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CHAPTER 4 – ENVIRONMENTAL IMPACT ASSESSMENT

4.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Measures	Less-Than-Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.5.0 Introduction

This section describes cultural resources identified within the San Diego Gas & Electric Company (SDG&E) East County (ECO) Substation Project (Proposed Project) site and identifies potential impacts that could result from construction or operation and maintenance. Cultural resources can include archaeological sites, sacred sites, traditional cultural properties, rock art, rock piles or cairns, historic buildings, and other features of the historic built environment. Cultural resources identified within the Proposed Project site are limited to prehistoric and historic archaeological sites. There is a high sensitivity for paleontological resources in one of the geologic formations that underlays the substation. With the implementation of applicant-proposed measures (APMs), potential impacts to cultural and paleontological resources that may result from the Proposed Project will be reduced to a less-than-significant level.

4.5.1 Methodology

Cultural Resources Records Search

Proposed Project area maps, imposed on United States (U.S.) Geological Survey (USGS) quadrangle maps and high-resolution aerial photographs, were used to determine the extent of previously completed cultural resource work and plot previously recorded cultural resource sites. The Proposed Project description was used as the basis for determining potential impacts to cultural resources. Site record and archival searches were completed at the South Coastal Information Center (SCIC). Site records for previously recorded sites in the Proposed Project area were reviewed and analyzed. The records search encompassed a maximum 0.5-mile radius around each of the five Proposed Project component locations. Technical reports completed for

previous projects that overlap or duplicate segments of the current study were also reviewed for information. A cultural technical report was prepared for the Proposed Project and has been included as Attachment 4.5-A: Cultural Resources Technical Report.

Native American Contacts

The Native American Heritage Commission (NAHC) was contacted for a Sacred Lands Record Search and for a list of the appropriate Native Americans to contact for input on this Proposed Project. This correspondence is included in Attachment 4.5-B: NAHC Correspondence. The NAHC indicated the presence of numerous sensitive locations in the vicinity of the Proposed Project and that there were a number of individuals who should be contacted for additional information. Letters to initiate contact were sent to representatives of the Campo Kumeyaay Nation, Manzanita Band of the Kumeyaay Nation, Ewiiapaayp Tribal Office, Kumeyaay Cultural Heritage Preservation Committee, Mr. Clint Linton (Diegueno/Kumeyaay), and the Kumeyaay Cultural Repatriation Committee. As of November 10, 2008, there has been only one direct response to the letters of inquiry from Chairwoman La Chappa of the Campo Kumeyaay Nation. Chairwoman La Chappa expressed that she would like to be updated with information as the Proposed Project progresses. To date, no other direct responses to the letters of inquiry have been received.

Archaeological Survey

The Proposed Project areas were visited in February, March, April, June, July, August, and October 2008 to conduct pedestrian field surveys to relocate previously recorded sites, inspect places not previously surveyed, and examine potential new construction sites. The visits included areas that have been previously surveyed or studied for various projects dating back to the mid 1980s. The current field survey (including the Boulevard Substation rebuild site) was conducted after completion of the site records search to compare the archival information with actual field conditions. The survey was completed by two individuals using a pedestrian transect that did not exceed 10 meters between team members. Surveyed areas were carefully inspected for surface evidence of archaeological materials, such as ceramics, debitage, ground stone, formal flaked-stone implements, agave roasting pits, and historic-era materials or features. Areas of substantial disturbance or alteration were spot checked for cultural resource presence.

Paleontological Resources Records Search

A literature and record review of relevant published geologic reports, unpublished paleontological reports, and unpublished museum paleontological locality data was conducted. All fossil localities found within a five-mile radius of the Proposed Project right-of-way (ROW) were noted.

4.5.2 Existing Conditions

Regulatory Background

Federal

National Historic Preservation Act

The National Historic Preservation Act requires federal agencies to consider the effects of their undertakings on historic properties. Historic properties are cultural resources (archaeological

sites, historic built environment features, or Native American sites) that are listed on or determined to be eligible for listing on the National Register of Historic Places (NRHP). The governing regulation, Section 106, 36 CFR Part 800, requires the project lead federal agency to consult with the State Historic Preservation Officer.

American Indian Religious Freedom Act of 1978

The American Indian Religious Freedom Act establishes a federal policy of respect for, and protection of, Native American religious practices. It also has provisions that allow limited access to Native American religious sites.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) provides for the repatriation of certain items from the federal government and certain museums to the native groups to which they once belonged. The Act defines “cultural items,” “sacred objects,” and “objects of cultural patrimony” and establishes a means for determining ownership of these items. However, the provisions for repatriation only apply to items found on federal lands.

Executive Orders 13007 and 13084

Executive Order 13007 requires federal agencies with land management responsibilities to allow access and use of Indian sacred sites on public lands and to avoid adversely affecting these sites. Executive Order 13084 reaffirms the government-to-government relationship between the federal government and recognized Indian tribes, and requires federal agencies to establish procedures for consultation with tribes. These executive orders only apply to projects that include federal undertakings.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 applies to projects that are located on public lands and Indian lands. The purpose of this act is “the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data which were obtained before the date of the enactment of this Act.”

State

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is a public listing of specific properties to be “protected from substantial adverse change.” Any resource eligible for listing in the CRHR must also be considered under the California Environmental Quality Act (CEQA), described in this section under California Public Resources Code (PRC) section 21000, *et seq.* and California Code of Regulations (CCR), title 14, section 15000, *et seq.*

A historical resource may be listed in the CRHR if it meets one or more of the following criteria:

- 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.
- It is associated with the lives of persons important to local, California, or national history.
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic value.
- It has yielded or has the potential to yield information important in the prehistory or history of the local area, California, or the nation.

Automatic listings include properties listed in the NRHP, determined eligible either by the Keeper of the National Register or through a consensus determination on a project review, or State Historical Landmarks from number 770 onward. In addition, Points of Historical Interest nominated from January 1998 onward are to be jointly listed as Points of Historical Interest and in the CRHR. Landmarks prior to number 770 and Points of Historical Interest may be listed through an action of the State Historical Resources Commission.

Resources listed in a local historic register or deemed significant in a historical resources survey, as provided under PRC Section 5024.1(g), are presumed to be historically or culturally significant unless the preponderance of evidence demonstrates that they are not. A resource that is not listed on or determined to be ineligible for listing on the CRHR, not included in a local register of historical resources, or not deemed significant in a historical resources survey may, nonetheless, be historically significant (PRC Section 21084.1 and Section 21098.1).

Native American Graves Protection and Repatriation Act (2001), California Health and Safety Code

Broad provisions for the protection of Native American cultural resources are contained in the California Health and Safety Code, Division 7, Part 2, Chapter 5 (Sections 8010 through 8030), including the NAGPRA. NAGPRA established a state policy to ensure that California Native American human remains and cultural items are treated with respect and dignity. The NAGPRA also provides the mechanism for disclosure and return of human remains and cultural items held by publicly funded agencies and museums in California. Likewise, the NAGPRA outlines the process that California Native American tribes who are not recognized by the federal government may file claims for human remains and cultural items held in agencies or museums.

California Public Resources Code

Several provisions of the PRC govern archaeological finds in terms of human remains, or any other related object of archaeological or historical interest or value. Procedures are detailed under PRC Section 5097.9 through 5097.996 for actions to be taken whenever Native American remains are discovered. Furthermore, Section 7050.5 of the California Health and Safety Code states that any person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the PRC. Any person removing any human remains without authority of law or written permission of the person or persons having the right to control the remains under PRC Section 7100 has committed a public offense that is punishable by imprisonment.

Title 14 of the CCR, section 4308 concerns preservation law and states that “no person shall remove, injure, disfigure, deface, or destroy any object of archaeological or historical interest or value” within a state park.

Paleontological resources are limited, non-renewable resources of scientific, cultural, and educational value that are protected under CEQA (PRC 21000 et seq.). CEQA and PRC Section 5097, *et seq.* govern the preservation and protection of these resources.

Ethnographic Overview

The Proposed Project area is in the southeastern portion of San Diego County within the historical territory of the Kumeyaay people. Kumeyaay is a native term referring to all Yuman-speaking people living in the region bounded by the San Dieguito River to the south, extending to the Sierra Juarez in Baja California and roughly west of present day Salton Sea. Prior to European contact, Kumeyaay territory may have extended as far north as the San Luis Rey River and to the south into present day Mexico. To the north of the Kumeyaay are the Takic-speaking Luiseño and Cahuilla. To the east and south are other people who speak a variety of distinct languages belonging to the Yuman language family. The Kumeyaay have been referred to by a confusing array of names. The standard practice during the Spanish colonial era in California was to name all native peoples within the sphere of influence of a particular mission district after that mission; hence, the native people living around mission San Diego de Alcalá came to be known as Diegueño. Because this nomenclature generally ignored traditional socio-political divisions, anthropologists later began to apply the terms Tipai and Ipai to distinguish between two culturally and linguistically distinct groups. More recent ethnographic data and historic records indicate that many present day native people refer to themselves as Kumeyaay, and this is now the most widely accepted name.

On the basis of linguistic and archaeological evidence, it has been suggested that the ancestors of the present-day Kumeyaay arrived in this part of California sometime between 1000 B.C. and A.D. 1000. By adding new cultural traditions to earlier patterns, these ancestral Kumeyaay appear to have assimilated with the earlier human inhabitants rather than displacing them.

The Kumeyaay were organized into autonomous bands, each controlling an area measuring approximately 10 to 30 miles around a source of fresh water, typically a perennial drainage or occasionally a spring (Shipek, 1982). Each band usually occupied a main village and several satellite living areas. These settlements were temporary, as the community would fission seasonally into smaller groups, establishing camps to gather, process, and cache seasonally available resources, such as acorns, pine nuts, and agave. Seasonal movements were geared toward following the ripening of major plants dispersed from canyon floors to higher mountain slopes. During the winter months, a band would typically aggregate back to the main village.

The complexity of Kumeyaay residential structures varied according to locality and need. In summer camps, a windbreak or rock-shelter might have been sufficient protection from the elements. In winter, when more substantial structures were needed, the Kumeyaay built thatch-covered domes or gabled houses.

Leadership of each band was invested in a clan chief and at least one assistant. Positions were generally inherited, although a chief could be selected by consensus. Chiefs typically derived their authority through strength of personality and social skills rather than by force, as they had no real coercive powers. The duties of the chief included resolving disputes, advising about marriages, appointing leaders for important gathering expeditions, and directing clan and inter-clan ceremonies.

The Kumeyaay practiced a fairly typical California hunting and gathering subsistence regimen, based on a variety of locally abundant terrestrial and aquatic resources. The Kumeyaay diet was heavily dependent on harvesting wild plant foods, with a strong emphasis on acorns and pinion. An abundance of other plant food, including many different kinds of seeds, bulbs, and other plants, rounded out the diet. Meat was procured by hunting small game, including rabbits, squirrels, and various reptiles. Many of these animals were captured with nets or by hand. Larger game, such as deer, was taken with bow and arrow, but probably did not figure prominently in the diet. Those living in the coastal zone had access to rich marine resources, including an abundant supply of shellfish, fish, sea birds, and sea mammals.

Interaction with neighboring tribes was maintained through extensive trade networks involving the movement of goods and information across diverse ecological zones. The San Diego–area Kumeyaay appear to have maintained stronger trade relationships with their neighbors to the east than with groups to the north and south, as evidenced by a lively trade between the seacoast and inland areas as far east as the Colorado River (Luomala, 1978). Acorns, dried seafood, ornamental marine shell, and other materials moved eastward from the coast and uplands, and salt, gourd seeds, obsidian, and mesquite beans moved in the opposite direction.

Contact between the Kumeyaay and Europeans began in 1542 when Juan Rodríguez Cabrillo landed the first Spanish expedition in San Diego. Sustained cultural interaction did not develop, however, until the founding of Mission San Diego Alcalá in 1769. Although the Kumeyaay culture was not as severely impacted by Spanish colonization as some other California tribes, its sociopolitical structure was drastically disrupted during the Mission period and later. Those Kumeyaay living closest to the mission were most greatly influenced by European civilization, whereas groups living in the mountains were less traumatized by cultural interaction and better able to preserve their heritage.

By the end of the nineteenth century, most Kumeyaay were disenfranchised from their land and relegated to reservations or, in some cases, acculturated into mainstream Euro-American society, generally in rural areas or at the edges of small towns on marginal land that immigrants did not want. Employment opportunities were few. Most Kumeyaay were poorly paid and labored in mines, on ranches, or in towns, although some still supplemented their income with traditional subsistence activities (Chartkoff and Chartkoff, 1984).

Throughout the twentieth century, the Kumeyaay struggled and worked toward maintaining their autonomy and sovereignty. Today their culture is thriving and the Kumeyaay are represented by federally recognized tribes with reservations throughout San Diego County. At present, about 20,000 Kumeyaay descendants live in San Diego County, and approximately 10 percent of them live on 13 established Kumeyaay reservations.

Historic Overview

Prehistoric Background

Southeastern San Diego County contains archaeological evidence of human use and occupation spanning thousands of years of prehistory. The earliest sites date to the early Holocene (9,000 to 7,500 years ago) and are known as the San Dieguito complex, so-named because the culture was first defined through the investigation of a site along the San Dieguito River, about 30 miles northwest of the Proposed Project area. The archaeological remains of this period consist of large, stemmed projectile points and finely made scraping and chopping tools used for hunting and processing large game animals (Moratto, 1984). San Dieguito stone tools generally exhibit a high degree of workmanship and careful raw material selection. Leaf-shaped blades, occasionally with wide-stemmed hafting elements, are common point and/or knife forms. The hafting and delivery systems associated with these artifacts are widely debated, but they probably included hardened foreshafts that fastened to atlatl darts and lances. Bows may have been used, but the mass (weight) of many of the projectiles associated with this cultural tradition implies that it was rare, if in fact present at all.

The La Jolla complex (7,500 to 2,000 years ago) followed the San Dieguito complex. La Jolla Period sites are recognized by the presence of abundant millingstone or ground stone implements such as manos and metates and by the development of shell middens near lagoons and sloughs. This period exhibits a shift from hunting to a more generalized subsistence strategy, relying on a broader range of resources, including plant, shellfish, and small game. During this period, the number of sites increases from the earlier San Dieguito Period and they are found across a greater range of environmental zones with a high concentration along the coastal margin.

In addition to the presence of ground stone tools, La Jolla Period sites are typically associated with flexed human burials with grave offerings and in coastal areas, shell middens. Occasionally, cogstones and discoidals are found in these assemblages. The flaked stone assemblages from these sites generally contain higher percentages of battering and crushing implements, with less emphasis on tools that have a finely worked cutting edge. Formal tool collections have significantly lower percentages of large bifacially worked knives and unifacially worked scraper/cores.

The origin of the La Jolla cultural complex is unclear. Some researchers believe that it developed out of the earlier San Dieguito complex, but others think that it may have coexisted with the San Dieguito and merely represents use of distinct environments and resources by the same culture. Regardless of the origins, the archaeological remains of these two complexes indicate very different subsistence strategies, with the San Dieguito complex focusing on hunting and the La Jolla complex using a broader-based foraging and gathering strategy. Regional variants of the San Dieguito and La Jolla complexes are found in interior regions of San Diego County. The Pauma complex, originally believed to be a distinct archaeological culture, is more likely to be a regional variant of the better-known La Jolla complex.

As elsewhere during late prehistory in Southern California, the Yuman complex (1,300 to 200 years ago) or Late Period was a time of cultural transformation. Beginning just over 1,000 years ago, Yuman-speaking groups moved into the San Diego area. These later populations are recognized by distinctive small projectile points, ceramic vessels, and an increase in the use of

bedrock milling stations with the development of deep mortars. The acorn became an increasingly important component of their diet, although subsistence pursuits from earlier periods continued.

Although differences in settlement patterns have been noted for each successive prehistoric period, habitation sites from all periods are most commonly found near lagoons and along the open coast, or along inland valley stream-channels and rivers.

The Proposed Project area is in a region with a semi-arid climate, a distinct seasonal pattern of rain, and relatively few reliable sources of potable water. In general, the coastal zone, mouths of canyons, or confluences of streams are considered to be archaeologically sensitive and to be the most likely places to support archaeological sites, ranging from small activity areas to habitation sites. Smaller special-use or satellite sites are found scattered across all environmental zones, particularly near water sources or near other desirable resources, such as plant foods, stone material for the manufacture of tools, or clay sources for the production of ceramic vessels.

One common archaeological feature in eastern San Diego County is the agave roasting pit. The Canebrake Canyon archaeological model (Kumeyaay) suggests that agave roasting pits are characterized by:

- A basal layer of rocks underlying the coals, which presumably would not have been disturbed by pit opening or reuse
- A large central rock, reaching to the surface, perhaps not disturbed by pit opening or reuse
- Large rocks lining the pit walls and reaching from the base of the pit to the ground surface, also presumably not disturbed by pit opening or reuse
- No rocks overlying the coals, no surface scatter of rocks, and no rocks with multiple fire-affected surface

A number of these pits are recorded within the Proposed Project area, in particular at the proposed ECO Substation site. The clustering of these pits may be related to the presence of the plants that were collected and prepared in them, as well as the overall conditions that have allowed for the preservation of these features. In nearly all cases, these features have been recorded based on surface indications; few of them have been excavated and verified.

Historic Background

The historic period began in the San Diego area with the voyage of Juan Rodríguez Cabrillo, who landed near Point Loma on September 28, 1542. Although several expeditions were later sent to explore the Alta California coast, for nearly two centuries following Cabrillo's voyage the Spanish government showed little interest in the region, focusing instead on the Mexican mainland and Baja California. In the 1760s however, spurred on by the threat to Spanish holdings in Alta California by southward expansion of the Russian sphere of influence, the Spanish government began planning for the colonization of Alta California (Rolle, 1978).

The Spanish originally planned to establish their first settlement in Alta California at San Diego, using a four-pronged expedition. Two groups were to arrive by sea and two by land. The

various expeditions departed from their respective locations throughout the first half of 1769. The two ships and both over-land parties eventually reached San Diego. A third supply ship was dispatched to join the expedition, but it was apparently lost at sea. The colonists succeeded in establishing Mission San Diego de Alcalá on July 16, 1769, at the present-day location of Presidio Park. The Mission was moved inland to its present location after the original setting proved unsatisfactory. The Presidio remained on the hillside, overlooking present day Old Town and the mouth of the San Diego River, and it gradually fell into disrepair. Occupants of the Presidio made their way to Old Town and contributed to the development of this very early settlement in the San Diego region.

For the next 50 years, mission influence grew in Southern California. Mission San Luis Rey de Francia, north of San Diego in present-day Oceanside, was established on June 13, 1798 (James, 1912) and other missions and Presidios were established along the coast of California. The mission economy was based on farming and open-range ranching over vast expanses of territory. Ranching included both sheep and cattle.

As part of their colonization goals, the church hierarchy was obligated to convert the native people to Christianity, and the church worked diligently at converting the local aboriginal populations. The mission priests gathered as many Kumeyaay to the mission as possible. Once there, the neophytes essentially were held captive while they received religious instructions and provided free labor for the mission, often forcibly. The effects of mission influence upon the local native population were devastating. The reorganization of their traditional lifestyle alienated them from their previous subsistence patterns and social customs. European diseases, for which the Kumeyaay had no immunity, reached epidemic proportions and many died.

Mexican independence from Spain in 1821 was followed by secularization of the California missions in 1832. Between 1833 and 1845, the newly formed Mexican government divided up the immense church holdings into land grants. By the 1840s, ranches, farms, and dairies were being established throughout the El Cajon Valley, along the Sweetwater River, and in nearby areas.

The Rancho era in California was short-lived and, in 1848, Mexico ceded California to the United States under the Treaty of Guadalupe Hidalgo. Growth of the region was comparatively rapid after succession. Subsequent gold rushes, land booms, and transportation development all played a part in attracting settlers to the area. San Diego County was established in 1850, the same year that the City of San Diego was incorporated. Over the next 20 years, the county's population increased six-fold and the city population more than tripled (San Diego Historical Society, 2004). By the late 1800s, the county was still growing and a number of outlying communities developed around the old ranchos and land grants; in particular, areas in the southern limits of the county (Collett and Cheever, 2002).

Throughout the early twentieth century, most of San Diego County remained rural. Like most of Southern California, the region changed rapidly following World War II, when the pace of migration and growth quickened. Today, eastern San Diego County remains one of the few sparsely populated areas of the county, although this is changing. The remoteness of the Proposed Project area has resulted in a generally undeveloped appearance, with the exception of

access roads, target practice ranges, and an accumulation of modern trash. The Proposed Project area is also within an active zone for the movement of undocumented immigrants into the U.S.

Cultural Resources

Record Search Results

The results of the record search indicate that the proposed ECO Substation, Southwest Powerlink (SWPL) loop-in, and 138 kilovolt (kV) transmission line have previously recorded sites in the Area of Potential Effect (APE). Two potentially significant historic resources are recorded within the 138 kV transmission line alignment. A segment of the San Diego and Arizona Railroad and a segment of Old Highway 80 are recorded within the transmission line APE. All of the previously recorded sites within the proposed ECO Substation footprint are plotted in the northeastern section. The previously recorded sites are summarized in Table 4.5-1: Previously Recorded Sites – ECO Substation APE, Table 4.5-2: Previously Recorded Sites – SWPL Loop-In APE and in Table 4.5-3: Previously Recorded Sites – 138 kV Transmission Line APE. There are no previously recorded sites, features, or isolated finds within the proposed Boulevard Substation rebuild or the White Star Communication Facility rebuild areas.

Table 4.5-1: Previously Recorded Sites – ECO Substation APE

Site Number	Site Description	Date Recorded	Site Evaluated?
CA-SDI-2720	Unknown	1964 Prewitt	No
CA-SDI-6115	18 Agave Roasting Pits and Small Prehistoric Ceramic Scatter	1976 Unknown Recorder	No

Source: Department of Parks and Recreation (DPR) Forms; on file at the SCIC.

Table 4.5-2: Previously Recorded Sites – SWPL Loop-In APE

Site Number	Site Description	Date Recorded	Site Evaluated?
CA-SDI-7073	Sparse Flaked Lithic and Prehistoric Ceramic Scatter	1979 Burkenroad	No
CA-SDI-7083	Sparse Prehistoric Ceramic Scatter	1979 Moore	No

Source: DPR Forms; on file at the SCIC.

East County Substation and Southwest Powerlink Loop-In

Two new isolated finds composed of two metavolcanic scraper stone tools, were recorded during the current survey effort within the ECO Substation site. In addition, a number of the previously recorded sites within this portion of the Proposed Project area were relocated.

138 kV Transmission Line

A total of 31 previously recorded sites are within the transmission line ROW. Many of these sites were recorded during the original fieldwork for the SWPL alignment more than 25 years

ago. This total includes all sites within and immediately adjacent to the overall transmission line ROW, including a 0.5-mile archival search buffer around the ROW. The general conditions of the ROW have changed during the intervening years since the SWPL environmental studies, primarily as a result of increased foot and vehicle traffic related to the high number of undocumented immigrants who pass through the area and the related increase in border enforcement activity. Some of these impacts have resulted in disturbance or destruction of previously recorded archaeological resources.

The current survey resulted in the discovery of five new sites and three isolated finds within the transmission corridor, as shown in Table 4.5-4: New Sites and New Isolates – 138 kV Transmission Line APE. Most of these sites and isolated locations are within the segment of the transmission corridor that passes through the property known as Jacumba Valley Ranch. The five newly discovered sites appear to be surface scatters of debitage with some formal stone tools. These sites were recorded and mapped during the field survey effort and appear to be within the APE for the Proposed Project.

The pedestrian survey was conducted in a 300-foot-wide corridor, with special attention paid to the staked locations of the proposed 138 kV transmission line poles and the potential work areas and access roads. The previously recorded sites that correspond with the staked pole locations are identified as follows:

- Pole 96 is within the boundary of the previously recorded site CA-SDI-7086. During the survey, flaked lithic artifacts and prehistoric ceramics were observed on the surface in the general vicinity of the field stake marked SP-96. The current conditions consist of a sparse flaked lithic artifact and prehistoric ceramic scatter.
- Pole 97 is within the boundary of the previously recorded site CA-SDI-7053/H. During the survey, the site was found to be a sparse flaked lithic artifact scatter in an area measuring approximately 30 meters by 30 meters. The historic dump and road segment were verified, although the road segment and historic dump may be outside of the Proposed Project ROW.
- Pole 99 is within the boundary of the previously recorded site CA-SDI-7063. This site was relocated at the recorded coordinates during the current survey. The current conditions of the site include a rock shelter, single bedrock mortar, and sparse flaked lithic artifact and prehistoric ceramic surface scatter. The site measures approximately 10 meters by 10 meters in size and is situated on a low-lying ridge. The site has been disturbed by recent activity as evidenced by modern garbage and recent camp fires in the rock shelter. The proposed location for Pole 99 will have an adverse effect on this small site as the placement of the pole is directly within the site area.
- Poles 101 and 102 are within the boundary of the previously recorded site CA-SDI-7059. During the current survey, the site was relocated. The current conditions of the site include a sparse flaked lithic artifact and prehistoric ceramic scatter, as well as bedrock milling features. The rock shelter was not identified during the current field survey. Only flaked lithic artifacts were observed on the surface in the general vicinity of the staked locations of Poles 101 and 102.

Table 4.5-3: Previously Recorded Sites – 138 kV Transmission Line APE

Site Number	Site Description	Date Recorded	Site Evaluated?
P-37-024023	Segment of Historic U.S Highway 80	2000 Caltrans	Yes
CA-SDI-176 Update	Bedrock Milling Feature with Moderate Flaked Lithic Artifact Scatter	2006 Hector, Moslak, and Palette	No
CA-SDI-7011H	Early Twentieth Century Homestead with associated historic artifacts/Sparse Flaked Lithic Artifact and Prehistoric Ceramic Scatter	1979 Burkenroad	No
CA-SDI-7015H	Segment of San Diego and Arizona Railroad	1979 Burkenroad	No
CA-SDI-7027	Sparse Flaked Lithic Artifact Scatter	1979 Dominici	No
CA-SDI-7030	Sparse Flaked Lithic Scatter Artifact and Historic Trash Dump	1981 Donovan	No
CA-SDI-7037	Sparse Flaked Lithic Artifact Scatter	1979 Moore	No
CA-SDI-7040	Sparse Flaked Lithic Scatter	1979 Dominici	No
CA-SDI-7046	Quartz quarry and Sparse Flaked Lithic Artifact Scatter	1979 Townsend	No
CA-SDI-7051	Temporary Camp with Rockshelter, Bedrock Milling and Moderate Flaked Lithic Artifact and Prehistoric Ceramic Scatter	1981 Donovan	No
CA-SDI-7053/H Update*	Historic Road Segment and Historic Can Dump with Sparse Flaked Lithic Artifact Scatter	2006 Hector, Moslak, and Palette	No
CA-SDI-7055	Quarry and Sparse Flaked Lithic Artifact Scatter	1979 Townsend	No
CA-SDI-7056	Moderate Flaked Lithic Artifact Scatter	1979 Crotteau	No
CA-SDI-7059*	Temporary Camp with Rock Shelter, Bedrock Milling and Moderate Flaked Lithic Artifact and Prehistoric Ceramic Scatter	1979 Crotteau	No
CA-SDI-7060 Update*	Sparse Flaked Lithic Artifact Scatter	2006 Hector, Moslak, and Palette	No
CA-SDI-7063*	Temporary Camp with Rock Shelter, Moderate Flaked Lithic Artifact Scatter, Sparse Ground Stone and Prehistoric Ceramic Scatter	1979 Moore	No
CA-SDI-7069	Sparse Flaked Lithic Artifact Scatter	1979 Moore	No

Site Number	Site Description	Date Recorded	Site Evaluated?
CA-SDI-7072	Sparse Flaked Lithic Artifact Scatter	1979 Burkenroad	No
CA-SDI-7079	Sparse Flaked Lithic Artifact Scatter	1979 Moore	No
CA-SDI-7080H	Historic Can Dump	1979 Townsend	No
CA-SDI-7085	Temporary Camp with Milling Feature, Moderate Flaked Lithic Artifact Scatter, and Sparse Prehistoric Ceramic Scatter	1979 Crotteau	No
CA-SDI-7086*	Sparse Flaked Lithic Artifact and Prehistoric Ceramic Scatter	1979 Townsend	No
CA-SDI-7951	Quarry and Moderate Flaked Lithic Artifact Scatter	1981 Donovan	No
CA-SDI-8315	Sparse Flaked Lithic Artifact Scatter and Fallen Stone Monument	1980 Johnson	No
CA-SDI-8316	Sparse Flaked Lithic Artifact Scatter	1980 Johnson	No
CA-SDI-8430 Update	Moderate Flaked Lithic Artifact Scatter	1988 Van Horn	No
CA-SDI-8431	Sparse Flaked Lithic Artifact Scatter	1980 Goldberg	No
CA-SDI-8432	Bedrock Milling Feature with Sparse Flaked Lithic Artifact Scatter	1980 Goldberg	No
CA-SDI-9156	Sparse Flaked Lithic Artifact Scatter	1981 Townsend	No
CA-SDI-9278H	Historic Well and Corral with associated historic artifacts	1982 Donovan	No
CA-SDI-9279	Sparse Prehistoric Ceramic Scatter	1982 Donovan	No

Source: DPR Forms; on file at the SCIC.

*These sites correspond with the staked locations of power poles or designated work areas.

Table 4.5-4: New Sites and New Isolates – 138 kV Transmission Line APE

Site Number	Site Description
CA-SDI-19066	Moderate Density Surface Scatter of stone artifacts consisting of approximately sixty fine grained and coarse grained metavolcanic flakes, three fine grained metavolcanic cores and one fine grained metavolcanic hammerstone scattered over in an area measuring 15 meters by 8 meters
CA-SDI-19067	Moderate Density Surface Scatter of stone artifacts consisting of approximately fifty fine grained and coarse grained metavolcanic flakes and two coarse grained metavolcanic cores in an area measuring 15 meters by 15 meters
CA-SDI-19068	Moderate Density Surface Scatter of stone artifacts consisting of approximately fifty fine grained and coarse grained metavolcanic flakes in an area measuring 20 meters by 15 meters
CA-SDI-19069	Sparse Surface Scatter of stone artifacts consisting of ten fine grained metavolcanic flakes in an area measuring 10 meters by 10 meters
CA-SDI-19070	Sparse Surface Scatter of stone artifacts consisting of three fine grained metavolcanic flakes in an area measuring 3 meters by 2 meters
P-37-029818	Two Fine Grained Porphyritic Metavolcanic Core Reduction Flakes
P-37-030190	One Large Porphyritic Metavolcanic Primary Flake
P-37-030191	Porphyritic Metavolcanic Scraper with 25% remaining cortex and four areas showing edge retouch

- Poles 103 and 104 are within the boundary of the previously recorded site CA-SDI-7060. The current survey found the site is a sparse flaked lithic artifact and prehistoric ceramic surface scatter distributed over an extensive area. During the survey, flaked lithic artifacts were observed on the ground surface in the general vicinity of the staked locations of Poles 103 and 104.

Boulevard Substation Rebuild

No cultural resource sites, features, or isolated finds have been identified in the Boulevard Substation rebuild area.

White Star Communication Facility Rebuild

No cultural resource sites, features, or isolated finds have been identified in the White Star Communication Facility rebuild area.

Paleontological Resources

The Proposed Project is located within the Peninsular Range Geomorphic Province, a region primarily characterized by late Mesozoic (approximately 120 to 85 million years old [Ma]) plutonic igneous rocks of the Peninsular Ranges, Batholith and early Mesozoic (approximately 230 Ma) metasedimentary rocks of the Julian Schist, and related pre-batholithic rocks. A notable exception to this general geologic setting occurs in the Jacumba Valley and Table Mountain area, where a sequence of mid-Cenozoic (approximately 18 Ma) sedimentary and volcanic rocks have been preserved in association with a series of northwest trending faults (Minch and Abbott, 1973; Todd, 2004).

Based on the records review and field survey, only one highly sensitive resource is within the Proposed Project area—the Table Mountain Formation. This formation consists of up to 300 feet of yellowish to reddish brown, crudely stratified, friable, medium- to coarse-grained sandstones and conglomeratic sandstones (Brooks and Roberts, 1954; Minch and Abbott, 1973). The age of these sedimentary rocks was thought to be late Cretaceous (i.e., approximately 70 Ma) by Minch and Abbott (1973). However, based on recent paleontological work by paleontologists from the San Diego Natural History Museum, the Table Mountain Formation is now considered to likely be early Miocene in age (i.e., greater than 18.5 Ma and less than 25 Ma; S.L. Walsh, personal communication).

Numerous paleontological collecting sites are recorded from the Table Mountain Formation, exposed at Table Mountain, in the deeply eroded hillsides between Round Mountain and Jacumba Peak, and in road cuts along Carrizo Gorge Road on the north side of Jacumba Valley. These fossil remains were discovered in spite of the widespread coverage of local bedrock outcrops by surficial soils, slope-wash, and native vegetation. Fossils recovered from the Table Mountain Formation consist of bones and teeth of land mammals, including rodents, rabbits, and camels.

The Table Mountain Formation underlies and is protected from erosion by the overlying resistant rocks of the Jacumba Volcanics. As such, these sedimentary rocks crop out wherever the volcanic rocks occur (e.g., the deeply eroded slopes of Table Mountain and the flanking slopes of

the broad, lava flow-capped ridge between Round Mountain and Jacumba Peak). During the field walkover, weathered artificial exposures of the Table Mountain Formation were observed along the existing SDG&E access road in the northern half of the proposed ECO Substation site. These exposures consisted of light brown, poorly sorted, coarse-grained compact sandstones and form the lower slopes of the prominent flat-topped butte discussed earlier. The resistant cap rock of this butte is formed by one of the basalt lava flows of the Jacumba Volcanics. Additional exposures of the Table Mountain Formation were observed in the low road-cut along Old Highway 80, in the extreme northwestern corner of the proposed ECO Substation site. Here the rock unit consists of 25 feet of light brown, interbedded siltstones and fine-grained sandstones. Along the proposed 138 kV transmission line ROW, the Table Mountain Formation occurs on the flanking slopes of the broad, lava flow-capped ridge between Round Mountain and Jacumba Peak.

Prior to 1987, no fossils were known from the Table Mountain Formation. This lack of fossils primarily was due to a lack of active field prospecting by paleontologists. Because fossils have the potential to substantially help unravel the complex geologic history of the Jacumba region, the earlier lack of fossil recovery represented a real problem for geologists working in the area. In addition, nothing was then known about the nature of prehistoric life during the period when this volcanic activity was taking place. The proven paleontological resources of the Table Mountain Formation suggest that this sedimentary rock unit possesses a high resource sensitivity.

4.5.3 Impacts

Significance Criteria

Cultural Resources

Under CEQA, Proposed Project construction or operation and maintenance effects to unique or important resources must be considered. A resource is unique or important if it:

- Is associated with an event or person of recognized importance in California or American history or scientific importance in prehistory
- Can provide useful information of demonstrable public interest and is useful in addressing scientifically consequential and reasonable archaeological research questions
- Has a special or particular quality, such as oldest, best example, largest, or last surviving example of its kind
- Is at least 100 years old and possesses substantial stratigraphic integrity
- Involves important research questions that historical research has shown can only be answered with archaeological methods

Construction-related subsurface and surface disturbances could result in a loss of integrity of cultural deposits, a loss of scientific information, and the alteration of archaeological site setting. Potential indirect impacts, primarily vandalism, can result from increased access and use of the general area during construction and long-term operation and maintenance activities. The potential also exists for the inadvertent discovery of buried or masked archaeological materials during construction activities.

Impacts to cultural resources are considered significant if the project:

- Causes a substantial adverse change in the significance of a historical resource, as defined in Section 15064.5 of the CEQA Guidelines
- Causes a substantial adverse change in the significance of an archaeological resource, pursuant to Section 15064.5 of the CEQA Guidelines
- Disturbs any human remains, including those interred outside of formal cemeteries

“Substantial adverse change” means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired. Section 21084.1 of the CEQA Guidelines stipulates that any resource listed on, or eligible for listing on, the CRHR is presumed to be historically or culturally significant. Section 21084.1 treatment of any substantial adverse change in the significance of a historical resource listed on, or eligible to be listed on, the CRHR as a significant effect on the environment.

Paleontological Resources

Impacts to paleontological resources will be considered significant if the Proposed Project directly or indirectly destroys a unique paleontological resource or site or unique geologic feature. Because fossils are the remains of prehistoric animal and plant life, they are considered to be non-renewable. Impacts to paleontological resources are identified from high to zero depending on the resource sensitivity of impacted formations. The specific criteria applied for each sensitivity category are summarized as follows:

- High significance: Impacts to high sensitivity formations (Table Mountain Formation)
- Moderate significance: Impacts to moderate sensitivity formations (Older alluvium and fanglomerate)
- Low significance: Impacts to low sensitivity formations (Holocene alluvium and fanglomerate)
- Marginal significance: Impacts to marginal sensitivity formations (Julian Schist)
- Zero significance: Impacts to zero sensitivity formations (Peninsular Ranges Batholith)

The discovery of even sparse fossil remains in the Table Mountain Formation is considered to be a significant event.

Question 4.4a – Historical Resource Change

Construction – No Impact

Based on archival information and survey results, no historic resources are within four of the five Proposed Project components—the ECO Substation site, the SWPL loop-in areas of disturbance, and the Boulevard Substation and White Star Communication Facility rebuild areas. Although two potentially significant historic resources—the San Diego and Arizona Railroad and Old Highway 80—are within the proposed 138 kV transmission line alignment, these resources will be spanned by the line and will not be physically altered during construction. Therefore, there will be no direct impacts.

Operation and Maintenance – No Impact

The operation and maintenance of the Proposed Project will not have an impact on historic era resources because the only potentially significant resources in the Proposed Project area will be spanned. Operation and maintenance activities will be conducted within existing facility fence lines and pole locations and will not affect these two resource areas. Therefore, there will be no impacts.

Question 4.4b – Archaeological Resource Change

Construction – Less-than-Significant Impact

Construction activities for the Boulevard Substation and White Star Communication Facility rebuild areas will have no impact on cultural resources as no cultural resource sites, features, or isolated finds have been identified in these Proposed Project component areas.

Ground-disturbing construction activities, including grading and excavation, that will be necessary to develop the pads for the ECO Substation have the potential to impact cultural resources within the Proposed Project area by disturbing subsurface soils and potentially disturbing or destroying buried cultural deposits (archaeological sites). Likewise, grading of access roads to Proposed Project facilities and excavation of holes for the installation of the 138 kV transmission line poles and clearance structures have the potential to impact both surface and buried cultural deposits. These potential impacts will be reduced to a less-than-significant level with the implementation of the APMs discussed in Section 4.5.4 Applicant-Proposed Measures. These measures include demarcation of known resources, evaluation of the resources that are within direct areas of impact from tower placement or access road alignment, training of construction personnel, and agency consultation and mitigation for resources that may otherwise be destroyed as a result of Proposed Project construction.

Conductor installation has a low to moderate potential to affect cultural resources. Specific surveys will be completed to determine the presence of cultural resources at the particular work areas involved in this installation process. These resources will be avoided to the degree possible. If avoidance is not feasible, an evaluation will be completed and appropriate minimization measures implemented, in accordance with the APMs in Section 4.5.4 Applicant-Proposed Measures. As a result, impacts to cultural resources will be reduced to a less-than-significant level.

Operation and Maintenance – No Impact

Ground-disturbing activities associated with Proposed Project operation and maintenance will be performed at similar intensities as they are currently conducted and at the locations already disturbed for Proposed Project construction. Therefore, no impacts to cultural resources are anticipated during the continuing operation and maintenance of the Proposed Project.

Question 4.4c – Paleontological Resource Destruction

Construction – Less-than-Significant Impact

Physical destructions of paleontological resources will occur when earthwork activities are performed, such as mass grading operations and excavation that cuts into the geological deposits

(formations) within which fossils are buried. Impacts by Proposed Project component and rock unit of potentially high to moderate significance are discussed as follows.

East County Substation

Conceptual construction plans for the ECO Substation indicate the need for extensive excavations for two pads—a western pad to house the 230/138 kV equipment yard and an eastern pad to house the 500 kV equipment yard. Because of the general westerly slope of the ground surface at the proposed ECO Substation site, both pad excavations will involve a cut-fill transition where the eastern portion of the pad is cut to produce fill material to build the western portion of the pad. The plans suggest a maximum cut of approximately 35 feet for the 230 kV equipment yard and up to approximately 65 feet for the 500 kV equipment yard. This level of excavation will result in potentially significant impacts to the older alluvium and fanglomerate deposits in this area. Likewise, these deep pad excavations will also result in extensive impacts to the Table Mountain Formation.

Without knowing the true thickness of the overlying older alluvium and fanglomerate deposits, it is not currently possible to determine the exact volume of Table Mountain Formation that will be impacted by these excavations. However, given the extent of the proposed pad excavations, impacts to the Table Mountain Formation will occur. Because of the cut-fill transition nature of the proposed sheet pad excavations, the greatest impacts will occur in the eastern (i.e., cut) portions of each pad. These impacts will be reduced to a less-than-significant level by the implementation of the APMs (discussed in Section 4.5.4 Applicant-Proposed Measures), which will include monitoring during the initial earth-disturbing work and recovery of any potentially significant paleontological resources discovered during this phase of the Proposed Project.

Southwest Powerlink Loop-In

Construction of the loop-in segment from the SWPL 500 kV transmission line to the ECO Substation will involve installation of four new transmission towers, each having four drilled concrete piers. Creation of each pier borehole will potentially cause significant impacts to the older alluvium and fanglomerate deposits in this area. Depending on the thickness of these Pleistocene-age deposits, the older Miocene-age Table Mountain Formation may also be impacted by the pier boreholes. These impacts will be reduced to a less-than-significant level with the implementation of the APMs discussed in Section 4.5.4 Applicant-Proposed Measures, which will include monitoring during the initial earth-disturbing work and recovery of any potentially significant paleontological resources discovered during this phase of the Proposed Project.

138 kV Transmission Line

Construction of the 13.3-mile-long 138 kV transmission line will involve installation of approximately 98 steel poles and nine wooden poles. Construction of the section between Jacumba Valley and Jacumba Peak and between Jacumba Valley and the ECO Substation may result in significant impacts to paleontological resources preserved in the Table Mountain Formation. These impacts will be reduced to a less-than significant level through the implementation of the APMs discussed in Section 4.5.4 Applicant-Proposed Measures, which

include monitoring during the initial earth-disturbing work and recovery of any potentially significant paleontological resources discovered during this phase of the Proposed Project.

Because the area west of approximate Milepost 9.25 to the Boulevard Substation rebuild is underlain by geologic deposits with zero paleontological resource sensitivity, construction activities along this portion of the ROW will not result in any significant impacts.

Boulevard Substation Rebuild

Construction activities for the Boulevard Substation rebuild will not impact sensitive paleontological resources as none are present at the site.

White Star Communication Facility Rebuild

Construction activities for the White Star Communication Facility rebuild will not result in significant impacts to paleontological resources because none are present at the site.

Operation and Maintenance – No Impact

Operation and maintenance activities associated with the Proposed Project will be conducted in areas previously disturbed for Proposed Project construction. As a result, paleontological resources will not be encountered during these activities and there will be no impact.

Question 4.4d – Human Remains Disturbance

Construction – Less-than-Significant Impact

Because no known cemeteries exist and no recorded Native American or other human remains have been found within or adjacent to the Proposed Project area, the potential for the inadvertent discovery of Native American or other human remains during subsurface construction associated with the Proposed Project is considered low. Regardless, if human remains are encountered during the course of construction, SDG&E will implement the appropriate notification processes as required by law. In the unlikely event that Native American human remains are discovered during construction, work will be halted in the vicinity of the find and the county coroner will be notified as required by the PRC. As a result, potential impacts will be less than significant.

Operations and Maintenance – No Impact

As previously described, the presence of human remains is considered unlikely in the Proposed Project area. Because Proposed Project operation and maintenance activities will occur in the same areas disturbed for construction, they will not impact any human remains.

4.5.4 Applicant-Proposed Measures

When implemented, the following APMs will reduce the potential adverse impacts to cultural resources to a less-than-significant level:

- APM-CUL-01: Prior to construction, all SDG&E, contractor, and subcontractor Project personnel will receive training regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations, including the potential for exposing subsurface cultural resources and

paleontological resources and to recognize possible buried resources. This training will include presentation of the procedures to be followed upon discovery or suspected discovery of archaeological materials, including Native American remains, and their treatment, as well as of paleontological resources.

- APM-CUL-02: At least 120 days prior to construction, a cultural/historical resource consultant will be retained by SDG&E to complete an analysis and assessment of the potential to disturb resources that were identified during the initial studies from major ground-disturbing activities. The analysis and assessment will be prepared to meet the requirements of the CEQA and NEPA. Project component sites that require testing for significance determination will be treated on a case-by-case basis using all applicable criteria.
- APM-CUL-03: A qualified archaeologist will attend preconstruction meetings, as needed, to make comments and/or suggestions concerning the monitoring program and to discuss excavation plans with the excavation contractor. The requirements for archaeological monitoring will be noted on the construction plans. The archaeologist's duties will include monitoring, evaluation, analysis of collected materials, and preparation of a monitoring results report conforming to agency guidelines for the Determination of the Significance of Archaeological Sites.
- APM-CUL-04: Known cultural resources that can be avoided will be demarcated as Environmentally Sensitive Areas. Construction crews will be instructed to avoid disturbance of these areas.
- APM-CUL-05: In the event that cultural resources are discovered, the archaeologist will have the authority to divert or temporarily halt ground disturbance to allow evaluation of potentially significant cultural resources. The archaeologist will contact SDG&E's Cultural Resource Specialist and Environmental Project Manager at the time of discovery. The archaeologist, in consultation with SDG&E's Cultural Resource Specialist will determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities are allowed to resume. For significant cultural resources, a Research Design and Data Recovery Program will be prepared and carried out to mitigate impacts.
- APM-CUL-06: All collected cultural remains will be cleaned, cataloged, and permanently curated with an appropriate institution. All artifacts will be analyzed to identify function and chronology as they relate to the history of the area. Faunal material will be identified as to species.
- APM-CUL-07: A monitoring results report (with appropriate graphics), which describes the results, analyses, and conclusions of the monitoring program, will be prepared and submitted to SDG&E's Cultural Resource Specialist and Environmental Project Manager following termination of the program. Any noteworthy cultural sites or features encountered will be recorded with the SCIC at San Diego State University and with the San Diego Museum of Man.

- APM-CUL-08: Prior to construction, a paleontological resource consultant will be retained by SDG&E to complete an analysis and assessment of the potential to disturb resources from major ground-disturbing activities, such as facility pad grading, trenching, or new access road grading.
- APM-CUL-09: A qualified paleontologist will attend preconstruction meetings, as needed, to consult with the excavation contractor concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual with a Master of Science or Doctor of Philosophy in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of Southern California, and who has worked as a paleontological mitigation project supervisor in the region for at least one year. The requirements for paleontological monitoring will be noted on the construction plans.
- APM-CUL-10: A paleontological monitor will work under the direction of the qualified Project paleontologist and will be on site to observe excavation operations that involve the original cutting of previously undisturbed deposits with high paleontological resource sensitivity (i.e., Table Mountain Formation). A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. Because the Miocene-age Table Mountain Formation is locally covered by Pleistocene-age Older alluvium and fanglomerate deposits of unknown thickness, careful monitoring of excavations of the younger deposits will be necessary to ensure that overall monitoring of the Table Mountain Formation is as complete as possible. However, if site-specific geotechnical studies are sufficient to distinguish the geologic contact between the Pleistocene and Miocene sedimentary rock units, this information can be used to more clearly define those portions of the excavations solely sited in the Table Mountain Formation. If this level of detail is achieved prior to excavating activities, a paleontological monitor will need to be on site only on a part-time basis to observe excavation operations that involve the original cutting of previously undisturbed deposits of moderate paleontological resource sensitivity (i.e., older alluvium and fanglomerates deposits).
- APM-CUL-11: In the event that fossils are encountered, the Project paleontologist will have the authority to divert or temporarily halt construction activities in the area of discovery to allow recovery of fossil remains in a timely fashion. The paleontologist will contact SDG&E's Cultural Resource Specialist and Environmental Project Manager at the time of discovery. The paleontologist, in consultation with SDG&E's Cultural Resource Specialist will determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities are allowed to resume. Because of the potential for recovery of small fossil remains, it may be necessary to set up a screen-washing operation on site. When fossils are discovered, the paleontologist (or paleontological monitor) will recover them along with pertinent stratigraphic data. In most cases, this fossil salvage can be completed in a short period of time. Because of the potential for recovery of small fossil remains, such as isolated

mammal teeth, recovery of bulk-sedimentary-matrix samples for off-site wet screening from specific strata may be necessary, as determined in the field. Fossil remains collected during monitoring and salvage will be cleaned, repaired, sorted, cataloged, and deposited in a scientific institution with permanent paleontological collections.

4.5.5 References

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