

4. Environmental Impact Assessment

4.5 Cultural and Paleontological Resources

Pursuant to state and federal law, the Proposed Project is subject to environmental review to identify the undertaking and assess the potential impacts to cultural and paleontological resources. State and federal language varies in terms used for areas of impact or effect, and for this chapter the term “area of potential effect” (APE) would be used to describe project areas of potential construction and operation impacts. The APE includes a total of 1,406 acres consisting of 4.6 acres of land adjacent to the existing Downs Substation property and a 200-foot wide corridor centered along the approximately 58 mile proposed fiber optic route (see [Figure 4.5-1](#) for a figure showing land ownership along the Proposed Project).

4.5.1 Environmental Setting

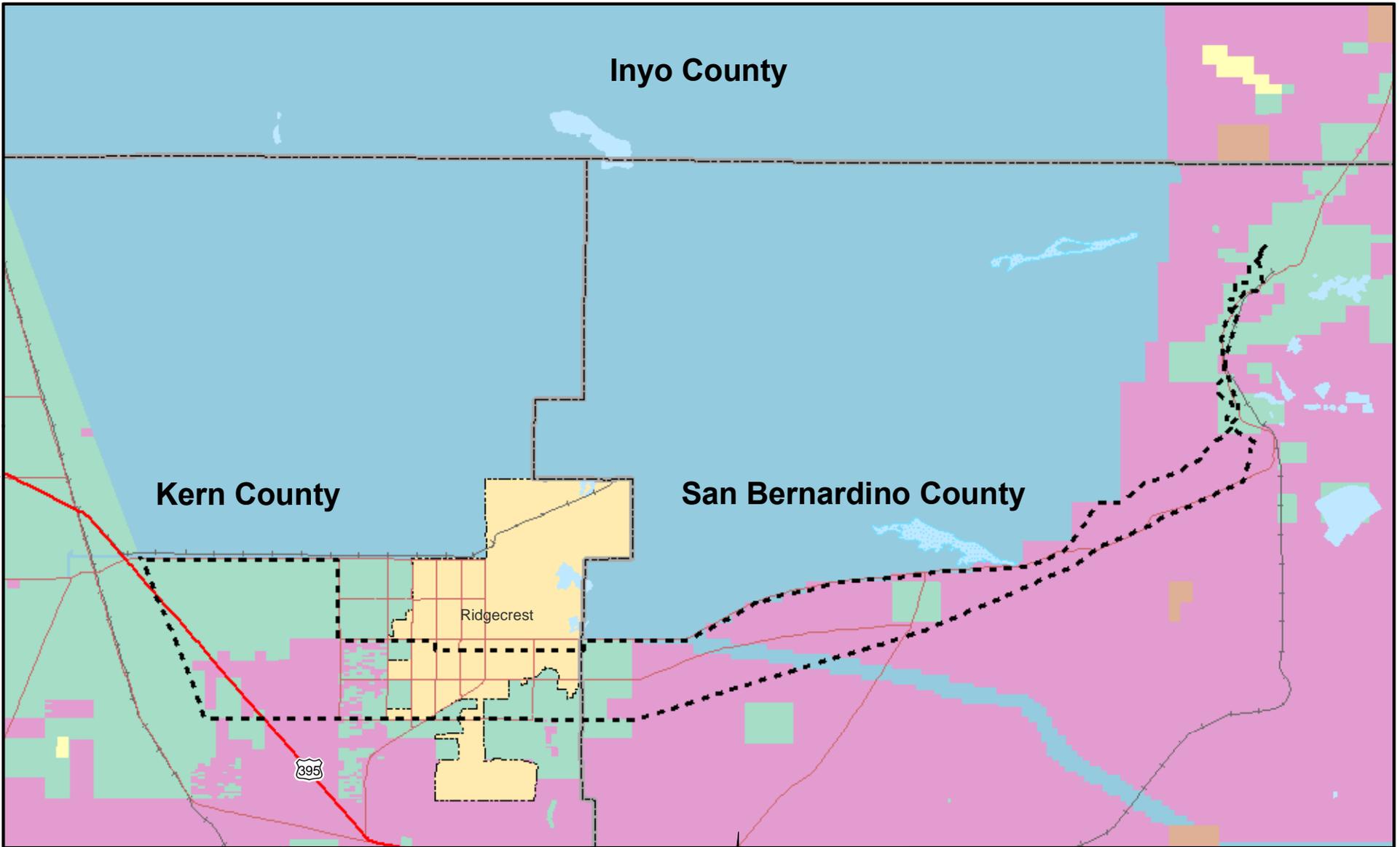
The Proposed Project area is situated on the northern edge of the Mojave Desert in southeastern California. The Proposed Project area encompasses two primary basins: Indian Wells Valley and Searles Valley. The Indian Wells Valley was given its name in 1920 by the U.S. Geographical Board, consolidating the areas of Salt Wells, Brown Valley, and Inyokern Valley.

The portions of the Proposed Project within the Searles Valley are surrounded by the Argus Range on the west, the Slate Range to the north and east, and the Summit Range and Lava Mountains on the south. The portions of the Proposed Project located in the Indian Wells Valley are surrounded by the Sierra Nevada Range on the west, the Coso Range on the north, the Argus Range to the east, and the El Paso Mountains to the south. Principal landforms in the Searles and Indian Wells valleys include large playas; a single large (Searles Lake) basin, and the playas of the China Lake basin, respectively. The relatively flat terrain of the Proposed Project area consists of sandy, gravelly substrate deposited by alluvial processes, as well as areas of clay pans.

The vegetation communities found at the location of the proposed Downs Substation expansion include disturbed creosote bush-white bursage and ruderal sink communities. Along the Inyokern-McGen-Searles 115 kV subtransmission lines, creosote bush-white bursage communities, a community dominated by desert holly and spiny hopsage, and a rusty molly-dominated community are found. In addition, there are un-vegetated areas and highly disturbed lands.

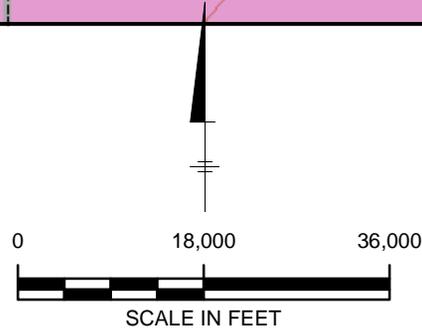
At present, the Proposed Project area is a desert with an annual rainfall of approximately 4.3 inches (11 centimeters [cm]) (Western Regional Climate Center [WRCC] 2007). Rainfall occurs primarily as winter storms, with approximately 70 percent falling between November and March. An additional 12 percent is accumulated through the monsoons in late summer (August–September).

PROJECT NUMBER: CA000752.0001.0001
 CITY:NOVI DIV:GROUP:ENV DB: PIC: PM: TM: TR:
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LEGEND

- Inyokern-McGen-Searles No. 1 and No. 2 115 kV Subtransmission Lines
- County Boundary
- City Boundary
- Bureau Of Land Management
- CA Dept of Fish and Game
- China Lake Naval Air Weapons Station
- State Lands Commission
- County, Private Lands



SOUTHERN CALIFORNIA EDISON
 DOWNS SUBSTATION PROJECT
 KERN AND SAN BERNARDINO COUNTIES, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

**OWNERSHIP OF LANDS ACROSS
 THE PROPOSED PROJECT AREA**



FIGURE

4.5-1

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The prehistoric climate may have alternated through wetter and drier periods. At the end of the last Wisconsin glacial maximum (approximately 18,000 years ago), the Mojave Desert was likely occupied by a wetter climate and pluvial lakes in place of the numerous playas that currently dot the Searles and China Lake basins. Over the following 6,000 years, the region became more arid, with semi-permanent lakes remaining in the region. The increasingly arid environment also led to the extinction of the Rancholabrean megafauna. The early Holocene period likely saw a hydrological trend that more closely resembles the Mojave Desert today. The middle Holocene saw the development of the climatic, hydrologic, and floristic patterns that characterize the Mojave Desert today (Giambastiani 2008).

The climate of the late Holocene saw an increase in precipitation at approximately 4,000 to 3,500 years before present (BP), followed by a warm-moist climate after circa 2000 BP and again followed by a warm, dry period. In reviewing the published data on climatic shifts in the western United States, Jones et al. argued that there was an extended drought in the western Great Basin and Mojave Desert from approximately 1,100 to 650 BP (2004:17). Jones et al. suggest the period from 892 to 1112 AD was cool and dry, followed by a warm, wet period; this in turn was followed by a hot, dry interval from 1209 to 1350 AD. The period from about 800 to 1350 AD is known as the Medieval Climatic Anomaly (MCA).

4.5.1.1 Cultural Resources

4.5.1.1.1 Prehistoric Context

Recent efforts by Sutton et al. (2007) have attempted to produce an integrative model that establishes a standard nomenclature for temporal sequences and cultural complexes. Previously, the interchangeable use of the terms “period” and “complex” have led to some confusion because they define both time periods and cultural entities. In an effort to minimize confusion, the prehistoric context follows the model established by Sutton et al. (2007) by using climatic periods (e.g., early Holocene, middle Holocene, etc.) to specify temporal spans, and cultural complexes (e.g., Lake Mojave Complex, Gypsum Complex, etc.) to describe the cultural entities that existed within those time spans.

Chronological periods associated with the Proposed Project area are grouped into the late Pleistocene, terminal Pleistocene, early Holocene, middle Holocene, and late Holocene intervals. The chronological sequence shown in [Table 4.5-1](#) is adapted from Sutton et al. (2007).

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Table 4.5-1 Prehistoric Cultural Chronology

Date	Temporal Period	Cultural Complex	Previously Known As
Pre-12,000 cal BP	Late Pleistocene	Pre-Clovis	Early Man Pre-Projectile Point
12,000-10,000 cal BP	Terminal Pleistocene	Paleoindian	Clovis Big Game Hunting Tradition
10,000-8,000 cal BP	Early Holocene	Lake Mojave	Western Pluvial Lakes Tradition San Dieguito Complex
		Pinto	
9,000-5,000 cal BP	Middle Holocene		Little Lake
		Deadman Lake	N/A
4,000-1,800 cal BP	Late Holocene	Gypsum	Newberry
1,800-900 cal BP		Rose Spring	Saratoga Springs Haiwee
cal BP 900-Present		Late Prehistoric	Shoshonean Marana Protohistoric

Notes:

BP = before present

cal = calibrated

N/A = not applicable

Adapted from Sutton et al. 2007.

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4.5.1.1.2 Ethnohistoric Context

Ethnographic and linguistic data for the Proposed Project area suggest the territories of three adjacent groups—the Coso (Koso; Panamint) Shoshone, the Tubatulabal, and the Kawaiisu—intersected and probably overlapped in the vicinity of the Indian Wells Valley. Thus, the area was probably used during the annual rounds of all three groups. The core area of the Kawaiisu is thought to be the better-watered Tehachapi Mountains and extreme Southern Sierra Nevada (Kroeber 1925:590, 602; Zigmond 1986:399, Figure 1); however, Earle (2003) and Underwood (2006) have recently proposed a division between the “Mountain Kawaiisu” inhabiting the traditional core area in the Tehachapi Mountains, and the “Desert Kawaiisu” occupying the desert areas east of the Tehachapis, including the southern halves of Panamint and Death Valleys, the southern Panamint and Argus Ranges, and Searles Valley in the vicinity of Trona.

These areas are also considered Kawaiisu territory by Steward (1938:71). Dayley (1989:3–4) also includes Indian Wells Valley, as well as the southern Argus Range, in Panamint Shoshone territory. There are a few ethnographic accounts of Tubatulabal and Coso Shoshone activities in Indian Wells Valley (see Steward 1938:81–82), but apparently none documenting the Kawaiisu. However, some researchers (compare Sutton 1991, 1996; Earle 2003, 2005; Underwood 2006) believe the Kawaiisu used the area in prehistoric times.

The Coso region immediately north of Indian Wells Valley is in the territory of the Coso and Panamint Shoshone, who, like the Kawaiisu, were (and some remain) speakers of a Numic language (Steward 1938:83; Whitley 1994:358; Davis-King 2003; Underwood 2006; Johnson and Molenaar 2008). Descendants of the Coso and Panamint Shoshone are today members of the federally recognized Timbisha Shoshone and Lone Pine Paiute-Shoshone tribes. Due to intermarriage and trade relations with adjacent tribal groups including the Tubatulabal, Kawaiisu, Owens Valley Paiute, and Southern Paiute, residents of villages on the perimeters of this territory were multilingual (Steward 1938; Barth 1969; Earle 2003, 2005; Underwood 2006; Johnson and Molenaar 2008). Recent research conducted by Earle (2003), who analyzed linguistic data collected by Kroeber (1925) and Steward (1938), and by Underwood (2006), who compared descriptions of social organization, settlement and subsistence patterns, and winter dwellings of the Coso Shoshone and desert-dwelling Kawaiisu in the ethnographic literature (e.g., Nelson 1891; Dutcher 1893; Driver 1937; Thomas et al. 1986; Zigmond 1986), points to a probable connection between the two groups.

4.5.1.1.3 Historic Context

The historic period in California can be divided into three main eras: Spanish (1769–1821), Mexican (1822–1846), and American (1848–present). The Spanish period begins in 1769, when

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the first permanent Spanish settlement, Mission San Diego de Alcalá, was founded on July 16 (Beck and Haase 1974:19). Early Spanish settlement took the form of missions, which were founded to convert Native Americans and then transfer the land back to them once they had demonstrated ability to manage the land; presidios, which provided military protection; and pueblos, which were secular towns.

The first European American to travel through the vicinity of the Proposed Project area is likely the Padre Francisco Garcés party, which came from the Tucson area through the Mojave Desert in 1776 (Beck and Haase 1974:15). The “Old Spanish Trail,” an overland route linking Santa Fe with Los Angeles, was likely derived from older Native American routes; explorer John C. Frémont traversed this trail in 1845 with Captain Joe Walker when mapping Owens Valley. Chalfant names Walker as the first European American in the Owens Valley in 1833, but there is also a possibility that Mountain Man Jedediah S. Smith traveled through the area in 1826 (Chalfant 1933:93).

In 1821, the Mexican Republic was established after a revolution against the Spanish crown, and California was designated a Mexican territory in 1824 (Starr 2005). During the Mexican era, the mission system was dismantled and secularized, and land was disbursed to Mexican citizens. As many as 600 land grants were approved during this time (Starr 2005:49). In 1848, California became an American territory; the United States had declared war on Mexico in 1846, and after weakening resistance, the Mexicans surrendered in 1847 at the “Capitulation of Cahuenga,” and the Treaty of Guadalupe Hidalgo was signed on February 2, 1848 (Starr 2005:70). Just a week earlier, James Marshall discovered gold at Sutter’s Mill in Coloma, and the rush for gold began. Amid the efforts of landowners to prove their Mexican property claims to the American government, tens of thousands of fortune-seekers made their way to the gold fields, transforming Alta California in the process.

It was during the Gold Rush that many more Americans began to look for overland routes to the gold fields that bypassed the formidable Sierras, and headed southward. The William Manly party traveled through the area in 1849–1850 and spent a harrowing few months in Death Valley. The way, Manly mentions that “[a] party who called themselves ‘The Jayhawkers’ passed us and we followed along in the rear...” (Manly and McGroarty 2004:111). According to some sources, two of the members of the Jayhawkers party were brothers John and Dennis Searles, who would go on to settle in what is now known as Searles Valley where they began mining borax (AAUW 1975:2–3). It is likely that some of the gold-seekers who attempted the southerly route to the gold fields passed through Indian Wells Valley after crossing the southern Argus Range in January 1850 (Johnson and Johnson 1987; Latta 2003; Long 1941; Wheat 1939). These emigrants may have been the first European Americans to cross through the Proposed Project area.

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San Bernardino County was carved out of the large Los Angeles County in 1853. In 1866, Inyo and Kern Counties were formed from portions of Tulare and Los Angeles Counties (Beck and Haase 1974:62–63). The discovery of silver and gold in the Coso Mountains in 1860 brought an influx of settlers to the area; the towns of Darwin, Panamint City, and Cerro Gordo were founded as a result.

In 1862, the Searles brothers were prospecting for gold and silver in the Slate Range near the Panamint Mountains and discovered that a dry lake in the area was covered in borax. Only later, seeing the success of F. W. “Borax” Smith, would they realize that the substances could be mined and marketed; in 1874, the Searles brothers and associates staked a claim on the dry lake (now known as Searles Lake) for 640 acres and established the San Bernardino Borax Mining Company. The company was sold and then disbanded 20 years later, and other attempts to mine the area of surface borax failed. Not until 1910 did another entrepreneur, S.W. Austin, take control of the California Trona Company and drill for borax beneath the lake’s surface, finding another substantial deposit of salts 100 feet deep (Kerr-McGee Chemical Corporation 1989). Mineral mining on Searles Lake continues to this day.

Transport of ore and minerals out of the Indian Wells Valley became a pressing issue in the late nineteenth century. R.C. Jacobs, one of the discoverers of the Panamint lodes, traveled to Los Angeles to convince the city fathers to finance a road that would fork from the Bullion Trail between Los Angeles and Owens Valley at Indian Wells, then cross over the pass between the Argus and Slate Ranges (Nadeau 1999). In 1874, Chinese laborers hired by Jacobs blasted a roadbed on the Slate Range crossing to connect Indian Wells with Panamint City. Chinese laborers also worked on railroad construction in Owens Valley in the 1880s and temporarily resided in the Indian Wells Valley, leading to the coining of the name China Lake to the dry lakebed in the area (Garrett 1996:40 in Love and Tang 1997).

In 1875, Remi Nadeau began construction of a freight road from Indian Wells to the silver mines near the newly established town of Darwin (JRP 1997; Nadeau 1999). The first route established by Nadeau passed through Mountain Springs Canyon, then headed north via Junction Station to the Darwin mines. Two freight stations on the Remi Nadeau freight road that crossed the Indian Wells Valley—Desert Station, at the south end of the China Lake playa, and Kelley’s Station (also known as Fort Nadeau), near the mouth of Mountain Springs Canyon—were built to service Nadeau’s teams. However, until the early 1900s, Indian Wells Valley remained sparsely populated. The invention of the evaporative cooler in 1937 in Imperial Valley revolutionized living standards throughout the desert communities of California; for the first time, families could consider year-round living in relative comfort (AAUW 1975:90).

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The settlement of Inyokern was established in the mid-nineteenth century as an agrarian outpost. Previously known as Magnolia, or Siding 16, the town grew in size with the creation of the Los Angeles Aqueduct (Durham 1998:1050). A civilian airfield was built in 1935 as an emergency landing strip for commercial flights over the Mojave. The U.S. Army Air Corps and then the U.S. Navy commandeered the use of the airstrip (then known as Harvey Field) during World War II. The field became the base of operations for initial naval weapons testing before the creation of the Naval Ordnance Testing Station (NOTS) Inyokern and Armitage Field. Today, Inyokern is a satellite community serving the nearby China Lake Naval Air Weapons Station (CLNAWS) facility.

Trona, named for the mineral consisting of sodium carbonate and bicarbonate, was established in 1914 with the opening of a post office. In 1916, the name was given to a railroad terminus at the location (Gudde 2004:400). The Trona Railway, a 30.7-mile shortline railroad developed to deliver chemicals and borax to the main Southern Pacific rail line from Searles Lake, was built in 1914 (Fickewith 1992:152–153). In addition, the railway carried a passenger car that handled traffic from Trona to Searles Junction, which also connected with the Southern Pacific Rail Road (Fickewith 1992:153). Trona functioned as a company town for the various mineral mining outfits in the area over the years; a 1948 brochure produced by the American Potash and Chemical Corporation extolled the fact that Trona was “a modern industrial village in the Mojave Desert” and “a self-contained town operated on a cost basis by the Company for the benefit of its employees” (Trona on the Web 2010). The nearby towns of Argus, West End, and Pioneer Point were established under similar circumstances.

The town of Ridgecrest, originally called Crumville, was a small agricultural community before officially changing its name in 1941 (reportedly by one vote) when the post office was renamed (Pahuta 1996). A hand-drawn map from the 1930s shows feed lots, milking barns, and several homes separated by dirt roads (High Desert Memories n.d.). In 1943, the land north of the community was given to the U.S. Navy to develop a naval ordnance testing station for ground-to-air and air-to-air weapons. Ridgecrest was incorporated in 1963 after serving as a satellite community for the Naval Ordnance Test Station (NOTS) Inyokern, which would be renamed the Naval Weapons Center (NWC) in the 1960s and finally CLNAWS in the 1990s.

4.5.1.2 *Paleontological Resources*

The Proposed Project is located in an area that contained extensive middle to late Pleistocene pluvial lakes. These lakes are known to have overflowed into those downstream during very wet periods so that they were linked together. Studies from more southerly lakes show strong time series shifts from summer rain-sourced lakes to winter precipitation-sourced lakes. Many were deposited in a fluctuating environment of shallow lakes and mudflats. Millennial- to centennial-

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scale cycles of wet and dry periods may be recorded by alternating soils and fluvial, shallow-lake, and mudflat beds (Reheis and Bright n.d.).

The pluvial lakes have yielded abundant middle to late Pleistocene vertebrate fossils in addition to paleo-environmentally important micro fossils like ostracods. The vertebrate fossils include birds, mammals, fish, reptiles, and amphibians, many now extinct.

Geologic units at the surface within the Proposed Project area include Mesozoic granitics, Quaternary lake deposits, Quaternary Older Alluvium, and Quaternary Younger Alluvium (Jennings et al. 1962).

Prior fossil localities from the vicinity were searched by the San Bernardino County Museum (Scott 2010). Online and published databases were also searched, including the Natural History Museum of Los Angeles County Department of Invertebrate Paleontology (LACMIP 2010), the Museum of Paleontology at the University of California at Berkeley (UCMP 2010), the Paleobiology Database (2010), and published materials covering the Quaternary sediments of California.

No fossil localities are known to exist directly along the Downs Substation Project APE. Quaternary lake deposits of China Lake have yielded numerous fossil resources of late Pleistocene age. The remains of mammoth (*Mammuthus*), sabre-toothed cat (*Smilodon*), large and small horses (*Equus*), camel (*Camelops*), llama (*Hemiauchenia*), deer (*Odocoileus*), bison (*Bison*), and freshwater invertebrates have been recovered from China Lake sediments (Scott 2010; Fortsch 1978; Davis and Panlaqui 1978; Jefferson 1991a, 1991b, 1992; Scott and Cox 2008). Mammoth tusk fragments from one locality were dated to 18,600±450 years BP. It is likely that the sediments of Searles Lake have similar fossil resources to those in China Lake. Freshwater invertebrates including bivalves, snails, and ostracods are known from Searles Lake (G. Smith 2009).

No fossil localities from other Pleistocene deposits are known to exist near the Proposed Project. Similar sediments in the Mojave Desert have produced numerous Pleistocene fossils (Jefferson 1991b; Scott and Cox 2008; Scott 2010). Similarly, no localities are known for either recent alluvium or Mesozoic granitics.

The potential fossil yield analysis prepared by Gust and Scott (2010:10) is provided in [Table 4.5-2](#).

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Table 4.5-2 Potential Fossil Yield Analysis

Downs Project Sediments	PFYC*	Paleo Sensitivity	Mitigation
Quaternary Lake Sediments	5a	High	Full-time monitoring
Quaternary Older Alluvium	3b	Moderate	Part-time monitoring
Quaternary Younger Alluvium	2	Low	On-call monitoring
Granitics	1	Very Low	None

* PFYC: Potential Fossil Yield Classification

4.5.1.3 Summary of Previous Research

Seventy-three studies were identified within the cultural resources study area, which is defined as the area within one-half mile of either side of the fiber optic telecommunication cable routes, and a one-half mile radius surrounding the proposed Downs Substation expansion property. Many of the previous survey reports list transmission lines, pipelines, and construction expansion as the purpose of the studies (Duran et al 2010: Appendix E to this PEA). Some of the more notable studies include the *Historic Property Survey Report: West Ridgecrest Boulevard Widening and Reconstruction Project, City of Ridgecrest, Kern County*, and the *Cultural Resources Overview Water System General Plan Indian Wells Valley Water District Kern and San Bernardino Counties, California*. Both studies were conducted by author Bai Tang and encompass large areas through the City of Ridgecrest and surrounding areas. Other notable studies include those conducted at CLNAWS.

Studies conducted at CLNAWS have had an important impact on the archaeology of the southwestern Mojave Desert. Some of the more notable work conducted at CLNAWS include the studies conducted in the China Lake Basin by E.L. Davis in 1969 and 1974 (Davis 1974, 1975, 1982; Davis and Panlaqui 1978). Davis' work revealed the antiquity of human occupation in the China Lake Basin and led to an increased interest in Paleoindian archaeology in the Mojave Desert. Today, the terminal Pleistocene/early Holocene remains one of the least-known periods in Mojave Desert prehistory; several studies have focused on understanding the nature of human occupation in the Mojave during this time period.

4.5.1.3.1 Previously Recorded Resources

Previous research in the cultural resources study area reveals an inventory of prehistoric archaeological sites that date from the terminal Pleistocene to the late Prehistoric, covering a wide breadth of human occupation in the region.

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Previous studies also reveal deposits, foundations, and landscapes associated with historic-era sites within the Indian Wells Valley and China Lake Basin that relate to homesteading and ranching activities within the area.

Two prehistoric sites and 23 historic-era sites were identified within the 0.5-mile radius of the Proposed Project APE, as shown on [Table 4.5-3](#):

Table 4.5-3 Resources Identified During Previous Research

Resource	Site Type	Artifacts	Report
CA-KER-1671	Simple Flaked Stone	Obsidian and cryptocrystalline debitage	Wickstrom 2003
CA-KER-6328H	Historic Refuse	Cans, glass, ceramics, construction materials	Tang & Hogan 2004
CA-KER-6502H	Historic Refuse	Cans, glass, ceramics	Darcangelo & Hildebrandt 2004
CA-KER-6503H	Historic Refuse	Domestic refuse	Darcangelo & Hildebrandt 2004
CA-KER-7078H	Historic Wagon Trail	Panamint Valley freight trail	Hope 2004
P-15-11177	Historic Building	One story cement building	Tang & Hogan 2004
P-15-11178	Historic Building	Steel-frame warehouse	Tang & Hogan 2004
P-15-11179	Historic Building	Single story commercial building	Tang & Hogan 2004
P-15-11180	Historic Building	One story "L" shaped wood shingled building	Tang & Hogan 2004
P-15-11181	Historic Building	One story commercial building	Tang & Hogan 2004
P-15-11182	Historic Building	First Landmark Missionary Baptist Church	Tang & Hogan 2004
P-15-11183	Historic Building	One story commercial building	Tang & Hogan 2004
P-15-11194	Historic Building	Two story public building	Tang & Hogan 2004
P-15-11195	Historic Building	One story commercial building	Tang & Hogan 2004
P-15-11211	Historic Building	One story modern building	Tang & Hogan 2004
CA-SBR-2281	Limited Habitation	Rock rings, ground stone	Kaldenberg 1977
CA-SBR-4134	Simple Flaked Stone	Obsidian debitage and cutting tool fragments	N/A
CA-SBR-8547H	Railway	Segment of Trona Railway	Love & Tang 1996

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Resource	Site Type	Artifacts	Report
CA-SBR-8548H	Historic Road	Paved road	Love & Tang 1996
CA-SBR-8549H	Historic Village	Remnants of Borosolvay Pacific Borax Company village	Love & Tang 1996
CA-SBR-8550	Historic Building	Burnham Chemical Co. processing plant	Love & Tang 1996
CA-SBR-11477	Milling Station	Three milling stones, possible hearth	Darcangelo 2004
CA-SBR-11478H	Historic Refuse	Cans, glass, ceramics, and construction materials	Darcangelo 2004
CA-SBR-11479H	Historic Building	Foundations of NAWSCL security checkpoint	Darcangelo 2004
CHL-774	Historic Landmark	California Historic Landmark No. 774	N/A

N/A = Not Applicable

4.5.1.4 Summary of Findings from Research Conducted for the Proposed Project

As previously presented, the APE for the Proposed Project includes a total of 1,406 acres consisting of 4.6 acres of land adjacent to the existing Downs Substation property and a 200-foot wide corridor centered along the approximately 58 mile proposed fiber optic route. The cultural resources study area for the Proposed Project is identified as the area within one-half mile of either side of the fiber optic telecommunication cable routes, and a one-half mile radius surrounding the proposed Downs Substation expansion property.

Nine newly identified historic-era sites and 19 newly identified historic-era isolates²² were identified within the Proposed Project APE. No newly identified prehistoric sites or isolates were identified. Three previously recorded historic-era sites are also located within the Proposed Project APE (Duran et al. 2010). Topographic maps with township, range, and section for each resource were used to research land use history in the Bureau of Land Management (BLM) township tract books covering the years 1866 to 1972. Historic plat maps and land patent records kept by the General Land Office were also inspected.

²² An isolate is defined as an isolated artifact or small group of artifacts that appear to reflect a single event, loci, or activity and may lack identifiable context but has the potential to add important information about a region, culture, or person. Isolates are not considered under CEQA to be significant, and thus do not require avoidance or mitigation.

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4.5.1.4.1 Records Search and Literature Review Methods

SCE conducted a records search to identify and review previously recorded literature and resource records found within the cultural resources study area. The search included a review of the archives of the California Historical Resources Information System located at the Southern San Joaquin Valley Information Center, California State University Bakersfield, and the San Bernardino County Archaeological Information Center at the San Bernardino County Museum. Additionally, research was conducted at the National Archives Pacific Region research facility in San Bruno, California. Pedestrian surveys and evaluations of the built environment were conducted for the Proposed Project (Duran, Trevino and Johnson 2010).

The Native American Heritage Commission (NAHC) was contacted by SCE and a search of its Sacred Lands File (SLF) for private lands within the proposed Downs Substation location was requested on April 20, 2010. The BLM maintains responsibility for Native American consultation concerning BLM land within the area of the Proposed Project. SCE has not been involved with BLM's inter-governmental communication and does not know whether BLM has sent any documentation to appropriate tribes or individuals.

As reflected in NAHC's May 3, 2010 response to SCE, the SLF search conducted by NAHC did not indicate the presence of any Native American cultural resources within a 0.5-mile radius of the private parcels within the current project APE. Correspondence was initiated on May 7, 2010 with the Tule River Indian Tribe, the Kawaiisu Tribe of Tejon Reservation, Mr. Ron Wermuth, Kitanemuk & Yowlumne Tejon Indians, the Kern Valley Indian Council, the Tejon Indian Tribe, and the Tubatulabals of Kern Valley. The Proposed Project was briefly described and participation in the project review process was encouraged, to enhance preservation of sacred lands or resources that might be present within the Proposed Project APE. To date, no response has been received.

A paleontological literature study has also been prepared for the Proposed Project (Gust and Scott 2010). This section is adapted from the cultural resource technical assessment (Duran et al. 2010) and the paleontological literature study (Gust and Scott 2010) and describes the results of these studies, potential impacts, and Applicant Proposed Measures (APMs).

4.5.1.4.2 Intensive Archaeological Survey Methods

An intensive pedestrian survey of the Proposed Project APE was conducted over the period of May 12-20, 2010. The APE includes a total of 1,406 acres consisting of 4.6 acres of land adjacent to the existing Downs Substation property and a 200-foot wide corridor centered along the approximately 58 mile proposed fiber optic route. The proposed fiber optic telecommunication cable would be installed along the existing Inyokern-McGen-Searles No. 1 and No. 2 115 kV

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subtransmission lines. The APE extends through private and public lands; federal jurisdictions include the BLM and CLNAWS. Access to the APE on BLM and CLNAWS public land was permitted, as was access to the 4.6 acre property adjacent to the existing Downs Substation. Approximately 228 acres of private land, representing 16 percent of the total 1,406-acre project survey area, could not be surveyed due to access restrictions. When crossing private land, a cursory survey was conducted wherever the ground surface was in view.

A field authorization permit was required and obtained to conduct a non-collection and non-excavation cultural resources survey on BLM lands. Permission to survey on lands owned by CLNAWS was granted by Command Archaeologist Mike Baskerville.

Survey methods were accomplished in accordance with the standards for a Class III survey set by the BLM. Survey was conducted using transects at 15-meter intervals. Project area boundaries for the survey of the proposed Downs Substation expansion were located and identified with a handheld Trimble Juno SB global positioning system (GPS) receiver and an aerial photo-based map with Universal Transverse Mercator (UTM) coordinate information.

Survey of the proposed Downs Substation expansion area was conducted as a block; surveys along the proposed alignments were linear, conducted with two transects on each side of the alignment centerline. A survey crew examined the ground for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, baked clay items, fire-affected rock), soil discolorations that could indicate the presence of cultural deposits, and features indicative of the former presence of structures or buildings (e.g., postholes, foundations) or historic debris (e.g., metal, glass, ceramics). Ground disturbances such as burrows, cut banks, and slump walls were visually inspected.

Trimble GPS receivers were used to record the locations and boundaries (where warranted) for cultural sites and isolates identified during intensive survey. GPS data were differentially corrected using Trimble GPS correct software (an ArcMap extension) and a daily updated Scripps Orbit and Permanent Array Center (SOPAC) server provided by Cerro Coso Community College; these corrected data provide shapefile format for use in geographic information system software.

Cultural resources found during the survey were documented following Secretary of the Interior (SOI) standards (National Park Service 1983). All newly identified sites and isolates were recorded on State of California Office of Historical Preservation, Department of Parks and Recreation (OHP DPR) series 523 forms (Appendix E to this PEA). Forms used to record archaeological sites include the Primary Record (523A), Archaeological Site Record (523C), Sketch Map (523K), and Location Map (523J). Linear resources are recorded using the Linear Feature Record form (523E). Continuation sheets (523I) were used as additional supplements to site records when needed. Any previously recorded cultural resources were also updated on

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these forms. All DPR forms were completed according to the instructions listed in the *Instructions for Recording of Historical Resources* (OHP 1995).

4.5.1.4.3 Results of Intensive Archaeological Survey

As confirmed by intensive survey, three previously recorded historic-era sites are identified within the Proposed Project APE; new discoveries include identification of 9 historic-era sites and 19 historic-era isolates located within the Proposed Project APE. The cultural resource inventory presented here is abstracted from the technical cultural resources survey report (Duran et al. 2010).

All sites identified during the inventory were evaluated for their potential eligibility for inclusion in the National Register of Historic Places (National Register) and California Register of Historical Resources (California Register). None of the newly identified or previously identified archaeological sites were found eligible for inclusion in the National or California Registers. Isolates are not eligible resources for the National Register or California Register.

The majority of this inventory of historic sites and isolates consist of discarded items, historic refuse deposits, or dump sites. Sullivan and Griffith (2005) have addressed the issues regarding historic refuse sites and provided guidance for evaluating these sites for eligibility to the National Register. The following discussion and criteria are excerpted from their report (Sullivan and Griffith 2005:27–29).

When considering eligibility, historic refuse sites have historical meaning or significance through their association with the source. Because refuse scatters usually do not occur in proximity to the source property (i.e., most are isolated deposits), they may be viewed as individual sites/properties and assigned site numbers. Determining the association between the refuse locale and its source of generation is critical to establishing resource context. Identifying the associated property can be difficult and would require archival research, often involving an area larger than the immediate Proposed Project area.

Knowing the eligibility of the source property will aid in determining the eligibility of the associated refuse. In many survey situations, it may be impossible, due to land jurisdiction issues, project boundaries, etc., to evaluate the eligibility of the property that generated the historic materials. In these cases, the context for the associated property would be identified. If the associated property has significance within the context and the historic deposit can contribute important research information about the property, then the resource is eligible. For management purposes, refuse sites will usually be assigned their own site number.

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The steps in evaluating the eligibility of a refuse deposit are as follows:

- 1) Identify the property that was the source (generated the materials) of the archaeological remains.
- 2) Identify the historic context(s) for the source property and refuse deposit.
- 3) If possible, determine the National Register status of the source property.
- 4) Evaluate the integrity of the deposit and its potential to contribute important information about the associated source property or associated context.

If an association is established with an eligible property and context, the deposit may be eligible under Criterion D. To be eligible under D, the resource must have the potential to yield important information that would contribute to an understanding of the associated property and context: integrity of location, materials, and association are required.

4.5.1.4.3.1 Sites Located within the APE of the Proposed Downs Substation Expansion

Site CA-KER-6328H

Site CA-KER-6328H is located within the APE for the proposed Downs Substation expansion, and consists of a large multi-episode historic refuse deposit and scatter with multiple loci. The site was originally recorded in 2003 by Josh Smallwood of CRM Tech. Artifacts noted at the site include household refuse such as ceramics, glass, cans, scrap metal, concrete, milled wood, automobile parts, bedsprings, toilet fragments, barrel hoops, and sewage piping. Site CA-KER-6328H is located on private land. The predominant artifact is the ubiquitous metal can which occurs in abundance throughout the site.

The site was originally recorded with six loci. During the current investigation, only the eastern half of the site was updated. Disturbances to the site have parceled the updated section of the site into 11 different loci (Locus A through K). Several two-track roads cut through the empty lot where the site is located, and the area is currently used as a parking lot for an adjacent park. Many of the loci within the site are bound by the two-track roads that cross through the area. The majority of artifacts along the margins of each locus are likely in a secondary context because of the creation of the two-track roads in the immediate vicinity. Some modern refuse was noted within the historic material suggesting that local residents occasionally dump refuse at the site. A number of the artifacts present at the site exhibited maker's marks including Clorox bottles dating from 1929-1962, Purex bottles dating from 1939-1957, Roma wines dating from 1866-1945,

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Duraglas dating from 1940-1943, Hazel-Atlas glass company dating from 1923-1964, and Ball canning jars dating from 1888-1930.

Based on archival research and archaeological remains, the only research question site CA-KER-6328H could potentially aid in answering is that regarding homesteading and ranching patterns in the Indian Wells Valley in the early twentieth century. There are no distinct housing structures or objects at the site, nor does the refuse appear to be directly related to a specific homestead, family residence, or business. The data collected from the site do not indicate that the site has significance as the earliest or most significant historic period of settlement in the area. Thus, site CA-KER-6328H does not answer any research questions about historic homestead and ranching patterns.

Moreover, CA-KER-6328H has been heavily damaged by modern activities. In-use two track roads cut through the site, and the area is used as a parking lot for an adjacent park, indicating that the site no longer maintains its integrity. In addition to the lack of integrity, the household nature of the refuse at CA-KER-6328H suggests that the site is not associated with any significant events in local or national history and is therefore ineligible for listing to the National Register under Criterion A and ineligible for listing to the California Register under Criterion 1. John Fitzgibbon and Harry Lutge appear to be of no local or national significance, indicating that 6238H is ineligible for listing to the National Register under Criterion B and ineligible for listing to the California Register under Criterion 2. No structures or features were present at the site, indicating that CA-KER-6238H is ineligible for listing to the National Register under Criterion C and ineligible for listing to the California Register under Criterion 3. A sample of the artifacts was recorded in the field and the data potential of the site has been exhausted, indicating that CA-KER-6328H is ineligible for listing to the National Register under Criterion D and ineligible for listing to the California Register under Criterion 4. Site CA-KER-6328 is recommended ineligible for listing to the National Register under all four criteria (A–D) and ineligible for listing to the California Register under all four criteria (1–4).

4.5.1.4.3.2 Sites Located within the APE of the Fiber Optic Telecommunication Cable Routes

Resources identified within the APE for the proposed fiber optic telecommunication cable routes include two previously recorded and nine newly recorded historic-era resources, and 19 historic-era isolated finds.

Site CA-KER-7738H/CA-SBR-13799H

Site CA-KER-7738H/CA-SBR-13799H, the Inyokern-McGen-Searles No. 1 115 kV subtransmission line, is a linear feature composed of H-frame and T-frame utility poles. H-frame utility

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poles were noted between the Inyokern and Searles Substations. From Searles Substation to McGen Substation, T-frame utility poles were noted. The high-voltage lines are suspended under the main crossbar of the utility pole. Insulators for the high-voltage lines consist of six ceramic disks. Both uprights of the utility pole are creosoted and have a basal diameter of 16 inches. The utility poles for this line are spaced approximately 650 feet apart, and each pole is approximately 21 feet tall. Some date stamps were noted on poles ranging from the 1950s to the 2000s. The majority of the H-frame utility poles have one pole dated 1953 or 1955 and the other pole dating 1963. Many of the poles near the City of Trona were replaced in 1989. Other dates noted for the poles included 1996, 2004, and 2009. Site CA-KER-7738H/CA-SBR-13799H traverses lands in both Kern and San Bernardino County.

The utilitarian nature of power lines suggests that power lines are often ineligible for listing to the National or California Registers under Criteria A and/or B unless associated with significant facility or individual (Taylor 2005). Preliminary analysis of the local history and electrical substations associated with this power line suggests that CA-KER-7738H/CA-SBR-13799H is not associated with any significant events or individuals of national or local significance and therefore ineligible for the National Register under Criteria A and B and ineligible for listing to the California Register under Criteria 1 and 2. The indistinctive and common nature of the power poles indicates power poles are generally ineligible for the National Register under Criterion C (Taylor 2005). The common and indistinctive nature of CA-KER-7738H/CA-SBR-13799H indicates that the resource is ineligible for listing to the National Register under Criterion C and ineligible for listing to the California Register under Criterion 3. The recent design and construction (within the last 60 years) of the power poles associated with CA-KER-7738H/CA-SBR-13799H are well documented, and their understood function suggests that the resources possess little or no potential to yield important historical data, indicating that CA-KER-7738H/CA-SBR-13799H is ineligible for listing to the National Register under Criterion D and ineligible for listing to the California Register under Criterion 4. CA-KER-7738H/CA-SBR-13799H is ineligible for listing to the National Register under all four criteria (A–D) and ineligible for listing to the California Register under all four criteria (1–4).

Site CA-KER-7739H/CA-SBR-13800H

Site CA-KER-7739H/CA-SBR-13800H, the Inyokern-McGen-Searles No. 2 115 kV subtransmission line, is a linear feature composed of T-frame utility poles with two crossbars. The upright is creosoted and has a basal diameter of 13 inches. The line has a total of six conductors: one with four ceramic insulator disks at either end and above the top cross-member, one with four insulator disks mounted on a bracket on the east side of the top of the upright, one at either end and above the lower cross-member with two ceramic insulator disks, and one attached directly to the east side of the pole about halfway from the surface to the lower cross-member. Both cross-members are braced with steel braces. Braces and cross-members are both attached on the south side of the

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pole. The spacing between poles is approximately 280 feet. Some date stamps ranging from the 1960s to the 2000s were noted on poles. The majority of the poles for CA-KER-7739H/CA-SBR-13800H were placed in 1965, with the majority of poles near the City of Trona being replaced between 1975 and 1985. Some poles throughout the line were replaced in 1996. Site CA-KER-7739H/CA-SBR-13800H traverses lands in both Kern and San Bernardino Counties.

As with CA-KER-7738H/CA-SBR-13799H, a preliminary analysis of the local history and electrical substations associated with this power line suggests that CA-KER-7739H/CA-SBR-13800H is not associated with any significant events or individuals of national or local significance and therefore ineligible for the National Register under Criteria A and B and ineligible for listing to the California Register under Criteria 1 and 2. The indistinctive and common nature of the power poles indicates power poles are generally ineligible for the National Register under Criterion C (Taylor 2005). The common and indistinctive nature of CA-KER-7739H/CA-SBR-13800H indicates that the resource is ineligible for listing to the National Register under Criterion C and ineligible for listing to the California Register under Criterion 3. The recent design and construction (within the last 60 years) of the power poles associated with CA-KER-7739H/CA-SBR-13800H are well documented, and their understood function suggests that the resources possess little or no potential to yield important historical data, indicating that CA-KER-7739H/CA-SBR-13800H is ineligible for listing to the National Register under Criterion D and ineligible for listing to the California Register under Criterion 4. CA-KER-7739H/CA-SBR-13800H is ineligible for listing to the National Register under all four criteria (A–D) and ineligible for listing to the California Register under all four criteria (1–4).

Site P 36-021450

Site P 36-021450 is Searles Substation, located in San Bernardino County. Searles Substation contains typical components of an electrical substation, including oil circuit breakers, transformers, voltage regulators, and a control house. Information received from SCE suggests that Searles Substation was constructed in the 1950s. Searles Substation is currently in use, and some components of the Searles Substation have likely been replaced in the last 60 years.

As a substation providing power to the City of Trona, Searles Substation is not associated with events of local or national significance, indicating the site is ineligible for listing to the National Register under Criterion A and ineligible for listing to the California Register under Criterion 1. The Searles Substation is not associated with individuals of national or local significance, indicating that the site is ineligible for listing to the National Register under Criterion B and ineligible for listing to the California Register under Criterion 2. The Searles Substation is not of unique design or the work of a master and is therefore ineligible for listing to the National Register under Criterion C and ineligible for listing to the California Register under Criterion 3. The recent design and construction (within the last 60 years) of the Searles Substation components associated with

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P 36-021450 are well documented, and their understood function suggests that the resources possess little or no potential to yield important historical data, indicating that P 36-021450 is ineligible for listing to the National Register under Criterion D and ineligible for listing to the California Register under Criterion 4. P 36-021450 is ineligible for listing to the National Register under all four criteria (A–D) and ineligible for listing to the California Register under all four criteria (1–4).

Site P 15-013796

Site P 15-013796 is Inyokern Substation, which is located in Kern County. The Inyokern Substation contains typical components of an electrical substation, including oil circuit breakers, transformers, voltage regulators, and a control house. The Inyokern Substation also contains wood components, which according to information provided by SCE, are no longer common with newly constructed substations. Information received from SCE suggests that the Inyokern Substation was constructed in the 1950s. The Inyokern Substation is currently in use, and some components of the Inyokern Substation have likely been replaced in the last 60 years.

As with Searles Substation, a substation providing power to the town of Inyokern, Inyokern Substation is not associated with events of local or national significance, indicating the site is ineligible for listing to the National Register under Criterion A and ineligible for listing to the California Register under Criterion 1. The Inyokern Substation is not associated with individuals of national or local significance, indicating that the site is ineligible for listing to the National Register under Criterion B and ineligible for listing to the California Register under Criterion 2. The Inyokern Substation is not of unique design or the work of a master and is therefore ineligible for listing to the National Register under Criterion C and ineligible for listing to the California Register under Criterion 3. The recent design and construction (within the last 60 years) of the components associated with P 15-013796 are well documented, and their understood function suggests that the resources possess little or no potential to yield important historical data, indicating that P 15-013796 is ineligible for listing to the National Register under Criterion D and ineligible for listing to the California Register under Criterion 4. P 15-013796 is ineligible for listing to the National Register under all four criteria (A–D) and ineligible for listing to the California Register under all four criteria (1–4).

Site CA-KER-7078H

Site CA-KER-7078H is a section of a nineteenth-century wagon trail, recorded in Kern County. The trail crosses perpendicular to the current Proposed Project area. Only the segment of the wagon trail that crosses the Proposed Project area was updated as part of the current effort. The trail remains in very poor condition and has been partially disturbed by modern use as a dirt road,

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and is also bisected by two-track roads and utility lines. Artifacts noted in proximity to the wagon trail include one hole-in-cap can measuring $4 \frac{2}{16}$ inches in diameter and $4 \frac{12}{16}$ inches in height. No other artifacts were noted in association with site CA-KER-7078H. In 2004, a full evaluation of the site was completed by Andrew Hope of Caltrans, who determined that the wagon trail was ineligible for listing to the National Register under all four criteria (A–D) and ineligible for listing to the California Register under all four criteria (1–4).

Site CA-SBR-13781H

Site CA-SBR-13781H is located in San Bernardino County, and consists of four concrete slabs representing three foundations with an associated historic refuse scatter spanning a period of at least 60 years. Bricks with maker's marks from the 1920s indicate that the foundations were built in the 1920s. Historic refuse scatter includes cans, glass, automotive parts, milled lumber, bricks, and other debris. The historic refuse deposit includes materials from the historic, sub-modern, and modern era. The majority of the historic refuse scatter appears to the east of the foundations. Glass present includes colorless, brown, green, aqua, blue, and milk glass fragments. More than 100 bricks and brick fragments were noted at the site. Ceramics at the site include fragments of sewer pipe, storage crockery, and one thick whiteware sherd with a date stamp of "AUG 16 1955." Other items include a 1980s California license plate and four discarded television sets. The site is in overall poor condition. Present activities have affected the site, including a recently used two-track dirt road that runs along the western boundary of the site. A parking area was noted through the southwestern boundary of the site.

CA-SBR-13781H is likely a concentration of refuse from local residents, suggesting that the site has no association with events of local or national significance, indicating that CA-SBR-13781H is ineligible for listing to the National Register under Criterion A and ineligible for listing to the California Register under Criterion 1. The names associated with the area include Hampton Ewing, Otis Simpson, and the Trona Railway. Hampton Ewing and Otis Simpson appear to be of no local or national significance, and the railway has been used to haul chemicals out of the Searles Valley and is of no local or national significance.

The only research question site CA-SBR-13781H could potentially aid in answering is that regarding homesteading and ranching patterns in the Indian Wells Valley in the early twentieth century. Because the site has been used for dumping of debris up to the present day, any integrity of the site from an earlier period of significance has likely been disrupted, thus rendering CA-SBR-13781H ineligible based on lack of integrity. Moreover, the data collected from the site do not indicate any unique or significant uses that had special significance as the earliest or most significant period of settlement in the area, nor do the building construction methods (concrete

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foundations) indicate a unique or best-preserved example of a method that could possibly render the site historically significant.

Thus, CA-SBR-13781H is ineligible for listing to the National Register under Criterion B and ineligible for listing to the California Register under Criterion 2. The site contains four concrete slab structures; however, these structures are not of unique design or construction method, indicating that CA-SBR-13781H is ineligible for listing to the National Register under Criterion C and ineligible for listing to the California Register under Criterion 3. A sample of the artifacts was recorded in the field and the data potential of the site has been exhausted, indicating that site CA-SBR-13781H is ineligible for listing to the National Register under Criterion D and ineligible for listing to the California Register under Criterion 4. Site CA-SBR-13781H is recommended ineligible for listing to the National Register under all four criteria (A–D) and ineligible for listing to the California Register under all four criteria (1–4).

Site CA-SBR-13780H

Site CA-SBR-13780H is located in San Bernardino County, and consists of a single-episode historic refuse deposit. Historic materials include cans, glass and ceramic fragments, wire nails, and metal fragments. Five hole-in-top condensed milk cans were observed, all measuring $2 \frac{15}{16}$ inches in diameter and $3 \frac{14}{16}$ inches in height; various other sanitary and hole-in-top cans were noted. The measurements for the condensed milk cans noted date from 1950 to the present. Ceramic artifacts include fragments of an improved earthenware bowl or platter with a floral transfer print reading “Atlas Globe? China Company/M-27.” Glass fragments include one colorless bottle base with “0-7297/2” maker’s mark and one colorless bottle base with fluting and “Pat’d-124748/[B]lend Rubenstein...New York distribution” stamped on the base. Other fragments include opaque green, brown, colorless, and cobalt blue glass. The site is in poor condition. Granite boulder push-piles around the site most likely reflect road construction from Highway 178. The granite push-piles appear to have interfered with the original site boundary limits because some artifacts were noted in proximity to the push-piles and are likely in a secondary context.

The only research question site CA-SBR-13780H could potentially aid in answering is that regarding homesteading and patterns in the Indian Wells Valley in the mid-twentieth century. There are no distinct housing structures or objects at the site, nor is there any evidence of a sustained historic period of refuse deposition, which would lend information about changing patterns of habitation in the area. Furthermore, the historic refuse deposit does not appear to be directly related to a specific homestead, family residence, or business, and the data collected from the site do not indicate that the site has significance as the earliest or most significant period of settlement in the area. Thus, site CA-SBR-13780H does not answer any research questions about homestead and ranching patterns.

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CA-SBR-13780H is likely a concentration of refuse from local residents, suggesting that the site has no association with events of local or national significance, indicating that CA-SBR-13780H is ineligible for listing to the National Register under Criterion A and ineligible for listing to the California Register under criterion 1. The names associated with the area include Hampton Ewing, Otis Simpson, and the Trona Railway. Hampton Ewing and Otis Simpson appear to be of no local or national significance, and the railway has been used to haul chemicals out of the Searles Valley and is of no local or national significance. CA-SBR-13780H is ineligible for listing to the National Register under Criterion B and ineligible for listing to the California Register under Criterion 2. No structures or features were present at the site, indicating that CA-SBR-13780H is ineligible for listing to the National Register under Criterion C and ineligible for listing to the California Register under Criterion 3. A sample of the artifacts was recorded in the field and the data potential of the site has been exhausted, indicating that CA-SBR-13780H is ineligible for listing to the National Register under Criterion D and ineligible for listing to the California Register under Criterion 4. Site CA-SBR-13780H is recommended ineligible for listing to the National Register under all four criteria (A–D) and ineligible for listing to the California Register under all four criteria (1–4).

Site CA-SBR-13778H

Site CA-SBR-13778H is located in San Bernardino County, and consists of historic refuse that may have been a part of a dwelling. The site sits atop a small rise and it is located on BLM land. Materials noted at the site include cans, glass, ceramics, milled wood fragments, seat and bed springs, flex pipe, a stove pipe, bailing wire, chicken wire, round-head nails, concrete fragments, toilet bowl fragments, and terra cotta fragments that may have originated from a clay pipe. Two California license plate fragments were noted. The license plates are highly oxidized and only partially legible. A sample of can types was recorded at the site. Cans noted during the sample analysis include 50 single serving–sized rotary-opened sanitary cans, two hinge-top tins, 15 multi-serving rotary-opened sanitary cans, one condensed milk can with soldered seams measuring 2 ¹⁴/₁₆ inches in diameter, one hole-in-top condensed milk can with machine-soldered seams measuring 3 inches in diameter and 3 ¹³/₁₆ inches in height, five church key-opened 12-ounce steel beer cans, and two paint cans. Several glass fragments were noted, including fragments of aqua, colorless, green, and blue glass. Colorless glass dominated. Two glass hobbleskirt Coca-Cola bottles were noted at the site. One bottles states “6 FL-OZS.” Two clay bricks were identified with a maker’s mark. One fragment of ceramic dishware was noted with a white glaze and a blue design of a Chinese landscape. The milk cans at the site date from approximately 1917 to the present. The hobbleskirt Coca-Cola bottles noted at the site were manufactured starting in 1917 and continue to the present day. However, bottles stating contents of 6 ounces date between 1951 and 1958. Overall site condition is poor. Several two-track dirt roads used by off-highway-vehicles (OHV) were noted adjacent to the site boundary.

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The only research question site CA-SBR-13778H could potentially aid in answering is that regarding homesteading and ranching patterns in the Indian Wells Valley in the early twentieth century. There are no identifiable housing structures or objects at the site, nor is there any evidence of a sustained historic period of refuse deposition, which would indicate habitation in the area. Furthermore, the historic refuse deposit does not appear to be directly related to a specific homestead, family residence, or business, and the data collected from the site do not indicate that the site has significance as the earliest or most significant period of settlement in the area. Thus, site CA-SBR-13778H does not answer any research questions about homestead and ranching patterns.

The historic refuse at CA-SBR-13778H is not associated with any events significant in local or national history, indicating that the site is ineligible for listing to the National Register under Criterion A and ineligible for listing to the California Register under Criterion 1. H.W. Dougherty and the Searles Lake Chemical Corporation are the only names associated with site CA-SBR-13778H. H.W. Dougherty does not appear to be an individual of local or national significance, and the Searles Lake Chemical Corporation does not appear to have any local or national significance, suggesting the CA-SBR-13778H is ineligible for listing to the National Register under Criterion B and ineligible for listing to the California Register under Criterion 2. No structures or features were present at the site, indicating that CA-SBR-13778H is ineligible for listing to the National Register under Criterion C and ineligible for listing to the California Register under Criterion 3. The site consists of a surficial deposit. The lack of subsurface artifacts indicates that the data potential for the site was exhausted during the primary in-field investigation. Analysis collected from the site during the investigation indicates that CA-SBR-13778H cannot provide information pertinent to the historic-era research issues in the Proposed Project area indicating that site CA-SBR-13778H is ineligible for listing to the National Register under Criterion D and ineligible for listing to the California Register under Criterion 4. Site CA-SBR-13778H is recommended ineligible for listing to the National Register under all four criteria (A–D) and ineligible for listing to the California Register under all four criteria (1–4).

Site CA-SBR-13779H

Site CA-SBR-13779H is located in San Bernardino County, and consists of an extensive multi-episode historic refuse deposit. The deposit extends far to the west of the Proposed Project area and outside the APE. The site appears to have been a dump from the 1920s through the 1970s. Some refuse noted at the site include cans, glass, milled wood, ceramics, and miscellaneous materials. The limits of this historic refuse deposit are incompletely defined because of the large area encompassed. The main section of the dump area appears to be west of the current Proposed Project APE. A sample analysis was completed for the recorded section of the site. Approximately 50 8-ounce friction-lid sanitary cans and 200 hole-in-top lapped-seam condensed

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milk cans measuring $3 \frac{15}{16}$ inches in height and $2 \frac{14}{16}$ inches in diameter were documented. Other notable cans include multiple 1-gallon sanitary-seal cans with internal friction lids, flat-top cans with soldered seams, paint cans, and 55-gallon drums. Glass includes aqua, brown, green, blue, and colorless fragments. Glass Coca-Cola, Pepsi Cola, and 7-Up bottles were noted. No dates could be derived from the beverage bottles noted at the site. However, the measurements of the milk cans noted at the site date between 1917 and 1945. The site is in poor condition. An earthen berm is constructed on the eastern boundary of the site. This berm may have been the result of activities related to the construction of a power line and access road located east of the berm. Very little refuse was noted east of the berm, suggesting that the berm was created after the dump site and that many of the artifacts are in a secondary context.

The township tract book for CA-SBR-13779H's location notes an application for land made by Fred D. Fellow, an assignee for potash mining, on January 24, 1931. A patent was issued on June 28, 1933. The Santa Fe Pacific Railway and Trona Railway both had rights-of-way in this general area (NARA n.d.c:141). A plat map from 1918 notes a "Potash Plant" in the area of the resource, and also notes "cottages."

The only research questions site CA-SBR-13779H could potentially aid in answering are those regarding homesteading and ranching patterns in the Indian Wells Valley in the early twentieth century, and mining in the early twentieth century. There are no distinct housing structures or objects at the site, nor is there any evidence of mining refuse or structures. Thus, site CA-SBR-13779H does not answer any research questions about homestead and ranching patterns or historic mining. Because the site has been used for dumping of debris at least until the 1970s, any integrity of the site from an earlier period of historic significance has likely been disrupted, thus rendering CA-SBR-13779H ineligible based on lack of integrity.

CA-SBR-13779H consists of historic refuse; with "cottages" noted in the area on early maps, this indicates that the scatter may have originated from local residents, and that historic refuse continued to accumulate until the present day. This refuse does not appear to have any association with significant events in local or national history, suggesting that CA-SBR-13779H is ineligible for listing to the National Register under Criterion A and ineligible for listing to the California Register under Criterion 1. The only name associated with the refuse scatter is Fred D. Fellow. Archival research suggests that Fellow is of no local or national significance, suggesting that CA-SBR-13779H is ineligible for listing to the National Register under Criterion B and ineligible for listing to the California Register under Criterion 2. No structures or features were present at the site, indicating that CA-SBR-13779H is ineligible for listing to the National Register under Criterion C and ineligible for listing to the California Register. A sample of the artifacts was recorded in the field and the data potential of the site has been exhausted, indicating that site CA-SBR-13779H is ineligible for listing to the National Register under Criterion D and ineligible for

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listing to the California Register under Criterion 4. Site CA-SBR-13779H is recommended ineligible for listing to the National Register under all four criteria (A–D) and ineligible for listing to the California Register under all four criteria (1–4).

Site CA-SBR-13777H

Site CA-SBR-13777H is located in San Bernardino County on BLM land and consists of a historic refuse scatter comprised of cans, glass, ceramics, and chicken wire, bailing wire, barrel hoops, and milled lumber. Glass artifacts include several bottle body fragments. Three base fragments were noted, only one with a maker's mark. Glass colors include amethyst, aqua, colorless, and brown. Approximately 100 cans are at the site. Can types include condensed milk, sanitary, hole-in-top, and sardine cans. Some more noteworthy cans include 30 solder-sealed hole-in-top cans with a machine-soldered seam, measuring $2 \frac{15}{16}$ inches in diameter and $4 \frac{11}{16}$ inches tall, and 15 hole-in-top condensed milk cans measuring $2 \frac{15}{16}$ inches in diameter and $4 \frac{6}{16}$ inches in height. Milk cans with these measurements date between 1885 and 1903. The site is in good condition with no apparent disturbances in the immediate vicinity, indicating that the artifacts are likely in their original context.

The only research question site CA-SBR-13777H could potentially aid in answering is that regarding homesteading and ranching patterns in the Indian Wells Valley in the early twentieth century. There are no distinct housing structures or objects at the site, nor is there any evidence of a sustained historic period of refuse deposition, which would lend information on changing habitation patterns in the area. Furthermore, the historic refuse deposit does not appear to be directly related to a specific homestead, family residence, or business, and the data collected from the site do not indicate that the site has significance as the earliest or most significant period of settlement in the area. Thus, site CA-SBR-13777H does not answer any research questions about historic homestead and ranching patterns.

The historic refuse deposit at CA-SBR-13777H is not associated with any events significant in local or national history, indicating that the site is ineligible for listing to the National Register under Criterion A and ineligible for listing to the California Register under Criterion 1. The only names associated with CA-SBR-13777H include Lillie Brown and Roy Salsbury. Neither of these individuals is of local or national significance, indicating that CA-SBR-13777H is ineligible for listing to the National Register under Criterion B and ineligible for listing to the California Register under Criterion 2. No structures or features were noted at the site, indicating that site CA-SBR-13777H is ineligible for listing to the National Register under Criterion C and ineligible for listing to the California Register under Criterion 3. The site consists of a surficial deposit. The lack of subsurface artifacts indicates that the data potential for the site was exhausted during the primary in-field investigation. Analysis collected from the site during the investigation indicates

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that CA-SBR-13777H cannot provide information pertinent to historic-era research issues in the Proposed Project area, indicating that site CA-SBR-13777H is ineligible for listing to the National Register under Criterion D and ineligible for listing to the California Register under Criterion 4. Site CA-SBR-13777H is recommended ineligible for listing to the National Register under all four criteria (A–D) and ineligible for listing to the California Register under all four criteria (1–4).

Site CA-SBR-11479H

Site CA-SBR-11479H is located in San Bernardino County and consists of three cement foundation slabs and associated historic refuse scatter. The site is partially located on BLM land; the remaining portion of the site is located on CLNAWS land. Fragments of asphalt were noted that appear to be from two roads. There are four steel poles set in concrete within the site boundary. These poles are in sets of two about a foot apart on either side of the asphalt road running from the highway to the foundation. Segments of 4-inch-diameter metal pipe are visible three feet south of these posts, and appear to be parts of a solid pipe running under the asphalt feature. East of the metal posts is a small twentieth-century historic refuse deposit containing diagnostic cans and glass. Some small pieces of barbed wire and milled lumber nailed together with wire nails were also present. Glass items include brown and colorless fragments. Several maker's marks were noted, including Knock Glass Bottle Co. of Mississippi, Maywood Glass Company, Duraglas, and Obear-Nestor Glass Company, St. Louis. Many of the maker's marks date from the 1940s and 1950s. Can types include machine-soldered cans with church key openings, cone-top cans, flat-top cans, and 10 possible evaporated milk cans measuring $2\frac{1}{2}$ inches in diameter and $2\frac{6}{16}$ inches in height. A total of 45 bayonet-opened sanitary cans were also noted at the site. Other artifacts include bandage containers, 55-gallon drums, coffee cans, and one coffee can with bullet holes. The overall site is in fair condition with no apparent recent disturbances.

Use of CA-SBR-11479H as a security and receiving area indicates that the site is unlikely to have any associated with events of local or national significance and is therefore ineligible for listing to the National Register under Criterion A and ineligible for listing to the California Register under Criterion 1. No persons of local or national significance appear to be associated with CA-SBR-11479H, and the site is therefore ineligible for listing to the National Register under Criterion B and ineligible for listing to the California Register under Criterion 2. The site contains concrete slab structures; however, these structures are not of unique design or construction method, indicating that CA-SBR-11479H is ineligible for listing to the National Register under Criterion C and ineligible for listing to the California Register under Criterion 3. A sample of the artifacts was recorded in the field and the data potential of the site has been exhausted, indicating that site CA-SBR-11479H is ineligible for listing to the National Register under Criterion D and ineligible for listing to the California Register under Criterion 4. Site CA-SBR-11479H is

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recommended ineligible for listing to the National Register under all four criteria (A–D) and ineligible for listing to the California Register under all four criteria (1–4).

Newly Identified Isolated Finds

Nineteen newly identified isolated finds were examined and recorded within the APE for the proposed fiber optic telecommunication cable installation route. These resources were encountered within the APE and all within portions of the APE within San Bernardino County. They are presented in outline in [Table 4.5-4](#):

Table 4.5-4 Cultural Resource Isolated Finds Identified Within the Project Area

Resource No.	Age	Description	Jurisdiction
P36-021466	Historic	Isolate cone-top beverage cans	Public
P36-021467	Historic	Isolate flat-top beverage cans	Public
P36-021469	Historic	Isolate bi-metal beverage cans	Public
P36-021451	Historic	Isolate glass fragments	Public
P36-021452	Historic	Isolate glass beverage bottle	Public
P36-021453	Historic	Isolate glass fragments	Public
P36-021454	Historic	Isolate ceramic shards	Public
P36-021455	Historic	Isolate glass fragments	Public
P36-021456	Historic	Isolate bailing wire & oxidized metal fragments	Public
P36-021457	Historic	Isolate glass & oxidized metal fragments	Public
P36-021458	Historic	Isolate glass fragments	Public
P36-021459	Historic	Isolate flat-top beverage cans	Public
P36-021460	Historic	Isolate cans: condensed milk	Public
P36-021461	Historic	Isolate cans	Public
P36-021462	Historic	Isolate can: condensed milk	Public
P36-021463	Historic	Isolate flat-top beverage cans	Public
P36-021464	Historic	Isolate crimped-seam pull-tab beverage cans	Public
P36-021465	Historic	Isolate glass fragments	Public
P36-021468	Historic	Isolate flat-top beverage cans	Public

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Isolates are not considered significant under CEQA because their context and integrity are limited and because their research potential is exhausted through detailed location and recording. Therefore, isolates are not considered further in this CEQA review and are not included in the impact analysis.

4.5.2 Regulatory Setting

Because the Proposed Project involves private and public lands, the cultural resources inventory was performed consistent with state and federal guidelines.

4.5.2.1 Federal

The Antiquities Act of 1906 (Public Law 59-209) and the Archaeological Resource Protection Act (Public Law 96-9) set forth the basic principle that the federal government, acting for all the people, should work for the protection, preservation, and public availability of the nation's historic and prehistoric resources. Additional federal legislation, including the National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321 and 4331-4335), the National Historic Preservation Act (NHPA) of 1966, as amended (16USC 470 et seq.), Native American Graves Protection and Repatriation Act (NAGPRA), Native American Religious Freedom Act (NARFA), and Executive Order No.11593, has increased the responsibilities of the federal government regarding preservation of important and significant cultural resources from federal, federally-assisted, or federally-licensed activities. This mandate to preserve these resources is consistent with other essential considerations of national policy and applies to both public and private lands.

Under federal guidelines and the NHPA Section 106 process, resources must be assessed and evaluated in light of their potential to be eligible for nomination to the National Register. To determine site significance through application of National Register criteria, several levels of potential significance that reflect different (although not necessarily mutually exclusive) values must be considered. As provided in 36 CFR 60.0:

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

- (a) That are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) That are associated with the lives of persons significant in our past; or

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- (c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) That have yielded, or may be likely to yield, information important in prehistory or history.

The PEA includes information concerning the above criteria. Additionally, technical reports that have been prepared for the Proposed Project include supplemental information regarding cultural resources. However, this document analyzes cultural resources primarily from a CEQA standpoint. As discussed in Section 4.10.2.1, SCE has initiated communications with BLM (the likely lead agency under NEPA) and the Department of the Navy. BLM has not yet determined the level of environmental review under NEPA for the Proposed Project. The Department of the Navy is expected to utilize the environmental document generated by BLM for purposes of their own environmental review. As a result of this communication, it was decided that the technical report would be written considering and consistent with federal and state guidelines for cultural resources.

As the federal agency with the largest land ownership throughout the project area, BLM is required to conduct government to government consultation with Native American Tribes and individuals whose interests may be affected by activities on BLM lands (36 CFR 800.2(c)). To date, SCE has not been involved with this communication. SCE's consulting firm, Epsilon Systems Solutions, submitted a copy of the Draft Cultural Resources Technical Report to the BLM Ridgecrest office on June 16, 2010. In addition, an updated version of the report was submitted on August 30, 2010 for their review and comments. To date, the BLM has not submitted any comments to the cultural resources technical report.

Paleontological Resources Preservation Act. The Paleontological Resources Preservation Act (PRPA) (Public Law 111-011, Title VI, Subtitle D on Paleontological Resources Preservation) requires the Secretaries of the Interior and Agriculture to manage and protect paleontological resources on Federal land using scientific principles and expertise. PRPA affirms the authority of Federal land management agencies to manage paleontological resources, including authority to issue permits for collection of paleontological resources, curation of paleontological resources, and protecting the confidentiality of locality data. The PRPA also provides authority for the protection of significant paleontological resources on Federal lands, including criminal and civil penalties for fossil theft and vandalism. More detail on the PRPA can be found in the paleontological resources inventory that has been prepared for the Proposed Project (Gust and Scott 2010).

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4.5.2.2 State

Under California law, any project requiring a "discretionary" permit (any permit where the agency can approve or deny the activity) must be reviewed for archaeology (CEQA sec. 15065(a), 21083.2 and 21084.1).

CEQA indicates that only "significant" cultural resources need to be considered during the land use planning process (sec. 12084.1 and 15064.5). Guidelines for determining the significance of a cultural resource have been codified by both the Federal and State government. The State guidelines [Title 14, California Code of Regulations (CCR), Sections 4852 (b) and (c)] list the criteria which must be met for a historic or prehistoric resource to be deemed "significant" or "unique" enough to be included in the California Register of Historical Resources and to come under the protection of CEQA. To be determined significant, a resource must meet at least one of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important to our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important to prehistory or history.

If the initial surface inspection was unable to determine the significance of the cultural resource, then it may be necessary to conduct a small test excavation. The test excavation is designed to determine the depth and size of the resource, its contents, and whether it has already been disturbed.

When a "unique" cultural resource is involved, CEQA requires that the permitting agency first consider project alternatives which will allow the "resources to be preserved in place and left in an undisturbed state" (CEQA sec. 21083.2(b)). The following alternatives are listed in CEQA to accomplish this goal:

1. The project shall be designed to "avoid archaeological sites." (CEQA sec. 21083.2 (b)(1)).

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2. The project shall protect the resource by “deeding archaeological sites into a permanent conservation easement.”(sec. 21083.2 (b)(2).
3. The project shall protect the resource by “Capping or covering the archaeological sites with a layer of soil before building on the sites.” (sec. 21083.2 (b)(3).
4. The project shall protect the resource by “Planning parks, greenspace, or other open space to incorporate archaeological sites.”(sec. 21083.2 (b)(4).

4.5.2.3 Local

There are no local regulations applicable to the Proposed Project.

4.5.3 Significance Criteria

The significance of potential impacts is addressed in Appendix G of the CEQA Guidelines (Title 14, CCR 15000 et seq.), and indicates that a Proposed Project would have a significant impact on cultural resources and paleontological resources if it would:

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

4.5.4 Impact Assessment

Ground-disturbing activities, including grading, excavation, and pole replacement, are identified as the activities most likely to cause an adverse change in the significance of a historical, archaeological, or paleontological resource or unique geologic feature, or to disturb human remains. These activities would be conducted only during construction; operation and maintenance related to the Proposed Project would not involve the disturbance of subsurface soils or geologic formations.

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Construction and operation of the Proposed Project would result in no impacts or less than significant impacts for the following CEQA criteria:

Would the Proposed Project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

No Impact. There are no historical resources as defined in Section 15064.5 identified in the Proposed Project APE. In addition, no archaeological sites in the Proposed Project APE are recommended by the current study as resources eligible for either the National Register of Historic Places or the California Register of Historical Resources listing. Construction and operation of the Proposed Project would not cause any adverse change in the significance of a historical resource as defined in Section 15064.5. Therefore, no impacts would occur under this criterion as a result of the Proposed Project.

Would the Proposed Project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less than Significant Impact with Application of Applicant Proposed Measures. The Proposed Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Site CA-KER-6238H is a historic-era refuse scatter with multiple loci, consisting of household refuse with cans, glass, ceramics, and other miscellaneous items. Based on the results of the field surveys and historic background research, site CA-KER-6238H is recommended not eligible for the National Register of Historic Places and the California Register of Historical Resources. Construction of the Downs Substation expansion would require ground disturbing activities, and thus the potential for uncovering buried resources exists. SCE is proposing the implementation of APM CR-1 to minimize potential impacts to this archaeological resource. Therefore, with implementation of APM CR-1, impacts to Site CA-KER-6238H would be less than significant.

Eleven historic-period archaeological sites were recorded along the proposed fiber optic telecommunication cable route. Installation of the fiber optic telecommunication cable would require the removal of six poles along the proposed route. Based on the results of the field surveys and background research it was determined that there are no archaeological resources located within the APE (30- m radius) of the poles that would be replaced to accommodate the installation of the fiber optic telecommunication cable. Therefore, impacts to these eleven sites would be less than significant.

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Would the Proposed Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact. The geologic units underlying the proposed Downs Substation expansion location have a very low sensitivity for containing paleontological resources. The geologic units underlying the fiber optic telecommunication cable installation routes have a very low to high potential to contain paleontological resources. However, ground disturbing activities associated with pole replacement do not have the potential to result in a significant impact related directly or indirectly to the destruction of a unique paleontological resource or unique geologic feature. Therefore, the Proposed Project is not expected to result in a significant impact related directly or indirectly to the destruction of a unique paleontological resource or unique geologic feature. Therefore, no impacts would occur under this criterion as a result of the Proposed Project.

Would the Proposed Project disturb any human remains, including those interred outside of formal cemeteries?

No Impact. The record search and intensive field surveys reported no human remains in the vicinity of the proposed Downs Substation expansion location or along the fiber optic telecommunication cable installation routes. Encountering human remains is considered unlikely, but inadvertent discovery of human remains is possible. If human remains are encountered, SCE would follow the policies and procedures contained in Public Resources Code Sections 5097.98 and 5097.99. Therefore, no impacts would occur under this criterion as a result of the Proposed Project.

4.5.5 Applicant Proposed Measures

SCE proposes the following Applicant Proposed Measure related to Cultural Resources:

1. **Applicant Proposed Measure CR-1.** An archaeologist would monitor the grubbing, pad preparation, and construction earthwork in the event that a significant buried deposit is inadvertently encountered during construction activity at the location of the Downs Substation expansion. In such case, SCE would develop an archaeological monitoring plan describing archaeological monitoring activities and treatment of any unanticipated discoveries, as warranted.

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