*. On file at the South Coastal Information Center, San Diego State University (MS# 1122426).

Hildebrand, John A., G. Timothy Gross, Jerry Schaefer, and Hector Neff
2002 Patayan Ceramic Variability: Using Trace Elements and Petrographic Analysis to Study Brown and Buff Wares in Southern California. In *Ceramic Production and Circulation in the Greater Southwest: Source Determination by INAA and Complementary Mineralogical Investigations*, edited by Donna M. Glowacki and Hector Neff, pp. 121-139. Monograph No. 44, Cotsen Institute of Archaeology, University of California, Los Angeles

Hohenthal, William D.
2001 *Tipai Ethnographic Notes*. Ballena Press.

Iversen, Dave, Arleen Garcia-Herbst, Don Laylander and Brian Williams
2010 *Class III Inventory of the Cultural Resources along the Approved San Diego Gas & Electric Sunrise Powerlink Final Environmentally Superior Southern Route, San Diego and Imperial Counties, California.* ASM Affiliates, Inc. Submitted to SDG&E and BLM-El Centro.

Jelinek, Arthur J.
1992 Perspectives from the Old World on the Habitation of the New. *American Antiquity* 57(2):345-347.

Johnson, J. R., T. W. Stafford, Jr., H. O. Ajie, and D. P. Morris
2002 Arlington Springs Revisited. In *Proceedings of the Fifth California Islands Symposium*, edited by D. R. Brown, K. C. Mitchell and H. W. Haney, pp. 541-545. Santa Barbara Museum of Natural History, Santa Barbara.

Johnston, Mary Elizabeth
1914 *Indian Legends of the Cuyamaca Mountains*.

Jones, Terry L.
1991 Marine-Resource Value and the Priority of Coastal Settlement: A California Perspective. *American Antiquity* 56(3):419-443.
1992 Settlement Trends Along the California Coast. In *Essays on the Prehistory of Maritime California*, edited by T. Jones, pp. 1-38. Center for Archaeological Research at Davis Publications No. 10.

King, Thomas F.
2003 *Places that Count: Traditional Cultural Properties in Cultural Resource Management.* Walnut Creek, CA: Altamira, 335 pp.

Kroeber, A. L.
1925 The Diegueño and Kamia. *Handbook of the Indians of California. Smithsonian Institution*, Washington, D.C: 709-725.
1970 *Handbook of the Indians of California*. California Book Company, Ltd., Berkeley, California. Third printing. Reprint of Bulletin No. 78, Bureau of American Ethnology, Smithsonian Institution (1925).

Laylander, Don
2010 Linguistic Prehistory and the Archaic-Late Transition in the Colorado Desert. *Journal of California and Great Basin Anthropology* 30:141-155.

LeMenager, Charles R.
2001 *Julian City and Cuyamaca Country*. Third printing. Eagle Peak Publishing Company, Ramona.

Lucas, Carmen and Susan Hector
2015 *Kwaaymii Homeland National Register Nomination Form.* Submitted to the State Historic Preservation Office and National Register of Historic Places Keeper.

Luomala, Katherine
1978 Tipai and Ipai. In *California*, edited by Robert F. Heizer, pp. 592-609. Handbook of the North American Indians, Vol. 8, W. C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

McFarland, Sharon L.
2000 Changes in Obsidian Exchange in Southern California. Unpublished Master's thesis, Department of Anthropology, San Diego State University.

Meighan, Clement W.
1954 A Late Complex in Southern California Prehistory. *Southwestern Journal of Anthropology* 10:215-227.

Meltzer, D. J.
1993 Pleistocene Peopling of the Americas. *Evolutionary Anthropology* 1(5):157-168.

Moratto, Michael J.
1984 *California Archaeology*. Academic Press. New York.

Moriarty, James R. III
1966 Cultural Phase Divisions Suggested by Typological Change Coordinated with Stratigraphically Controlled Radiocarbon Dating at San Diego. *Anthropological Journal of Canada* 4:20-30.
1969 The San Dieguito Complex: Suggested Environmental and Cultural Relationships. *Anthropological Journal of Canada* 7(3):2-18.

Munz, Philip A.
1974 *A Flora of Southern California*. University of California Press, Berkeley.

National Park Service
1991 *How to Apply the National Register Criteria for Evaluation*, National Register Bulletin 15.

Newland, James D.
1995a *Historic Resources Evaluation Report: Administrative Buildings.*
1995b *Historic Resources Survey and Evaluation Report: Special Use Permit Resorts and Camps: Laguna Mountains Recreation Area.*
2008 *Cleveland National Forest.*

Office of Historic Preservation
1990 *Archaeological* Resource Management Reports (ARMR): Recommended Contents and Format. California Office of Historic Preservation.

Owen, E. A.
1984 The Americas: The Case Against an Ice-Age Human Population. In *The Origins of Modern Humans: A World Survey of the Fossil Evidence*, edited by F. H. Smith and F. Spencer, pp. 517-563. Alan R. Liss, New York.

Oxendine, Joan
1983 *The Luiseño Village During the Late Prehistoric Era*. Ph.D. dissertation, Department of Anthropology, University of California, Riverside.

Parker, Patricia L., and Thomas L. King
1998 Guidelines for Evaluating and Documenting Traditional Cultural Properties. *National Register Bulletin 38*. U.S. Department of the Interior, National Park Service, Washington, D.C.

Pigniolo, Andrew R.
1995 The Rainbow Rock Wonderstone Source and its Place in Regional Material Distribution Studies. *Proceedings of the Society for California Archaeology* 8:123-131.
2005 A Different Context: San Dieguito in the Mountains of Southern California. *Proceedings of the 38th Annual Society for California Archaeology Meeting, 19:247-25.* Riverside.

Pryde, Philip R.
2004 *San Diego: An Introduction to the Region*. 4th ed. Sunbelt Publications, San Diego.

Rensch, Hero Eugine
1950 Indian Place Names of Rancho Cuyamaca. Manuscript, Bancroft Library.

Rivers, Betty
1993 The Pendleton Coast District: An Ethnographic and Historical Background. In *The Cultural Resources of the Pendleton Coast District.* On file at Cultural Heritage Section, California Department of Parks and Recreation, Sacramento.

Robinson, W. W.
1948 *Land in California*. University of California Press, Berkeley.

Rogers, Malcolm J.
1929 The Stone Art of the San Dieguito Plateau. *American Anthropologist* 31(3):454-467.
1939 *Early Lithic Industries of the Lower Basin of the Colorado River and Adjacent Desert Areas*. San Diego Museum Papers No. 3.
1945 An Outline of Yuman Prehistory. *Southwestern Journal of Anthropology* 1(1):167-198.
1966 *Ancient Hunters of the Far West*. Union-Tribune Publishing, San Diego.

Rogers, Spencer L.
1974 An Ancient Human Skeleton Found at Del Mar, California. *San Diego Museum Papers* No. 7.

Sayles, Edwin B.
1983 The Cochise Cultural Sequence in Southeastern Arizona. *Anthropological Papers of the University of Arizona* No. 42. Tucson.

Sayles, Edwin B., and Ernst Antevs
1941 The Cochise Culture. *Medallion Papers* No. 29. Gila Pueblo, Arizona.

Schaefer, Jerry and Brian Williams
2011 Inventory, Evaluation and Treatment of Cultural Resources in the Cleveland National Forest Transmission and Distribution Line Increased Fire Safety Project in Support of the Proponent's Environmental Assessment (Revised 2013).

Shackley, M. Steven
1981 *Late Prehistoric Exchange Network Analysis in Carrizo Gorge and the Far Southwest*. Unpublished Master's thesis, Department of Anthropology, San Diego State University.

Shaver, Christopher and Michael G. Baksh
2012 Archaeological Survey Report for the San Diego Gas & Electric Wind Interconnection Project, San Diego County, California, April, 2012.

Shipek, Florence
1984 Response. Pp. 109-122 in *Final Environmental Assessment for the Table Mountain Study Area: Wind Energy Development*. El Centro: Bureau of Land Management.
1985 *Kuuchamaa: The Kumeyaay Sacred Mountain. Journal of California and Great Basin Anthropology 7:67-74*.
1987 *Pushed into the Rocks: Southern California Indian Land Tenure, 1769-1986*. University of Nebraska Press, Lincoln.
1991 *Delfina Cuero: Her Autobiography*. Ballena Press, Menlo Park, California.

Sparkman, Philip Stedman
1908 The Culture of the Luiseño Indians. *University of California Publications in American Archaeology and Ethnology* 8(4):187-234.

Spier, Leslie
1923 Southern Diegueño Customs. *University of California Publications in American Archaeology and Ethnology* 20:295-358.

Stein, Lou
1978 *San Diego County Place-Names*. Second Edition. Tofua Press, San Diego.

Stewart, Richard M.
1958 *Mines and Mineral Resources of Santa Ysabel Quadrangle, San Diego County, California. Geology and Mineral Resources of Santa Ysabel Quadrangle, San Diego County, California*. California Division of Mines Bulletin No. 177. San Francisco.

Taylor, R. E.
1991 Frameworks for Dating the Late Pleistocene Peopling of the Americas. In *The First Americans: Search and Research*, edited by Tom D. Dillehay and David J. Meltzer. ORC Press, Boca Raton.

Taylor, R. Ervin, Louis A. Payen, Christina A. Prior, Peter J. Slota, Richard Gillespie, John A. J. Gowlett, Robert E. M. Hedges, A. J. Timothy Jull, Theodore H. Zabel, Douglas J. Donahue, and Rainer Berger
1985 Major Revisions in the Pleistocene Age Assignments for North American Human Skeletons by C14 Accelerator Mass Spectrometry: None Older Than 11,000 C14 Years B.P. *American Antiquity* 50:136-140.

True, Delbert L.
1958 An Early Complex in San Diego County, California. *American Antiquity* 23:255-263.
1966 *Archaeological Differentiation of Shoshonean and Yuman Speaking Groups in Southern California*. Ph.D. dissertation, Department of Anthropology, University of California, Los Angeles.
1970 *Investigation of a Late Prehistoric Complex in Cuyamaca Rancho State Park, San Diego County, California*. University of California Archaeological Survey, Los Angeles.
1980 The Pauma Complex in Northern San Diego County: 1978. *Journal of New World Archaeology* 2:1-39.

True, D. L., and Eleanor Beemer
1982 Two Milling Stone Inventories from Northern San Diego County, California. *Journal of California and Great Basin Anthropology* 4:233-261.

True, D. L., C. W. Meighan, and Harvey Crew
1974 *Archaeological Investigations at Molpa, San Diego County, California*. University of California Press.

True, D. L., and R. Pankey
1985 Radiocarbon Dates for the Pauma Complex Component at the Pankey Site, Northern San Diego County, California. *Journal of California and Great Basin Anthropology* 7:240-244.

True, Delbert L., and Georgie Waugh
1982 Proposed Settlement Shifts during San Luis Rey Times, Northern San Diego County. *Journal of California and Great Basin Anthropology* 4(1):34-54.

Van Wormer, Stephen
1991 *Even the Kitchen Sink: Archaeological Investigations of SDi-10258: The 1908 to 1913 San Diego City Dump.* Regional Environmental Consultants (RECON), San Diego. Prepared for City of San Diego Development and Environmental Planning Division.
1995 *Cultural Resource Mitigation for the Home Avenue Trunk Sewer: Archaeological Data Recovery of a Portion of SDI-10,528H, the 1908-1913 City of San Diego Dump.* Regional Environmental Consultants (RECON), San Diego. Prepared for City of San Diego Water Utilities/Engineering Departments.

Van Wormer, Stephen R., and William R. Manley
1997 *Archaeological Investigations at the San Diego County Justice Center*. William Manley Consulting, San Diego.

Wade, Sue A.
1986 Archaeological Testing Program at SDi-10185, Loci A-C, and SDi-10186. Otay Mesa, City of San Diego, California. RECON, San Diego.

Walawender, Michael J.
2000 *The Peninsular Ranges: A Geological Guide to San Diego's Back Country.* Kendall/Hunt Publishing Company, Dubuque, Iowa.

Wallace, William J.
1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214-23.

Warren, Claude N.
1964 *Cultural Change and Continuity on the San Diego Coast*. Ph.D. dissertation, Department of Anthropology, University of California, Los Angeles.
1966 *The San Dieguito Type Site*. San Diego Museum of Man Papers No. 5.
1967 The San Dieguito Complex: Review and Hypothesis. *American Antiquity* 32(2):168-185.
1968 Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, edited by Cynthia Irwin-Williams, pp. 1-14. Eastern New Mexico University Contributions in Anthropology No. 1. Portales.
1985 Garbage About the Foundations: A Comment on Bull's Assertion. *San Diego State University Cultural Resource Management Casual Papers* 2(1):82-90.
1987 The San Dieguito and La Jolla: Some Comments. In *San Dieguito-La Jolla: Chronology and Controversy*, edited by Dennis Gallegos, pp. 73-85. San Diego County Archaeological Society Research Paper No. 1.

Warren, Claude N., Gretchen Siegler, and Frank Dittner

1993 Paleoindian and Early Archaic Periods. In *Historic Properties Background Study for the City of San Diego Clean Water Program*. Brian F. Mooney Associates. Prepared for Clean Water Program for Greater San Diego.

2008 Revised-Paleo-Indian and Early Archaic Periods. In *Historic Properties Background Study for the City of San Diego Clean Water Program.* Brian F. Mooney Associates. Prepared for Clean Water Program for Greater San Diego.

Waterman, T. T.

1910 The Religious Practices of the Diegueño Indians. *University of California Publications in American Archaeology and Ethnology* 8(6).

Waters, Michael R.

1983 Late Holocene Lacustrine Chronology and Archaeology of Ancient Lake Cahuilla, California. *Quaternary Research* 19:373-387.

Welch, Patrick H. A.

1984 *Draft Environmental Assessment for the Table Mountain Study Area: Wind Energy Development.* El Centro: Bureau of Land Management.

West, G. James, Wallace Woolfenden, James A. Wanket, and R. Scott Anderson

2007 Late Pleistocene and Holocene Environments. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 11-34. AltaMira Press, Lanham, Maryland.

Williams, Brian

2014 *Final Cultural Resources Monitoring Report for the East County Substation Project*. Report in progress.

Wirth Associates

1981 *Jacumba Archaeological District*. Wirth Associates.

Wood, Catherine M.

1937 *Palomar from Tepee to Telescope*. Frye and Smith, Ltd., San Diego.

Woods, Clyde M.

1982 *APS/SDG&E Interconnection Project Native American Cultural Resources: Miguel to the Colorado River and Miguel to Mission Tap*. (Identification and Evaluation of Native American Cultural Resources Situated within One Mile of the Proposed and Existing Rights-of-Way in California). Submitted to San Diego Gas and Electric.

APPENDICES

APPENDIX A

Recommended Avoidance Measures for Powerline Replacement Project

RECOMMENDED AVOIDANCE MEASURES FOR POWERLINE REPLACEMENT PROJECT

Note: Avoidance and recommended mitigation noted in this table will be updated and/or revised as final engineering design for each powerline and distribution line segment is completed. The revisions will reflect recommended avoidance measures and mitigation based on final designs and construction methodologies specific to each project component and associated resource. The Cultural Resources Technical Report (Schaefer and Williams 2011) referred to in MM CUL-3 of the FEIR/EIS will be used to show any updates and/or revisions to recommendations included herein to avoid and mitigate for potential impacts to cultural resources. Previous studies and recommendations made for TL6931 (Shaver and Baksh 2012) will also be incorporated and updated as necessary. Prior to issuance of a Notice to Proceed (NTP) for any segment, Appendix A will be redistributed for thirty days to the consulting parties and any updates to the Schaefer and Williams 2011 or Shaver and Baksh 2012 recommendations resulting from final design will be noted. Sketch maps of all resources within the APE of each NTP will be submitted to the Forest with the Appendix A table and show the current sites' conditions. These maps shall be on file with the Forest and will be made available to consulting parties upon request. Site information is protected by California Government Code 6254.10, NHPA Section 304, ARPA Section 7.18 and other applicable federal state and local laws and regulations prohibiting public and unauthorized disclosure of records related to cultural resources, individuals requesting information may be required to complete a confidentiality agreement prior to the Forest releasing the requested information. The Forest shall coordinate for the transfer of site sketch maps with the requesting consulting party within seven days of receipt of the request.

Line/ Segment	Facility/ Work Space	Project Component	Recommended Avoidance/ Mitigation Measure
C78	SS X0	Stringing Site	None
C78	SS X1	Stringing Site	None
C78	SS X2	Stringing Site	None
C78	SS X81	Stringing Site	None
C78	P172691	Removal	None
C78	P172692	Removal	None
C78	P172693	Removal	None
C78	P172694	Removal	None
C78	P172695	Removal	None
C78	P172696	Removal	None
C78	P172697	Removal	None
C78	P166376	Removal	None
C78	P172698	Removal	None
C78	P166377	Removal	None
C78	P172699	Removal	None
C78	P172700	Removal	None
C78	P172701	Removal	None
C78	P172702	Removal	None
C78	P172703	Removal	None

Line/ Segment	Facility/ Work Space	Project Component	Recommended Avoidance/ Mitigation Measure
C78	P172704	Removal	A cultural monitor is recommended if pole replacement consists of a foundation pole or undergrounding
C78	P172705	Removal	Project Redesign: Use sawed down pole to the west of P172705 for replacement pole. A cultural monitor is recommended for this work and when the pole is removed from service and if road improvements occur along the access road to this pole.
C78	P172706	Removal	None
C78	P172707	Removal	None
C78	P172708	Removal	A cultural monitor is recommended if pole replacement consists of a foundation pole or undergrounding
C78	P172709	Removal	None
C78	P172710	Direct Bury	None
C78	P-32	Direct Bury	None
C78	P-31	Direct Bury	None
C78	P-30	Direct Bury	None
C78	P-33	Direct Bury	None
C78	P-34	Direct Bury	None
C78	P-29	Direct Bury	None
C78	P107769	Direct Bury	None
C78	P-28	Direct Bury	None
C78	P-35	Direct Bury	None
C78	P-27	Direct Bury	None
C78	P172686	Direct Bury	None
C78	P172687	Direct Bury	None
C78	P-20877	Direct Bury	None
C78	P172688	Direct Bury	None
C78	P-38	Direct Bury	None
C78	P172689	Direct Bury	None
C78	P-37	Direct Bury	None
C78	P172690	Direct Bury	None
C78	P-26	Direct Bury	None
C78	P-20	Direct Bury	None
C78	P-25	Direct Bury	None
C78	P-19	Direct Bury	None
C78	P-24	Direct Bury	None
C78	P-18	Direct Bury	None

Line/ Segment	Facility/ Work Space	Project Component	Recommended Avoidance/ Mitigation Measure
C78	P-21	Direct Bury	None
C78	P-22	Direct Bury	None
C78	P-17	Direct Bury	None
C78	P-16	Direct Bury	None
C78	P-15	Direct Bury	None
C78	P-13	Direct Bury	None
C78	P-14	Direct Bury	None
C78	P-9	Direct Bury	None
C78	P-8	Direct Bury	None
C78	P-10	Direct Bury	None
C78	P-11	Direct Bury	None
C78	P-7	Direct Bury	None
C78	P-12	Direct Bury	None
C78	P-1	Direct Bury	None
C78	P-5	Direct Bury	None
C78	P-4	Direct Bury	None
C78	P-2	Direct Bury	None
C78	P-3	Direct Bury	None
C78	P-6	Direct Bury	None
TL625B	P198896	None	None
TL625B	P272849	Micropile	None
TL625B	P273066	Micropile	None
TL625B	P30605	None	None
TL625B	P675321	Direct Bury	None
TL625B	Z135625	None	None
TL625B	Z135626	Micropile	None
TL625B	Z272839	Micropile	None
TL625B	Z272840	Micropile	None
TL625B	Z272841	Micropile	None
TL625B	Z272842	None	None
TL625B	Z272843	Micropile	None
TL625B	Z272844	Micropile	None
TL625B	Z272845	Micropile	None
TL625B	Z272846	Micropile	None
TL625B	Z272847	Micropile	None
TL625B	Z272848	None	None
TL625B	Z272850	Micropile	None
TL625B	Z272851	None	None
TL625B	Z272852	Micropile	None

Line/ Segment	Facility/ Work Space	Project Component	Recommended Avoidance/ Mitigation Measure
TL625B	Z272853	Micropile	None
TL625B	Z272854	Micropile	Do not conduct blading or other improvements of access road without an archaeological monitor. Archaeological monitor is recommended if pole will become a foundation or underground facility.
TL625B	Z272855	Micropile	~~Project Redesign: Using existing sawed-down pole or place new pole within 2-4' of existing pole and do not conduct blading or other improvements of access road without an archaeological monitor. Archaeological monitor is recommended if pole will become a foundation or underground facility.~~ REVISION: If pole construction is micropile, an archaeological monitor is recommended to establish an ESA around the workspace. Crews should utilize existing pads at this location. No further cultural resources work recommended.
TL625B	Z272856	Micropile	~~Project Redesign: Pole already steel, stay in existing access during overhead switch-out or if steel pole needs to be replaced, place new pole within 2-4' of existing pole and do not conduct blading or other improvements of access road without an archaeological monitor. Archaeological monitor is recommended if pole will become a foundation or underground facility.~~ REVISION: If pole construction is micropile, an archaeological monitor is recommended to establish an ESA around the workspace. Crews should utilize existing pads at this location. No further cultural resources work recommended.
TL625B	Z272857	Micropile	None
TL625B	Z272858	Micropile	None
TL625B	Z272859	Micropile	None
TL625B	Z272860	Micropile	None

Line/ Segment	Facility/ Work Space	Project Component	Recommended Avoidance/ Mitigation Measure
TL625B	Z272862	Micropile	Project Redesign: Pole already steel, stay in existing access during overhead switch-out or if steel pole needs to be replaced, place new pole within 2-4 ft of existing pole and do not conduct blading or other improvements of access road without an archaeological monitor present
TL625B	Z272864	None	Project Redesign: Place new pole within 2-4' of existing pole and do not conduct blading or other improvements of access road without an archaeological monitor. Archaeological monitor is recommended if pole will become a foundation or underground facility.
TL625B	Z272865	Micropile	~~Project Redesign: Place new pole within 2-4' of existing pole and do not conduct blading or other improvements of access road without an archaeological monitor. Archaeological monitor is recommended if pole will become a foundation or underground facility.~~ REVISION: If pole construction is micropile, an archaeological monitor is recommended to establish an ESA around the workspace and any vegetation removal. Crews should utilize existing pads at this location. No further cultural resources work recommended.
TL625B	Z272866	Micropile	None
TL625B	Z272867	Micropile	None
TL625B	Z272868	None	None
TL625B	Z272869	Micropile	None
TL625B	Z272870	Micropile	None
TL625B	Z272871	Micropile	None
TL625B	Z272872	Micropile	None
TL625B	Z272873	None	None
TL625B	Z272874	Micropile	None
TL625B	Z272874	Micropile	None
TL625B	Z272875	Micropile	None
TL625B	Z272876	Micropile	None
TL625B	Z272877	Micropile	None
TL625B	Z272878	Micropile	None
TL625B	Z272879	Micropile	None
TL625B	Z272880	Micropile	None

Line/ Segment	Facility/ Work Space	Project Component	Recommended Avoidance/ Mitigation Measure
TL625B	Z272881	None	None
TL625B	Z272882	Micropile	None
TL625B	Z272883	Micropile	None
TL625B	Z272884	None	None
TL625B	Z272885	Micropile	None
TL625B	Z272886	Micropile	None
TL625B	Z272887	None	None
TL625B	Z272888	None	None
TL625B	Z272889	None	None
TL625B	Z272890	Micropile	None
TL625B	Z272891	Micropile	None
TL625B	Z272892	Micropile	None
TL625B	Z272893	Micropile	None
TL625B	Z272894	Micropile	None
TL625B	Z272895	Micropile	None
TL625B	Z272897	Micropile	None
TL625B	Z272898	Micropile	None
TL625B	Z272899	Micropile	None
TL625B	Z272900	Micropile	None
TL625B	Z272901	Micropile	None
TL625B	Z272902	Direct Bury	None
TL625B	Z30607	Micropile	None
TL625B	Z571417	Direct Bury	None
TL625B	Z571418	Direct Bury	Stay within access road and no blading of access road without an archaeological monitor present. Avoid bedrock outcrops. If pole replacement consists of a foundation pole or undergrounding, a cultural monitor is recommended due to high sensitivity for buried cultural deposits.
TL625B	SS C	Stringing Site	Do not conduct blading or other improvements of access road without an archaeological monitor. An ESA should be constructed along the sides of the existing disturbance during stringing activities.
TL625B	GS C	Guard Structure	None
TL625B	GS D	Guard Structure	None

Line/ Segment	Facility/ Work Space	Project Component	Recommended Avoidance/ Mitigation Measure
TL625B	GS E	Guard Structure	None
TL625B	GS F	Guard Structure	None
TL625B	GS C	Guard Structure	None
TL625B	GS D	Guard Structure	None
TL625B	GS E	Guard Structure	None
TL625B	GS F	Guard Structure	None
TL625B	Japatul SY and Helo LZ	Staging Area	None
TL625B	Peterson Staging Yard A	Staging Area	None
TL625B	Peterson Staging Yard B	Staging Area	None
TL625B	Snyder Staging Yard	Staging Area	None
TL625B	SS X390	Stringing Site	None
TL625B	SS X447	Stringing Site	None
TL625B	SS X455	Stringing Site	None
TL625B	SS G	Stringing Site	None
TL625B	SS F	Stringing Site	None
TL625B	SS E	Stringing Site	None
TL625B	SS D	Stringing Site	None
TL625B	SS B	Stringing Site	None
TL625B	SS A	Stringing Site	None
TL625B	GS B	Guard Structure	None
TL625B	GS G	Guard Structure	None
TL625B	GS H	Guard Structure	None
TL625B	GS I	Guard Structure	None
TL625B	GS J	Guard Structure	None
TL625B	GS B	Guard Structure	None
TL625B	GS G	Guard Structure	None

Line/ Segment	Facility/ Work Space	Project Component	Recommended Avoidance/ Mitigation Measure
TL625B	GS H	Guard Structure	None
TL625B	GS I	Guard Structure	None
TL625B	GS J	Guard Structure	None
TL625B	SS 15B	Stringing Site	None
TL625B	SS 14B	Stringing Site	None
TL625B	GS 9B	Guard Structure	None
TL625B	GS 9B	Guard Structure	None
TL625B	GS 10B	Guard Structure	None
TL625B	GS 9B	Guard Structure	None
TL625B	GS 9B	Guard Structure	None
TL625B	GS 10B	Guard Structure	None
TL625B	GS 10B	Guard Structure	None
TL625B	GS 10B	Guard Structure	None
TL625B	GS A	Guard Structure	None
TL625B	GS A	Guard Structure	None
TL629E	SS A	Stringing Site	None
TL629E	SS O	Stringing Site	None
TL629E	Border Patrol SY	Staging Area	None
TL629E	Border Patrol Helo Site	Staging Area	None
TL629E	Kitchen Creek Staging Yard	Staging Area	An ESA should be constructed along the sides of the existing access road disturbance prior to establishment of the yard.
TL629E	Kitchen Creek Helo Site	Staging Area	None
TL629E	SS X441	Stringing Site	None
TL629E	SS X442	Stringing Site	An ESA should be constructed along the sides of the existing disturbance during stringing activities.

Line/ Segment	Facility/ Work Space	Project Component	Recommended Avoidance/ Mitigation Measure
TL629E	SS X443	Stringing Site	An ESA should be constructed along the sides of the existing disturbance during stringing activities.
TL629E	SS 38	Stringing Site	None
TL629E	SS 39	Stringing Site	None
TL629E	SS 40	Stringing Site	None
TL629E	SS B	Stringing Site	None
TL629E	SS C	Stringing Site	None
TL629E	SS D	Stringing Site	None
TL629E	SS X524	Stringing Site	None
TL629E	SS F	Stringing Site	None
TL629E	SS H	Stringing Site	None
TL629E	SS H	Stringing Site	None
TL629E	SS I	Stringing Site	None
TL629E	SS X532	Stringing Site	None
TL629E	SS J	Stringing Site	An ESA should be constructed along the sides of the existing disturbance during stringing activities.
TL629E	SS K	Stringing Site	An ESA should be constructed along the sides of the existing disturbance during stringing activities.
TL629E	SS L	Stringing Site	None
TL629E	SS M	Stringing Site	None
TL629E	SS X540	Stringing Site	None
TL629E	SS X543	Stringing Site	None
TL629E	GS A	Guard Structure	None
TL629E	GS B	Guard Structure	None
TL629E	GS C	Guard Structure	None
TL629E	GS D	Guard Structure	None
TL629E	GS A	Guard Structure	None
TL629E	GS B	Guard Structure	None
TL629E	GS C	Guard Structure	None
TL629E	GS D	Guard Structure	None
TL629E	Z44221-22	Micropile	None

Line/ Segment	Facility/ Work Space	Project Component	Recommended Avoidance/ Mitigation Measure
TL629E	Z44220	Direct Bury	None
TL629E	Z44219	Direct Bury	None
TL629E	P250026 P-4 NEW	Micropile	An ESA should be constructed along the sides of the existing disturbance and a cultural monitor is recommended due to high sensitivity for buried cultural deposits.
TL629E	44217-18	Micropile	None
TL629E	44215-16	Micropile	None
TL629E	Z44214	Direct Bury	None
TL629E	Z44213	Direct Bury	None
TL629E	Z44212	Micropile	None
TL629E	Z44210-11	Micropile	None
TL629E	Z44209	Micropile	None
TL629E	Z44208	Direct Bury	None
TL629E	Z44207	Micropile	~~Project Redesign: Stay within 4 ft. of existing pole. Monitor recommended.~~ REVISION: If micropile, an archaeological monitor is recommended to establish an ESA. Crews should utilize existing disturbances at pole and no further cultural resources work is recommended.
TL629E	P45854	Micropile	None
TL629E	Z44206	Direct Bury	None
TL629E	Z44205	Micropile	None
TL629E	Z44204	Micropile	None
TL629E	Z44203	Direct Bury	None
TL629E	Z44202	Direct Bury	None
TL629E	Z44201	Micropile	None
TL629E	Z44200	Direct Bury	None
TL629E	Z44199	Direct Bury	None
TL629E	Z44198	Direct Bury	None
TL629E	Z44197	Micropile	None
TL629E	Z44196	Direct Bury	None
TL629E	Z44195	Direct Bury	None
TL629E	Z44194	Micropile	None
TL629E	Z44193	Direct Bury	None
TL629E	Z44192	Direct Bury	None
TL629E	Z44191	Direct Bury	None
TL629E	Z44190	Direct Bury	None

Line/ Segment	Facility/ Work Space	Project Component	Recommended Avoidance/ Mitigation Measure
TL629E	Z44189	Direct Bury	None
TL629E	Z44188	Micropile	None
TL629E	Z44187	Micropile	None
TL629E	P192944	Direct Bury	If pole replacement consists of a foundation pole or undergrounding, a cultural monitor is recommended due to high sensitivity for buried cultural deposits.
TL629E	Z40575-76	Direct Bury	None
TL629E	Z44178-79	Micropile	None
TL629E	Z44180-81	Micropile	None
TL629E	Z44182-83	Micropile	None
TL629E	Z44184	Direct Bury	None
TL629E	Z40577	Direct Bury	None
TL629E	Z44185	Direct Bury	None
TL629E	Z44186	Micropile	None
TL629E	Z44177	Direct Bury	None
TL629E	Z40578	Micropile	None
TL629E	Z44176	Micropile	None
TL629E	Z40579	Micropile	None
TL629E	Z44175	Micropile	None
TL629E	Z40580	Micropile	None
TL629E	Z40581	Direct Bury	None
TL629E	Z44173-74	Micropile	None
TL629E	Z40582	Micropile	None
TL629E	Z40583	Direct Bury	None
TL629E	Z40584	Micropile	None
TL629E	Z44171-72	Micropile	None
TL629E	Z40585	Micropile	~~Project Redesign: The existing access road to this pole will be eliminated and the pole will be helicopter set. A footpath from Z40587 should be delineated by an archaeological monitor prior to replacement activities.~~ REVISION: If proposed access road is kept, an archaeological monitor is recommended due to the high sensitivity for buried cultural deposits.

Line/ Segment	Facility/ Work Space	Project Component	Recommended Avoidance/ Mitigation Measure
TL629E	Z40586	Micropile	~~Project Redesign: The existing access road to this pole will be eliminated and the pole will be helicopter set. A footpath from Z40587 should be delineated by an archaeological monitor prior to replacement activities.~~ REVISION: If proposed access road is kept, an archaeological monitor is recommended due to the high sensitivity for buried cultural deposits.
TL629E	Z44170	Micropile	None
TL629E	Z40587	Micropile	None
TL629E	Z44160	Micropile	None
TL629E	Z44159	Direct Bury	None
TL629E	Z40588	Micropile	None
TL629E	Z44161	Micropile	None
TL629E	Z44158	Direct Bury	None
TL629E	Z40590	Direct Bury	None
TL629E	Z44169	Micropile	None
TL629E	Z40589	Micropile	None
TL629E	Z44162	Micropile	None
TL629E	Z44163	Direct Bury	None
TL629E	Z44164	Direct Bury	None
TL629E	Z44165	Direct Bury	None
TL629E	Z44168	Micropile	None
TL629E	Z44166	Micropile	None
TL629E	Z44167	Micropile	None
TL629E	Z44234	Micropile	None
TL629E	P41033	Micropile	None
TL629E	P174081	Direct Bury	None
TL629E	Z100035	Direct Bury	None
TL629E	Z100145	Direct Bury	None
TL629E	Z44232	Direct Bury	None
TL629E	Z44230-31	Micropile	None
TL629E	Z44229	Micropile	None
TL629E	Z44228	Direct Bury	None

Line/ Segment	Facility/ Work Space	Project Component	Recommended Avoidance/ Mitigation Measure
TL629E	Z44227	Micropile	None
TL629E	P250025 P-3 NEW	Direct Bury	None
TL629E	Z44226	Micropile	None
TL629E	P250024 P-2 NEW	Micropile	None
TL629E	Z44225	Direct Bury	None
TL629E	Z44223-24	Micropile	None
TL629E	[P40858]	Micropile	None
TL629E	[P40857]	Micropile	None
TL629E	[P40856]	Micropile	None
TL629E	[P40855]	Micropile	None
TL629E	[P40854]	Direct Bury	None
TL629E	[P40853]	Direct Bury	None
TL629E	P40852	Direct Bury	None
TL629E	[P40851]	Micropile	An ESA should be constructed along the sides of the existing disturbance and a cultural monitor is recommended due to high sensitivity for buried cultural deposits.
TL629E	P40850	Micropile	None
TL629E	Z40572-73-74	Micropile	If pole replacement consists of a foundation pole or undergrounding, a cultural monitor is recommended due to high sensitivity for buried cultural deposits.
TL629E	SS E	Stringing Site	None

APPENDIX B

Consultation and Cooperation with Tribes, Native American Organizations, and Individuals during O&M under the MSUP

Cooperation with Tribes, Native American Organizations, and Individuals during O&M under the MSUP

It is recognized that the lands encompassing the APE for the MSUP are part of the ancestral lands lived in, occupied by, used by, traveled through, and worshipped in by Native Americans.

Historic properties contained in the APE for this MSUP and covered by this HPMP include, but are not limited to, spiritual sites, archaeological sites (historic and ancient), cabins and other structures, landscapes associated with the history, culture, and historical activities of California Indians and their ancestors, Euroamericans, and other groups in Southern California.

Native American cultural values associated with their ancestral lands remain undiminished as a result of this Undertaking. The Forest will cooperate with Native Americans to maintain their cultural identity in association with these ancestral lands. The Forest will cooperate with tribes to facilitate policies regarding Native American access to and use of lands within the APE for this Undertaking that are under the legal control of the Forest.

Comments or other communications received from federally recognized tribes regarding the HPMP or any matter associated with the HPMP will be treated in the same manner as communications with any federal, state, or local government agency. Tribal comments or other communications pertaining to written documents, reports, or other materials developed in accordance with the HPMP will be acknowledged as having come from the tribes and will be placed in a separate "Tribal Communications and Comments" section of any report, or other document commented upon by the tribes, in an effort to maintain the government-to-government nature of correspondence and consultation.

The Forest will cooperate with tribes to identify a suitable curation facility for artifacts and other materials recovered during otherwise lawful activities authorized in the MSUP and culturally associated with the tribes, as well as associated records and other materials as defined at 36 CFR Part 79.

Tribes or individual Native Americans may provide information about historic properties contained within the APE for the MSUP to the Forest or SDG&E, consistent with their cultural beliefs, in order to assist the Forest and SDG&E in managing historic properties in the APE for the Undertaking that are of concern to the tribes and others. The Forest and SDG&E will respect the confidentiality of any information provided by the tribes and which the tribes wish to have maintained as confidential. The Forest and the tribes will cooperate to define a process by which confidential information may be provided to the Forest and SDG&E for their management purposes and yet preserve, to the extent possible, the confidential nature of the information. Neither the Forest nor SDG&E will share cultural information identified by the tribes as being of a confidential nature with any other party without the express permission of the tribe and the individual providing the information.

The tribes or other Native Americans with appropriate cultural knowledge may review reports and literature and offer any comments they feel to be useful by way of correcting inaccuracies or supplementing the information so as to improve SDG&E's and the Forest's understanding of relevant historic properties and Native American culture in the APE to better manage historic properties related to the Undertaking.

APPENDIX C

General Public Consultation and Participation

General Public Consultation and Participation

In cooperation with the Forest, SDG&E shall support the Forest to explore ways to enhance public participation in historic preservation during the term of the MSUP. Such efforts may include, but are not limited to:

- Supporting the Forest in assessing public interests in historic preservation and soliciting suggestions from the public,
- Supporting the Forest in determining how historic preservation goals and objectives can be effectively communicated to the public,
- Supporting the Forest in developing training that educates the public to the cultural diversity inherent in regional history and prehistory,
- Supporting the Forest in identifying opportunities for interpreting to the public regional prehistory, history, Native American culture, and other facets of the human experience in the area.

APPENDIX D

Employee Education and Public Awareness Program

Employee Education and Public Awareness Program

SDG&E shall ensure that all appropriate SDG&E personnel responsible for making decisions regarding the planning, construction, maintenance, preservation, or rehabilitation standards for the performance of work authorized in the MSUP on properties listed or eligible for listing on the NRHP receive annual training in the application of The Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR Part 68).

SDG&E qualified personnel or its qualified consultants shall provide training to all appropriate SDG&E operation and maintenance personnel regarding implementation of the HPMP on Forest land, including cultural awareness training for the appropriate treatment of historic properties of religious or cultural significance to tribes. SDG&E has prepared a training video (2010) that was consulted on with several local tribal members and that may be used in conjunction with other training to provide information to operation and maintenance personnel.

SDG&E qualified personnel shall develop and implement an in-house orientation program to advise SDG&E management personnel responsible for decisions potentially affecting historic properties within the MSUP APE regarding the provisions of the HPMP and its implications for operation and management procedures on Forest land. Annual training will be required for all personnel involved in operations and maintenance, including managers and supervisors.

APPENDIX E

Reporting Requirements during O&M of the MSUP

Reporting Requirements during O&M of the MSUP

SDG&E historic preservation activities associated with cultural resources inventory, evaluation, assessment of effects, treatment of effects, planning, Native American and public consultation, and other activities relating to the MSUP will be reported as directed by the Forest and in accordance with the Project Operations and Maintenance Plan. The format and content of such reports will be consistent with guidance of the California Office of Historic Preservation and the Secretary of the Interior and as otherwise stipulated by the Forest. Some reports may be prepared in a manner that is understandable to the educated lay public as directed by the Forest. Reports to the Forest will be prepared by qualified SDG&E personnel or its qualified consultants.

The reports shall:

- Describe the historic preservation program carried out in the APE for the MSUP by SDG&E in the foregoing federal fiscal year, summarizing the results of any inventory, evaluation, monitoring, and treatment efforts for the MSUP;
- Document any SDG&E or Forest on-going consultation with federal agencies and tribes, including any agreements concluded with any parties regarding historic preservation within the APE for the MSUP;
- Recommend changes to the historic preservation program;
- The draft reports will be provided to the Forest not later than December 1 of the calendar year primarily associated with the fiscal year activities.