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Document Title:	Section 5_3_Cultural Resources_Gem Energy Storage Center
Description:	This section analyzes the potential effects the Gem Energy Storage Center or its appurtenances may have on known or previously unrecorded cultural resources located within the study area.
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5.3 Cultural Resources

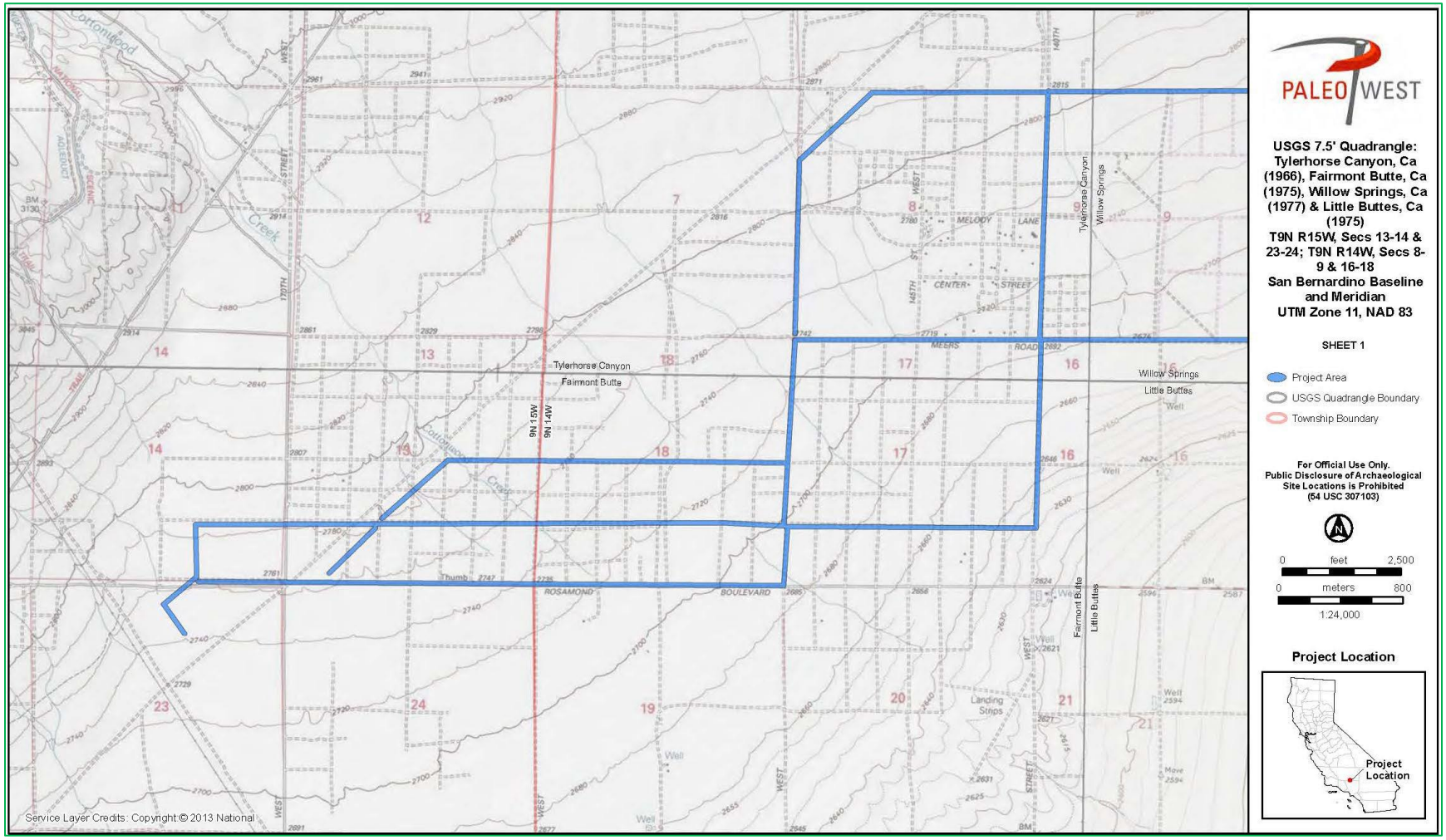
This section analyzes the potential effects Hydrostor, Inc.'s (Applicant) Gem Energy Storage Center (GESC) or its appurtenances may have on known or previously unrecorded cultural resources located within the study area. The delineation of the study area was performed following the California Energy Commission's (CEC) *Rules of Practice and Procedure and Power Plant Site Regulations Revisions, Appendix B (g)(2)(C)* (CEC 2007). Cultural resources include prehistoric resources; historic buildings, structures, objects, districts, and sites; and sites and resources of concern to Native Americans and other ethnic groups.

The Applicant has proposed an Advanced Compressed Air Energy Storage (A-CAES) facility in unincorporated Kern County, California. Herein, references to the A-CAES facility equate to the location of the proposed 71-acre GESC site. The GESC is located approximately one mile northeast of the community of Willow Springs and seven miles west of Rosamond, California. GESC will provide electricity to the existing Southern California Edison (SCE) Whirlwind Substation via an estimated 10.9-mile interconnection transmission line from the 500-megawatt (MW) A-CAES system. There are several alternative routes to the SCE Whirlwind Substation in addition to the *Preferred Route.* Los Angeles County Department of Water and Power has proposed the construction of a substation approximately 3 miles to the south of the GESC but the timing for the development of this substation is uncertain. Two possible alternative routes from the GESC to the proposed LADWP substation have been included in this analysis. Figure 5.6-1 and Figure 5.6-2 present the location and vicinity of the GESC site.

This section includes the following discussions: Section 5.3.1 describes the cultural resources environment that might be affected by GESC; Section 5.3.2 provides the research design used to guide the records and archival search and subsequent fieldwork phase of the cultural resource inventory for GESC; Section 5.3.3 presents an environmental analysis of construction and operation of GESC; Section 5.3.4 discusses whether there will be any cumulative effects from GESC; Section 5.3.5 presents mitigation measures that will be implemented to avoid construction impacts. GESC is not anticipated to require mitigation measures for cultural resources once it is operational; Section 5.3.6 discusses the laws, ordinances, regulations, and standards (LORS) applicable to the protection of cultural resources; Section 5.3.7 lists the agencies involved and agency contacts; Section 5.3.8 discusses permits, and Section 5.3.9 lists reference materials used in preparing this section. Per CEC Data Adequacy requirements this Section includes the following appendices:

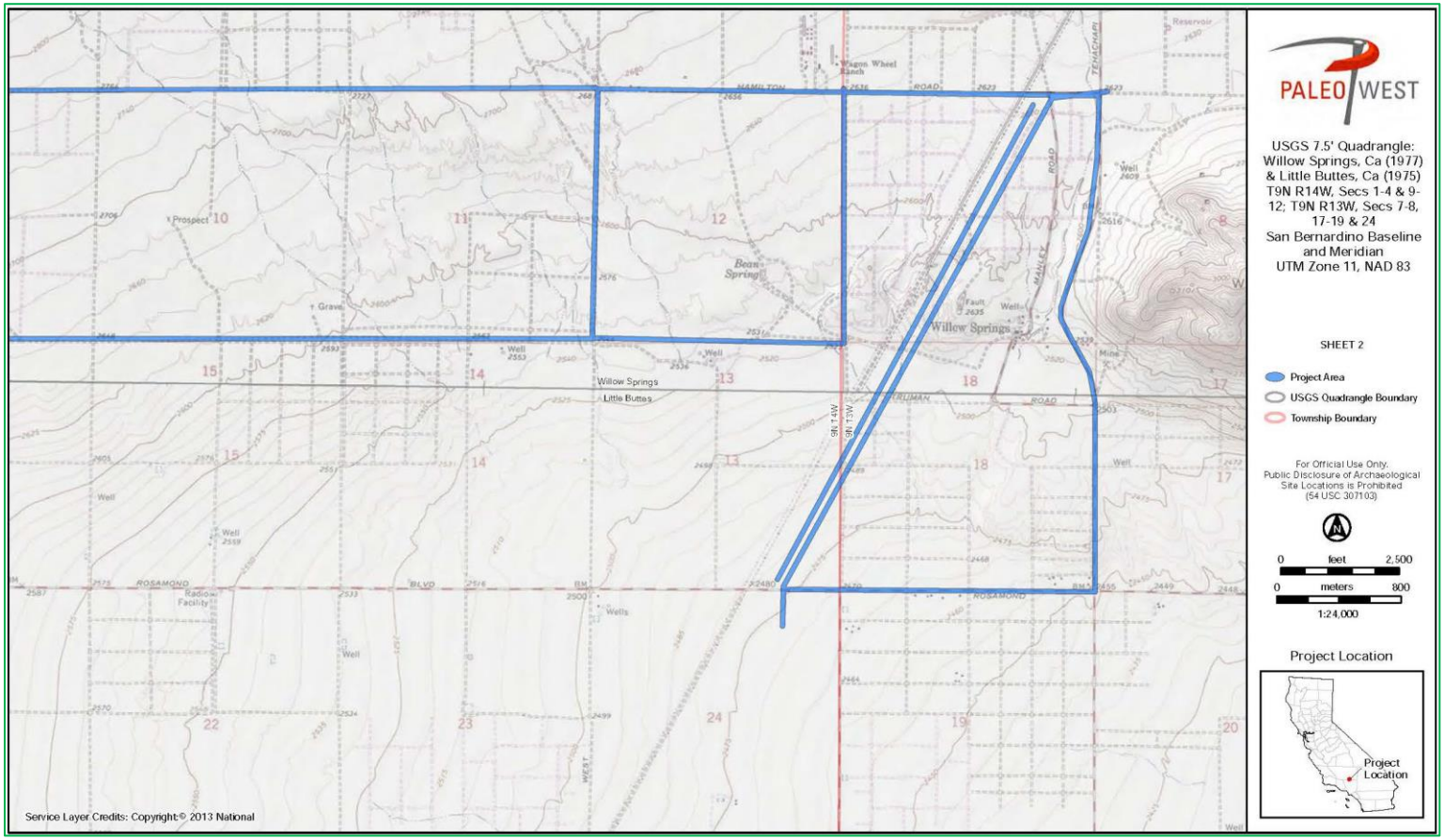
- Appendix 5.3A provides copies of agency consultation letters.
- Appendix 5.3B provides the cultural resource technical report which includes the following elements:
  - California Department of Parks and Recreation (DPR) 523 forms for newly recorded and updated resources.
  - Archival research material, including copies of historic maps and aerial photographs of the project and a complete copy of the California Historical Resources Information System (CHRIS) literature search results.
  - Copies of previous technical reports occurring within 0.25 miles of GESC and DPR 523 forms for previously recorded resources occurring within 0.25 miles of GESC and 0.25 miles of linear facilities.
- Appendix 5.3C provides names and qualifications of personnel who contributed to this study.

The Applicant will submit Appendix 5.3B separately to the CEC under a request for confidentiality.



Source: PaleoWest 2021.

Figure 5.3-1: Location Map (Western Portion of the Project Area)



Source: PaleoWest 2021.

Figure 5.3-2: Location Map (Eastern Portion of the Project Area)

This section is consistent with state regulatory requirements for cultural resources under the California Environmental Quality Act (CEQA). This study complies with the CEC's cultural resources guidelines, and instructions to CEC Staff for the review of an Application for Certification (AFC). The cultural resources assessment prepared for the GESC project includes the following:

- A description of the Project area, affected environment, and existing site conditions,
- A summary of the ethnography, prehistory, and history of the region,
- A review of site records for previously completed cultural resource investigations and recorded sites within the 0.25-mile study area,
- The Applicant's archeologist conducted a pedestrian survey of the Project area, which consists of the project linear facility routes and extending 50 feet on either side of the preferred alignment and alternative routes.
    - The Project area encompasses approximately 400 acres spanning 33 linear miles. The Project study area consists of a half-mile buffer around the Project area,
- Native American consultation.

The Applicant contracted PaleoWest, LLC (PaleoWest) to perform a cultural resources evaluation for the GESC project. A Register of Professional Archeologist (RPA), cultural resource specialist (CRS), and architectural historian conducted this study. PaleoWest presented their findings to the Applicant in their *Cultural Resources Technical Report for the Hydrostor A-CAES Project, Kern County, California*. Dr. Kyle Knabb PhD led PaleoWest's team for the GESC cultural resources evaluation. Dr. Knabb has 15 of experience in cultural resources management and compliance monitoring involving archaeological, paleontological, and prehistoric, and historic resources. Dr. Knabb has completed numerous cultural resource projects involving research, reconnaissance, testing, data recovery, monitoring, site recording, site protection/preservation, mapping, consultation, laboratory analysis, and report production. Dr. Knabb meets the Secretary of Interior's Professional Qualification Standards in archaeology and history and is an RPA (U.S. National Park Service, 1983).

5.3.1 Affected Environment

The GESC Project is located west of the unincorporated community of Willow Springs in the southeastern portion of Kern County, between 170th Street West to the west, 90th Street West to the east, Hamilton Boulevard to the north, and Rosamond Boulevard to the south. Regionally, the site is depicted on the U.S. Geological Survey (USGS) Tylerhorse Canyon, Fairmont Butte, Willow Springs, and Little Buttes 7.5-minute topographic quadrangle maps. The GESC project is within Sections 13, 14, 23, and 24 in Township 9 North, Range 15 West, Sections 1-4, 8, 9-12, and 16-18 in Township 9 North, Range 14 West, and Sections 7, 8, 17-19, and 24 in Township 9 North, Range 13 West, San Bernardino baseline and meridian.

The Project area lies within the Antelope Valley in the western Mojave Desert. The Mojave Desert is bounded on the west by the Sierra Nevada Mountains, on the south by the Transverse and Peninsular ranges, on the southeast and east by the Yuma and Colorado deserts, and on the north by the Great Basin. The western Mojave Desert comprises several valleys, including the Antelope Valley, Fremont Valley, Victor Valley, Lucerne Valley, along with the Mojave River and the Barstow area.

5.3.1.1 Cultural Chronology

Over the past century, archaeologists have generally divided the prehistory of the Western Mojave Desert into five distinct periods or sequences distinguished by specific material (i.e., technological) or cultural traits. Early cultural chronologies were proposed by Amsden (1937), Campbell et al. (1937), and Rogers (1939), that was later adapted by Warren and Crabtree in 1972 (later published in 1986 and further detailed by Warren in 1984), in what many consider to be the most influential cultural sequence proposed for the region. Alternative sequences have since emerged (e.g., Bettinger and Taylor 1974; Hall 1993; Yohe 1992) proposing new nomenclature (e.g., Newberry Period vs. Rose Spring Period vs. Saratoga Springs), slightly adjusted cultural chronologies, or attempting to link the Great Basin chronological framework to the Mojave Desert (PaleoWest 2021).

Recently, Sutton and others (2007:233) proposed a cultural-ecological chronological framework based on climatic periods (e.g., Early Holocene) “to specify spans of calendric time and cultural complexes (e.g., Lake Mojave Complex) to denote specific archaeological manifestations that existed during and across those periods.” The new sequence draws heavily from Warren and Crabtree (1972, 1986) and Warren (1984), as well as from the vast body of recent archaeological research conducted in the region (PaleoWest 2021).

5.3.1.2 Pleistocene (ca. 10,000 to 8,000 cal. B.P.)

The earliest cultural complex recognized in the Mojave Desert is Clovis, aptly named for the fluted projectiles often associated with Pleistocene megafaunal remains. Arguments for pre- Clovis Paleoindian human occupation in the Mojave Desert rely on relatively sparse evidence and unpublished data, although in light of the growing body of evidence suggesting a pre-Clovis occupation of the Americas, the argument cannot simply be ruled out. Paleoindian culture is poorly understood in the region due to a relative dearth of evidence stemming from a handful of isolated fluted point discoveries and one presumed occupation site on the shore of China Lake. Archaeologists tend to interpret the available data as evidence of a highly mobile, sparsely populated hunting society that occupied temporary camps near permanent Pleistocene water sources (PaleoWest 2021).

5.3.1.3 Early Holocene (9,600 BC to 6,000 BCE)

Two archaeological patterns are recognized during the Early Holocene: The Lake Mojave Complex (sometimes referred to as the Western Pluvial Lakes Tradition) and the Pinto Complex. The Lake Mojave Complex is characterized by stemmed projectile points of the Great Basin Series, abundant bifaces, steep-edged unifaces, and crescents. Archaeologists have also identified, in less frequency, cobble-core tools, and ground stone implements. The Pinto Complex, on the other hand, is distinguished primarily by the presence of Pinto-style projectile points. Although evidence suggests some temporal overlap, the inception of the Pinto Complex is assigned to the latter part of the Early Holocene and is generally considered a Middle Holocene cultural complex (PaleoWest 2021).

During this period, the Lake Mojave cultural complex utilized more extensive foraging ranges, as indicated by an increased frequency of extra local materials. Spheres of influence also expanded as potential long-distance trade networks were established between the desert and coastal peoples. Groups were still highly mobile, but they practiced a more forager-like settlement- subsistence strategy. Residential sites indicate more extensive periods of occupation and recurrent use. In addition, residential and temporary sites also indicated a diverse social economy, characterized by discrete workshops and special-use camps (e.g., hunting camps). Diet also appears to have diversified, with a shift away from dependence upon lacustral environments such as lakeside marshes, to the exploitation of multiple environments containing rich resource patches (PaleoWest 2021).

5.3.1.4 Middle Holocene (6,000 BCE to 500 BCE)

The Pinto Complex is the primary cultural complex in the Mojave Desert during the Middle Holocene. Once thought to have neatly succeeded the Lake Mojave Complex, a growing corpus of radiocarbon dates associated with Pinto Complex artifacts suggest that its inception could date as far back into the latter part of the Early Holocene. Extensive use of toolstone other than obsidian and high levels of tool blade reworking was characteristic of this complex and the earlier Lake Mojave Complex. A reduction in toolstone source material variability, however, suggests a contraction of foraging ranges that had expanded during the Early Holocene. Conversely, long-distance trade with coastal peoples continued uninterrupted, as indicated by the presence of Olivella shell beads (PaleoWest 2021).

The most distinguishing characteristic of the Pinto Complex is the prevalence of ground stone tools, which are abundant in nearly all identified Pinto Complex sites. The emphasis on milling tools indicates greater diversification of the subsistence economy during the Middle Holocene. Groups increased reliance on plant processing while continuing to supplement their diet with protein from small and large game animals (PaleoWest 2021).

Recent archaeological research in the Mojave Desert suggests there was a greater degree of regional cultural diversity during the Middle Holocene than once previously thought. Sutton et al. (2007) have proposed a new Middle Holocene cultural complex associated with sites exclusively located at Twentynine Palms in the southeastern Mojave Desert. Artifacts recovered from Deadman Lake Complex sites, such as Olivella Dama from the Sea of Cortez, and contracting-stem and lozenge-shaped projectiles similar to those recovered from Ventana Cave in Arizona may suggest closer cultural contact with Southwest Archaic cultures than Pinto cultures to the north and west. However, it is also possible that the proposed complex simply reflects a technologically distinct segment of the Pinto, rather than a distinct culture (PaleoWest 2021).

5.3.1.5 Late Holocene (500 CE to Historic Contact)

The Late Holocene in the greater Southern California region is characterized by increases in population, higher degrees of sedentism, expanding spheres of influence, and greater degrees of cultural complexity. In the Mojave Desert, the Late Holocene is divided into several cultural complexes; namely the Gypsum Complex (2000 calibrated (cal) Before Christ (B.C.) to cal anno Domini (A.D.) 200), the Rose Spring Complex (cal A.D. 200 to 1100), and the Late Prehistoric Complexes (cal A.D. 1100 to contact) (PaleoWest 2021).

The Gypsum Complex is defined by the presence of side-notched (Elko series), concave-based (Humboldt series), and well-shouldered contracting stem (Gypsum series) projectile points. Other indicative artifacts include quartz crystals, paint, rock art, and twig figures, which are generally associated with ritual activities. Warren (1984) considers the appearance of these artifact types at Gypsum Complex sites as evidence of the Southwest's expanding influence in the region. Conversely, Sutton and others (2007) opt to associate Gypsum sites, which tend to cluster in the northern Mojave Desert, with temporal sequences modeled for the adjacent Great Basin. It is most likely, however, that the Gypsum Complex was exposed to various cultural influences stemming from a long-distance exchange and social interaction networks that linked groups occupying the Mojave Desert to those on the Pacific Coast, and in the American Southwest and the Great Basin (PaleoWest 2021).

The Rose Spring Complex can also be defined by the presence of distinct projectile points (i.e., Rose Spring and Eastgate series) and artifacts, including stone knives, drills, pipes, bone awls, milling implements, marine shell ornaments, and large quantities of obsidian. Of greater significance, however, are the characteristic

advancements in technology, settlement strategies, and evidence for expanding and diverging trade networks (PaleoWest 2021).

The Rose Spring Complex marks the introduction of the bow and arrow weapon system to the Mojave Desert, likely from neighboring groups to the north and east. As populations increased, groups began to consolidate into larger, more sedentary residential settlements as indicated by the presence of well-developed midden and architecture. West and north of the Mojave River, increased trade activity along existing exchange networks ushered in a period of relative material wealth, exhibited by increased frequencies of marine shell ornaments and toolstone, procured almost exclusively from the Coso obsidian source. East and south of the Mojave River, archaeological evidence suggests there was a greater influence from Southwest and Colorado River cultures (i.e., Hakataya; Patayan) (PaleoWest 2021).

Between approximately A.D. 1100 and contact, a number of cultural complexes emerged that archaeologists believe may represent prehistoric correlates of known ethnographic groups. During the Late Prehistoric Cultural Complex, material distinctions between groups were more apparent, as displayed by the distribution of projectile point styles (e.g., Cottonwood vs. Desert Side-notched), ceramics, and lithic materials. Long-distance trade continued, benefiting those occupying “middleman” village sites along the Mojave River where abundant shell beads and ornaments, and lithic tools were recovered from archaeological contexts (Rector et al. 1983). Later on, however, trade in Coso obsidian was significantly reduced as groups shifted focus to the procurement of local silicate stone (PaleoWest 2021).

The Late Prehistoric Cultural Complex was also a time of increasing regional influence and territorial expansion. Warren (1984) noted “strong regional developments” in the Mojave Desert that included Anasazi interest in turquoise in the Mojave Trough, Hakatayan (Patayan) influence from the Colorado River, and the expansion of Numic Paiute and Shoshonean culture eastward. These developments led Sutton (1989) to propose that a number of interaction spheres were operating in the Mojave Desert during the Late Prehistoric. Sutton (1989) delineated interaction spheres based on the distribution of projectile point styles, ceramics, and obsidian and argued that the spheres broke along geographical lines that reflected the territorial boundaries of known ethnohistoric groups (PaleoWest 2021).

5.3.1.6 Ethnographic Setting

Two groups consider the Antelope Valley to be part of their traditional use area – the Tataviam and the Kitanemuk. Ethnographic information on each of these groups is provided below.

Tataviam

The Tataviam are a Native American group that resided in and around the area encompassing the GESC project area. They belong to the family of Serrano people who migrated down into the Antelope, Santa Clarita, and San Fernando valleys sometime before 1550 Before Present (B.P.). They settled into the Santa Clara River drainage system, east of Piru Creek, but also marginally inhabited the upper San Fernando Valley. Their territory also may have extended over the Sawmill Mountains to include at least the southwestern fringes of the Antelope Valley, which they apparently shared with the Kitanemuk, who occupied the greater portion of the Antelope Valley (PaleoWest 2021).

The Tataviam were hunters and gatherers who prepared their foodstuffs in much the same way as their neighbors. Their primary foods included yucca, acorns, juniper berries, sage seeds, deer, the occasional antelope, and smaller game such as rabbits and ground squirrels. There is no information regarding Tataviam

social organization, though information from neighboring groups shows similarities among Tataviam, Chumash, and Gabrieleño ritual practices. At first contact with the Spanish in the late 18th century, the population of this group was estimated at less than 1,000 persons. However, this ethnographic estimate of the entire population is unlikely to be accurate, since it is based only on one small village complex and cannot necessarily be indicative of the entire population of Tataviam. Given the archaeological evidence at various Tataviam sites, as well as the numbers incorporated into the Spanish Missions, pre-contact population and early contact population easily exceeded 1,000 persons (Blackburn 1962; Johnston 1962) (PaleoWest 2021).

The Tataviam people lived in small villages and were semi-nomadic when food was scarce. Labor was divided between the sexes. Men carried out most of the heavy but short-term labor, such as hunting and fishing, conducted most trading ventures, and had as their central concerns the well-being of the village and the family. Women were involved in collecting and processing most of the plant materials and basket production. The elderly of both sexes taught children and cared for the young (PaleoWest 2021).

Kitanemuk

The Kitanemuk belonged to the northern section of the people known as the “Serrano.” The name, “Serrano,” however, is only a generic term meaning “mountaineers” or “those of the Sierras.” Ethnographers group the Kitanemuk with the Serrano based on linguistic similarities though the Kitanemuk did not identify themselves as Serrano. They lived on the upper Tejon and Paso creeks and also held the streams on the rear side of the Tehachapi Mountains, the small creeks draining the rear slope of the Liebre and Sawmill Range, with Antelope Valley and the westernmost part of the Mojave Desert. The extent of their territorial claims in the desert region is not certain (PaleoWest 2021).

The Kitanemuk lived in permanent winter villages of 50 to 80 people or more. During the late spring, summer, and fall months they dispersed into smaller, highly mobile gathering groups. They followed a seasonal round, visiting different environmental regions as the important food-producing plants became ready for harvest. Some staple foods important to the Kitanemuk include acorns and piñon pine nuts (Antelope Valley Indian Museum) and yucca, elderberries, and mesquite beans were available as well (Duff 2004) (PaleoWest 2021).

While traveling in the Antelope Valley in 1776, Spanish explorer and Franciscan priest Francisco Garcés encountered the Kitanemuk living in a communal tule house. His written account describes that dwelling as consisting of a series of individual rooms surrounding a central courtyard. Each room housed a family and its own door and hearth (PaleoWest 2021).

The Kitanemuk appeared to share certain cultural fundamentals with the surrounding Serrano groups. While some customs differed, more specifically the ritualistic practices honoring their dead; the Kitanemuk appear to have buried their dead, while the Serrano cremated them (PaleoWest 2021).

Garcés also relates that the Kitanemuk had extensive trade relations with sometimes distant groups. For example, he writes that the Kitanemuk traded with the “Canal” (Chumash of the Santa Barbara Channel region) and describes wooden vessels with inlays of Haliotis that bore stylistic similarities to decorations found on the handles of Chumash knives and other objects (Kroeber 1953) (PaleoWest 2021).

5.3.1.6.1 Historic Setting

European exploration of the Mojave Desert began in the 16th century, but sustained EuroAmerican settlement of the region did not occur until the mid-19th century. This extended period of exploration without expansion creates a long Proto-historic period in the region, during which Europeans and local Native American groups knew of one another but interacted very little. This period is discussed above from the point of view of Native American history. Below, the Euro-American expansion into the region and subsequent historical developments are described.

The European period in the Mojave Desert began when Spanish missionaries and explorers entered the area in the 18th century. Among the first Europeans in the area was Pedro Fages, who led an expedition into the western Mojave in 1772 in pursuit of Spanish soldiers who had deserted (Pourade 1960). Later forays into the Mojave were undertaken in 1776 by Franciscan missionary Francisco Garces. Garces was tasked with exploring overland routes between Santa Fe, New Mexico, and Southern California. During his expedition, he stayed in what is today the town of Mojave (Coues 1900; Sutton 1991). The establishment of trade routes between Santa Fe and Los Angeles and the establishment of missions in the Mojave Desert were difficult in the 18th century because the native Mohave people hindered Spanish expansion beyond the coastal areas of California (Bean and Bourgeault 1989). The Old Spanish Trail, which passes through the Mojave Desert, was not firmly established as a travel route until the 1830s (Norris and Carrico 1978) (PaleoWest 2021).

The Mexican War of Independence from Spain began in 1810. The Mexicans were victorious in 1821 and declared the Republic of Mexico in 1823. California was made a territory of the Republic in 1825. During Mexican rule, from 1825 to 1847, the rancheros became wealthy from trade in hides, tallow, wine, and brandy. The missions' properties were redistributed between 1834 and 1836, making the rancheros even wealthier. American traders, drawn by low prices for cowhides and other raw materials, made contacts with the Californios. Some married the daughters of the rancheros, started business enterprises, and became increasingly influential in the finance and commerce of the region (Los Angeles Cultural Heritage Masterplan 2000:15) (PaleoWest 2021).

During the Mexican American War, on August 13, 1846, Captain John Fremont entered the pueblo of Los Angeles and declared it an American territory. The Treaty of Cahuenga ended the conflict in California in 1847. The Treaty of Guadalupe Hidalgo officially ended the war in 1848 (Los Angeles Cultural Heritage Masterplan 2000:15) (PaleoWest 2021).

American exploration into the Mojave Desert began in the 19th century. Jedediah Smith was the first American to enter the Mojave in 1826 and 1827. Little is known about Smith's time in the Mojave since his notes were lost in a fire (Pourade 1961). Smith followed the Old Spanish Trail, which runs south and east of the current Project area, and ultimately reached the Pacific Ocean where Spanish authorities prevented him from continuing farther and temporarily imprisoned him (Beck and Haase 1974; Norris and Carrico 1978). In 1844, John C. Fremont traveled through the Mojave from the north and eventually met up with the Old Spanish Trail (Beck and Haase 1974; Fremont 1845). Fremont was named "The Great Pathfinder" because his explorations helped open the West for Americans to move into California in the middle and late 19th century (Barnard 1977) (PaleoWest 2021).

By the 1850s, the Old Spanish Trail was established as a reliable overland route to California, and it became easier for people to move into the area. Once California was ceded to the United States, the land was open for settlement and development. With the discovery of gold in the Sierra Nevada Mountains, California's population boomed. Most of the early mining in California took place in the north, near Sacramento and San Francisco. Mining led to the creation of roads throughout the state. Later, these mining roads would be used to establish railroads that operated in the region (PaleoWest 2021).

In the Mojave, scientific exploration was being undertaken in conjunction with investigations into proposed railroads from the east (Sherer 1994). An expedition led by Lt. Amiel Weeks Whipple in 1854 sought to survey a railroad route leading from Arkansas to Los Angeles along the 35th parallel, passing near Fremont Valley. The proposed railroad was meant to tie into lines that originated in both the north and the south (Barnard 1977). Whipple's expedition included scientists who recorded information about the geology, climatology, and biology of the region (Sherer 1994). A later expedition undertaken by Edward Beale in 1857 tested the feasibility of using camels for transport across the desert and established an early wagon road through the area (Norris and Carrico 1978; Sherer 1994) (PaleoWest 2021).

5.3.1.6.2 Antelope Valley

The Antelope Valley lies on the west end of the Mojave Desert, in the northern extent of Los Angeles County, and extends into southern Kern County. A number of non-native expeditions traversed through the Antelope Valley starting with Friar Francisco Garces in 1776, but the first non-native settlements did not occur until the 1850s through a combination of factors. The discovery of gold in Kern County and Silver in Inyo County in the early 1850s established new wagon routes, followed by the Butterfield mail stagecoach mail route in 1858, and the Los-Angeles Havilah Stage Line in 1864. The establishment of Fort Tejon in 1854 on the west end of the valley created a safe outpost for travelers, and a telegraph line that connected San Francisco to Los Angeles was completed in 1860. Construction of the Southern Pacific Railroad through this section of the Antelope Valley was completed in 1876 as part of the connecting route between San Francisco and Los Angeles. The alignment passed through the newly established railroad towns of Rosamond and Lancaster, approximately seven miles west and south from the Project area (LACountyLibrary.com 2021; Lien 2021 July 7) (PaleoWest 2021).

5.3.1.6.3 Willow Springs

Willow Springs is a natural water feature in the Antelope Valley that was depicted next to "Tehicipi Road" on General Land Office map in 1856. Friar Garces stopped at the spring in 1776 as did John C. Fremont in 1844. Starting in 1860, the springs were used as a freight station and watering hole while transporting silver from the Cerro Gordo and Coso mines out of Inyo County. Two years later, Nelson and Adelia Ward built an adobe boarding house next to the springs where they hosted freighters, travelers, and kept horse and mule teams. Nelson Ward died in 1873 and in 1875 the silver freighting company chose a new route that bypassed Willow Springs. This loss of income prompted his widow to sell the station and move her five children elsewhere. The new owners only lasted a year running the station after they were robbed by bandits and the Southern Pacific Railroad was completed in 1876 which rendered stage travel obsolete (Bureau of Land Management General Land Office 1856; Lien 2021 July 7; Bostwick 2010) (PaleoWest 2021).

The station remained abandoned for nearly 25 years until stone mason Ezra Hamilton purchased 160-acres, including the spring and the station, in 1900. Hamilton struck gold nearby four years earlier and wanted a set up his own gold mill. Enamored with his oasis in the desert landscape, Hamilton invested $40,000 to build a resort boasting 27 stone buildings that included houses, a hotel for 30 guests, school, dance hall, post office, restaurant, store, an auditorium, water reservoirs, and a pool fed by the spring. He also built greenhouses to stock the restaurant and store with fresh produce and experimented with silkworms for silk production. The resort thrived and served as a gathering place for residents until Hamilton's death in 1915 and the resort was sold three years later by his heirs (Bostwick 2010 Lien 2021 July 7; Morgan 1914: 999) (PaleoWest 2021).

Willow Springs changed hands a number of times between 1918 and 1947, including serving as the headquarters of a local mining operation in the 1930s. During this time, the watering hole at Willow Springs became California Historic Landmark #130 in 1934. Stockholders in the mining company, Robert and Mary Nelson, purchased the

property in 1947 and moved into one of the stone houses. Over the years they leased out the buildings, including a semi-successful restaurant, but a number of the buildings were destroyed in the 1952 Tehachapi earthquake (Tipton 1988; OHP 2021).

5.3.1.6.4 Post-World War II Development

The Willow Springs International Raceway opened a little over 1.25-miles west from Willow Springs in 1953. At the time, there was little residential development around Willow Springs or the racetrack, save for a few farms that had installed irrigation equipment and a few small desert homesteaders. During the 1960s, a series of new grided streets were cut in the area around Willow Spring and the raceway, apparently in anticipation of increased residential growth. Ultimately, very few residences were built, the majority of which are centered in a small area in the Project area bound by Irone Avenue, Melody Lane, 145th Street W, and 140th Street West and were constructed between 1960 and 1965 (University of California Santa Barbara 1952a, 1952b; HistoricAerials.com 1959, 1963; USGS 1965a, 1965b, 1965c, 1965d; Kern County Recorder 1960).

5.3.1.6.5 Wind and Solar Energy in Antelope Valley

The landscape and population size of the area around Willow Springs changed very little after Ezra Hamilton built his stone building resort at the turn of the twentieth century. That changed in the early 1980s when the first wind power project in the Antelope Valley was constructed at the base of the Tehachapi Mountains, north of the Project area. The windy Tehachapi Pass in the Mojave Desert proved to be a valuable resource on the barren landscape. More wind, and eventually solar farms cropped up in Tehachapi Pass and Antelope Valley. Ground was broken on the 80-square mile Manzana Wind Power Project located just west of the Project area in 2011 for the 126 1.5-megawatt wind turbines and came online in December 2012. Developed, owned, and operated by Avangrid Renewables, the company sells electrical output to San Diego Gas & Electric, Silicon Valley Power, and Los Angeles Department of Water and Power. At the southwest corner of the Project area is the SCE Whirlwind Substation that was constructed in 2011 as part of a long-range SCE wind farm plan that connects a series of substations through 500kv transmission lines to bring wind power to Los Angeles Basin. More recently, between 2013 and 2015, several large solar farms have been installed in the area south of the Project area below Rosamond Boulevard (Palm Desert Post 1982 Jan 13; AvangridRenewables.com 2021; Google Earth Pro 2013 May 2015 April; Edison International 2021) (PaleoWest 2021).

5.3.2 5.3-Research Design for the Cultural Resources Inventory

Archaeological investigation generally contributes to our understanding of the past by describing, recording, and reconstructing past lifeways; testing hypotheses regarding activities in the past; and reinforcing, altering, or challenging the current assumptions about the past (Little and Seibert 2000:29). To do this, research questions are identified to structure evaluations. The research questions are separated into prehistoric and historic period subcategories.

Chronology

Chronological information can be used to understand the trajectory and rate of cultural change and to establish relationships among sites at both a local and regional level. Chronological information can be derived from historic-period sites through the analysis of a set of maker's mark and artifact styles, while prehistoric period sites will require chronometric dates and formal diagnostic artifacts. Important questions or issues that can be addressed based on accurate chronological controls include, but are not limited to:

- When was the site used or occupied? Was use or occupation of the site continuous or discontinuous?

- Was the site contemporaneous with other sites in the area, or did it represent a distinct time period?
- Were different parts of the site occupied or used at different times?
- How were changes through time represented at the site in terms of prehistoric occupation, resource procurement, and population density?
- How do the historic-era artifact scatters reflect the dates upon which they were deposited? Did these deposits occur on a regular basis within short time frames?
- What methods could be used for dating the site?

Temporally sensitive prehistoric artifact types, such as shell beads and projectile points identifiable to specific time periods, can help place the site within the recognized prehistoric cultural horizons developed thus far for southern California. Materials that can be dated directly can provide specific chronological information for the site. Stratified cultural deposits can provide provenience for artifacts and material samples.

Flaked Stone Tool Technology

Flaked stone tools and the by-products of their production can be used to address important research questions regarding reduction trajectories employed in tool manufacture, as well as the types of activities carried out at an archaeological site. In addition, a valid sample of flaked stone material can help answer questions concerning how reduction sequences vary by type of material reduced, whether or not assemblages change over time, if assemblages represent local procurement or imported or partially finished materials, and if flaked stone assemblages can be characteristic of a specific cultural group. These data can help address questions related to the division and organization of labor, as well as questions that explore the relationships between people and their environment. Important questions or issues that can be addressed through flaked stone analysis include:

- What were the typical reduction trajectories employed in flaked stone tool manufacture at the site?
- Do these vary by the type of material used?
- How did flaked stone assemblages and material preferences change over time?
- Were flaked stone assemblages characterized by local raw material procurement and reduction, or were the assemblages more complex and inclusive of imported materials?
- What tool types comprised the flaked stone assemblage and what sorts of activities were represented by the flaked stone tool types?
- Did the flaked stone tool assemblage suggest the use of the site over a continuous period of time (indicated by a greater density and diversity of flaked stone tools, evidence of numerous stages of reduction and tool manufacture, and evidence of re-tooling) or did it reflect temporary or intermittent occupation (suggested by a few stages of reduction, repair, or retooling and few tool types)?
- What changes in technology occurred during and between periods of occupation?
- What was the distribution of flaked stone materials on the site relative to other types of artifacts and features, and how might those distributions have reflected task-specific behaviors?

- Are the tools different from those found in other sites in the region, and if so, what accounts for those differences?

Flaked stone tools must be recoverable in datable contexts or intact stratified cultural deposits or recovered association with other temporally diagnostic artifacts or features. Variability in the distribution of flaked stone tool forms may provide clues as to site function, specific tasks that took place at the site, and temporal affiliation. A large and complex assemblage of tool forms and debitage made from various raw materials, either excavated from individual features or, to a lesser degree, site-wide, can be used to examine changes in flaked stone tool manufacturing trajectories, technological development, and regional interaction through time.

Ground Stone Tool Technology

Ground stone artifacts can be used to address several research issues, including manufacturing method, change through time or the division of labor and social organization. The presence or absence of certain ground stone tool types can be chronologically sensitive and could be used to answer questions relating to subsistence practices. Important questions or issues that can be addressed through analysis of ground stone technologies include:

- What manufacturing methods were employed in ground stone tool manufacture?
- Did these methods vary according to the type of raw material being used?
- Were the ground stone assemblages characterized by handstone/milling slab or mortar/pestle technology? What do the assemblages reveal about food processing at the site?
- Were the ground stone assemblages characterized by local lithic procurement and manufacture or were the assemblages more complex, incorporating use of imported materials?
- How was ground stone distributed across the site relative to other artifact types and features, and how might that have reflected task-specific behaviors?

Ground stone must be recovered in datable contexts or intact stratified cultural deposits or recovered in association with other temporally diagnostic artifacts or features. Variability in the distribution of ground stone tool forms may provide clues as to site function, specific tasks that took place at the site, and temporal affiliation. A large and complex assemblage of ground stone artifacts made from various raw materials, either excavated from individual features or to a lesser degree, site-wide, can be used to examine changes in manufacturing trajectories, technological development, and regional interaction through time.

Heated-rock Features

Heated-rock feature are very common in southern California and although ubiquitous, they may bear floral, faunal. or macrobotanical remains and would be highly significant because open-air sites rarely allow for good preservation of feature interiors. The examination of any heated rock feature at sites in the Project area can be undertaken by following methods outlined by Milburn et al. (2009), which included analysis at the artifact level, archaeological feature level, through experimental studies, and as part of ethnographic investigations pertaining to subsistence. Important questions or issues that can be addressed based on analysis of heated-rock features include:

- What is the reason for and significance of the topographic placement of the sites with heated-rock features?
- What is the intra-site spatial relationship among these features at each site?

- What is the age and chronology for the creation of features and do the features represent contemporaneous use or use over a relatively long period of time?
- What are the faunal, floral, and lithic constituents of each feature and what do these indicate in terms of species and environments from which food and other resources were derived?
- How are the features constructed and how does the construction fit with feature types known from the region?
- What is the function of the features?

Organic samples obtained from the features can be used for chronometric dating to establish the chronological relations of features in and between each site. identifiable floral and faunal remains recovered from the feature should contribute to our understanding of what was being processed in the features and whether different types of features were used to process different materials. Data regarding site setting, chronology faunal and floral materials and construction methods should allow an understanding of how the feature was used and what role they may have played in settlement and subsistence practices.

Prehistoric Settlement and Subsistence

One of the primary goals of archaeological research is to understand the settlement and subsistence practices of prehistoric and historic peoples. Using all available data derived from intact features, research questions relating to settlement and subsistence practices may be explored and a better understanding of the cultural factors influencing the use of the local of each site may be achieved. Important questions or issues that can be addressed include:

- What were the cultural and natural factors influencing the decision to use or occupy the site? How was the evidence for this decision-making similar or dissimilar to that observed at other sites in the region, particularly regarding changing mobility patterns over time?
- How did the spatial distribution of artifacts, features, and other cultural materials at the site reflect the spatial organization of the occupants and their activities over time?
- What raw materials or subsistence items were procured at or imported to the site based on evidence from faunal and floral remains, artifacts raw materials, etc.? What was the seasonal availability of resources used at the site?
- What was the nature of the settlement or subsistence activities at the site at various points in time as reflected by temporally or spatially segregated assemblages of artifacts, features, and other cultural remains?
- Was the site occupied or used into the historic period? How or to what extend did artifact assemblages or subsistence practices shift as a result of the expanding settler colonial presence?

Historic Settlement and Subsistence

Research regarding the settlements of the western Antelope Valley is important for understanding whether sites in the area should be considered significant. Use of the valley was, at first, associated with homesteading and transportation. Due to the remoteness and limited accessibility of resources, permanent settlements were few and far between. Important questions or issues that can be addressed include:

- What were the cultural factors influencing the decision to deposit the artifact loci at this site?
- How did the spatial distribution of artifacts, features, and other cultural materials at the site reflect the location of the site relative to other historic farmsteads in the area?
- What types of materials were selectively deposited at this site, and do they reflect farming or some other type of off-site activity?
- What was the nature of the activities at the site at various points in time?
- How or to what extent did artifact assemblages or subsistence practices shift as a result of the expanding farming presence in the Antelope Valley?

Trade and Exchange

The Antelope Valley represents a potential stopping point for trading parties, given the view of the whole of the valley can be seen from certain ridges within the valley, and that travelers and animals would also need to use the Springs located in the vicinity. Prehistoric occupants of the valley may have been positioned along prehistoric regional trade and exchange routes linking the coast and the desert interior. Important questions or issues that can be addressed include:

- What prehistoric trade routes were associated with the area?
- How did the selection of raw materials for manufacture or the types of lithic materials used in finished tools reflect mobility patterns or preferences in socio-economic interactions with neighboring groups over time?
- The presence of shell artifacts would indicate interaction and trade with coastal groups – is there any indication that these materials were obtained through trade?
- What evidence from other sites in the region suggests prehistoric coast/interior interaction? How can that evidence be employed to refine our understanding of human activities at Mojave Desert sites?
- Are there tool types or styles found at the site that are characteristic of other areas or non-local assemblages?

Evidence for trade and socio-economic interaction can be gained through an examination of artifacts derived from identifiable local and non-local sources. Distinctive tool types can also be used to infer the group and temporal period that produced them. Such materials must be recovered from intact, datable deposits in order to be related to a particular time.

5.3.2.1 Resources Inventory

5.3.2.1.1 Archival Research

The Applicant's cultural resources team conducted a literature review and records search at the Southern San Joaquin Valley Information Center (SSJVIC), housed at California State University, Bakersfield, on November 5, 2020, and again on August 18, 2021. This inventory effort included the Project area and a one-half-mile radius around the Project area, collectively termed the Project study area. The objective of this records search was to identify prehistoric or historical cultural resources that have been previously recorded within the study area during prior cultural resource investigations.

As part of the cultural resources inventory, historical maps and aerial images were reviewed to characterize the developmental history of the Project area and surrounding area. Historical maps consulted include the following:

- Elizabeth Lake, CA (1915 and 1915) 30-minute,
- Willow Springs, CA (1943 and 1965) 15-minute,
- Los Angeles, CA (1949, 1955, and 1959) 1-degree,
- Little Buttes, CA (1965) 7.5-minute,
- Fairmont Butte, CA (1965) 7.5 minute,
- Tylerhorse Canyon, CA (1965) 7.5-minute USGS quadrangles, and
- Historical aerial images from NETROnline dated 1948, 1959, 1963, 1974, and 1994.

Results of the archival research indicate that by the early 1940s, portions of Hamilton Road and Rosamond Boulevard were present, with a few dirt roads connecting sparse structures to these relatively more major routes. The area remained relatively undeveloped until the 1960s, when a series of grid-oriented dirt roads were established throughout the Project area and the general vicinity. These road grids were presumably built for planned communities that were never established. Most of the roads visited during the survey exhibit some degree of use by residents. The most significant development in the area has been wind and solar energy development, with the Project vicinity remaining relatively undeveloped and retaining its rural character.

The data review indicates that no fewer than 68 previous investigations have been conducted and documented within one-half-mile of the Project area since 1961. Table 5.3-1 presents a detailed list of the 68 previous studies that have occurred within one-half mile of the GESC project. Forty-seven of these studies encompass portions of the Project area. Said studies indicate that cultural resources have been previously recorded in the GESC project area.

Table 5.3-1: Previous Cultural Studies within One-Half-Mile of the Project Area

Report No.	Date	Author(s)	Title
KE-00101	1996	Kimball, Marcia	Cultural Resource Testing and Evaluation Report for the Cory and Minn Parcels of the Loomis Land Exchange
KE-00355	1994	Clift, Gregory R., and Sutton, Mark Q.	An Archaeological Assessment of Tentative Tract No. 5612, Rosamond, Kern County, California
KE-00519	1990	Jackson, Scott	An Archaeological Assessment of 470 Acres of Land Southwest of Willow Springs, Kern County, CA
KE-00634	1985	Macko, Michael E. and Wiesbord, Jill	Sylmar Expansion Project: Cultural Resources Inventory and Significant Evaluation Addendum to Final Report
KE-00634A	1985	Macko, Michael E. and Weisbord, Jill	Sylmar Expansion Project Cultural Resources Inventory and Significance Evaluation Final Report Volume II
KE-00802	1989	Parr, Robert E.	An Archaeological Assessment of 480 Acres of Land West of Rosamond, Kern County, California
KE-00803	1989	Parr, Robert E.	An Archaeological Assessment of 80 Acres of Land West of Rosamond, Kern County, California

Report No.	Date	Author(s)	Title
KE-00869	1990	Parr, Robert E. and Jackson, Scott	An Archaeological Assessment of 840 Acres of Land Near Willow Spring, Kern County, California
KE-01010	1991	Robinson, R.W.	Regional Overview of the Cultural Resources of the Willow Springs Specific Plan Update, Southern Kern County, California
KE-01010A	1991	Bein, Robert	Environmental Impact Report Draft, Willow Springs Specific Plan Update
KE-01181	1990	Schiffman, Robert A.	Archaeological Investigation of 112 Acre Parcel West of Willow Springs Section 18, Township 9N, 13W. Kern County, California
KE-01182	1980	Schiffman, Robert A. and Garfinkel, Alan P.	Draft - Archaeological Overview of Kern County
KE-01183	1981	Schiffman, Robert A. and Garfinkel, Alan P.	Prehistory of Kern County - An Overview
KE-01196	1991	Robinson, R.W.	A Regional Overview of the Cultural Resources of the Willow Springs Specific Plan Update, Southern Kern County, California
KE-01286	1987	Schiffman, Robert A.	Archaeological Investigation for Parcel Map #8208, Kern County, California
KE-01341	1989	Schiffman, Robert A.	Archaeological Investigation for Parcel Map No. 9001, Kern County, California
KE-01355	1989	Schiffman, Robert A.	Archaeological Investigation for a 1900 Acres West of Rosamond, Kern County, California
KE-01605	1989	Sutton, Mark Q.	An Archaeological Survey of PM 8386, 20 Acres at 90th W. and Rosamond Blvd.
KE-01628	1987	Sutton, Mark Q.	On the Late Prehistory of the Western Mojave Desert
KE-01630	1978	Sutton, Mark Q., Forbes, Charles, and Robinson, Sylva	A Possible Paleo-Indian Site Complex in the Western Mojave Desert
KE-01867	1975	Hall, Matthew C., Barker, James P., Snyder, Toni B., Weaver, Richard A., and Lawton, Harry W.	Background to Prehistory of the El Paso/Red Mountain Desert Region
KE-01960	1986	Cleland, James H., Woods, Clyde M., Skinner, Elizabeth J., Kelly, Michael S., and Apple, Rebecca M.	Kern River Pipeline Cultural Resource Overview
KE-01993	1995	Hayden, William E., Macko, Michael E., and Earle, David D.	A Class III Intensive Survey of Five Land Exchange Sites for Hughes Land Company in the Rosamond and Palmdale Areas, Los Angeles and Kern Counties, California
KE-02002	1993	Meyers, Thomas B. and Trimble, Michael K.	Archaeological Curation - Needs Assessments for Fort Sill, Oklahoma, Fort Gordon, Georgia, Vandenberg Air Force Base, California, Camp Pendleton Marine Corps Base, California, and Naval Air Weapons Station, China Lake, California
KE-02059	1997	Love, Bruce	Cultural Resources Survey Report: Bakersfield-Rialto Fiberoptic Line Project, Kern, Los Angeles, and San Bernardino Counties, California
KE-02232	1961	Cawley	Cawley Manuscript

Report No.	Date	Author(s)	Title
KE-02244	1994	Everson, G. Dicken and Schneider, Joan S.	Kelso Conference Papers: A Collection of Papers and Abstracts from the First Five Kelso Conferences on the Prehistory of the Mojave Desert
KE-02825	2003	Hansen, Linda	Western Mojave Desert Off Road Vehicle Designation Project
KE-02826	2003	Pool, Mike and Hansen, Linda	Decision Record CDCA Plan Amendment: Western Mojave Desert Off Road Vehicle Designation Project
KE-02827	2003	Hansen, Linda, Hays, Michael E., Priester, Scott, and Pool, Mike	Draft Environmental Impact Report and Statement for the West Mojave Plan: A Habitat Conservation Plan and California Desert Conservation Area Plan Amendment Vol 1
KE-02954	2004	Schmidt, James	2004 Deteriorated Pole Replacement Project in the Willow Springs and Rosamond Areas, Kern County
KE-03212	2006	Romani, John	Archaeological Survey Report: Rosamond Boulevard from SR 14 to 90th Street West, Rosamond, Kern Co., CA
KE-03493	2005	Hudlow, Scott M.	A Phase I Cultural Resource Survey for Property at Hamilton Road and Willow Springs - Tehachapi Road, Kern County, California
KE-03534	2006	Nilsson, Elena, Bevill, Russel, Kelly, Michael S., and Dwyer, Erin	Archaeological Inventory of the First and Second Los Angeles Aqueducts and Selected Access Roads, Kern, Inyo, and Los Angeles Counties, CA
KE-03546	2006	Ahmet, Koral, Mason, Roger, and Bholat, Sara	Cultural Resources Survey Report for Antelope Transmission Project: Segments 2 & 3 Los Angeles and Kern Counties
KE-03781	2010	Orfila, Rebecca S.	RE: Archaeological Survey of the Southern California Edison Company Power Poles #1200431E, 1200439E, 549527E, 1433929E, and 549520E on the Oak Creek 21KV Circuit Near Willow Springs/ Rosamond, Kern County, California (IO# 312201; SAP# TD435806)
KE-03787	2010	Orfila, Rebecca S.	RE: Archaeological Survey of the Southern California Edison Company Power Pole #2007586E on the Oak Creek 12 KV Circuit Near Willow Springs, Kern County, California (IO# 314301, TD 479142)
KE-03793	2008	Romani, John F., and Gold (Garfinkel), Alan P.	Archaeological Survey Report Tehachapi Willow Springs Road from Rosamond Boulevard to 10 Miles North, Willow Springs Area, Kern County, California
KE-03874	2009	Glover, Amy and Gust, Sherri	Supplemental Cultural and Paleontological Resources Assessment, Segment 3A, Section1, Tehachapi Renewable Transmission Project
KE-03889	2009	DeCarlo, Matthew and Orfila, Rebecca	A Cultural Resources Assessment of Three Proposed Deteriorated Pole Replacement Projects (WO 4703-0455) Near Rosamond, Kern County, California
KE-03892	2009	Norwood, Richard H.	Phase I Cultural Resource Investigation for a 5-Acre Property North of the Intersection of 90th Street West and Rosamond Boulevard Rosamond, Kern County, California
KE-03941	2009	Price, Barry A., Baloian, Mary Clark, Lichtenstein, Robert, and Linder, Marc	Confidential Specialist Report: Cultural Resources Inventory for the Tehachapi Renewable Transmission Project Kern, Los Angeles, and San Bernardino Counties, California
KE-04023	2010	Schmidt, June A.	Re: Archaeological Letter Report: Oak Creek Distribution Line Scott Bracket/Deteriorated Pole Replacement Project (WO 6036-4800; 0-4823), Willow Springs Area, Kern County, California
KE-04057	2011	Hudlow, Scott M.	Phase I Cultural Resources Survey for PV3, Willow Springs, Kern County, California

Report No.	Date	Author(s)	Title
KE-04058	2011	Hudlow, Scott M.	Phase I Cultural Resources Survey for PV-11, (Rosamond Solar Array) Rosamond, Kern County, California
KE-04080	2010	Wilson, Stacie and Jordan, Stacey C.	Cultural Resources Report for the Proposed RRG Antelope Valley Solar Project Kern and Los Angeles Counties, California
KE-04099	2012	Miller, Jason Andrew	Results of the AV Solar Ranch Survey (LSA Project No. SCE1105S)
KE-04135	2011	Schmidt, James J.	Archaeological Letter Report: Rosamond Area (Willow Springs 12 kV, Lloyd, Huron, Alfalfa, and Muroc 12 kV) Deteriorated Pole Replacement Project (WO 6036-4800, K-4854 & K-4857), Kern and Los Angeles County, California
KE-04224	2010	Unknown	Supplemental Archaeological Investigation and National Register of Historic Places and California Register of Historical Resources Eligibility Evaluation of Archaeological Site CA-KER-7214H Southern California Edison Tehachapi Renewable Transmission Project, Segment 9, Kern County, California
KE-04225	2010	Jackson, Thomas, Armstrong, Matthew, and Sikes, Nancy	Cultural Resources Inventory of the Southern California Edison Company Whirlwind to Rosamond and Rosamond to Windhub Telecommunication Line, Kern County, California
KE-04226	2010	Schneider, Tsim D. and Holson, John	Supplemental Archaeological Survey Report #2, Tehachapi Renewable Transmission Project Segment 4, Kern and Los Angeles Counties, California
KE-04227	2010	Schneider, Tsim D. and Holson, John	Supplemental Archaeological Survey Report #2, Tehachapi Renewable Transmission Project Segment 10, Kern County, California
KE-04229	2010	Panich, Lee, Cimino, Stephanie, and Holson, John	Supplemental Archaeological Survey Report #1, Tehachapi Renewable Transmission Project Segment 10, Kern County, California
KE-04230	2011	Bischoff, Wayne	Third Supplemental Survey Report for Additional Roads on Segment 10, Tehachapi Renewable Transmission Project, Kern County, California
KE-04233	2010	Panich, Lee, Cimino, Stephanie, and Holson, John	Supplemental Archaeological Survey report #1, Tehachapi Renewable Transmission Project, Segment 4, Kern and Los Angeles Counties, California
KE-04234	2011	Bischoff, Wayne	Cultural Resources Survey Letter Report for the Variance Request for Disturbance Area Modifications for Towers M73-T3A and M73-T3B, Segment 4, Tehachapi Renewable Transmission Project, Kern County, California
KE-04435	2010	Meyer, Jack, Young, D. Craig, and Rosenthal, Jeffrey	Volume I: A Geoarchaeological Overview and Assessment of Caltrans Districts 6 and 9 - Cultural Resources Inventory of Caltrans District 6/9 Rural Conventional Highways - EA 06-0A7408 TEA Grant
KE-04435A	2010	Meyer, Jack, Young, D. Craig, and Rosenthal, Jeffrey S.	Volume II: Appendices A Geoarchaeological Overview and Assessment of Caltrans District 6 and 9 - Cultural Resources Inventory of Caltrans District 6/9 Rural Conventional Highways - EA 06-0A7408 TEA Grant
KE-04749	2015	Dice, Michael	Barren Ridge Renewable Transmission Project Historic Property Treatment Plan for Archaeological Sites TW-17, TW-18, and CA-KER-7034, Los Angeles and Kern Counties,

Report No.	Date	Author(s)	Title
KE-04833	2016	Foglia, Shannon and Cooley, Theodore	Cultural Resources Survey Report for the Proposed Southern California Edison Company's Antelope-Magunden No. 1 Transmission Line Rating Remediation Project, Kern County, California
KE-04887	2009	Way, K. Ross, Jackson, Thomas L., and Jones, Kari	Results of the Evaluation of Eligibility of Archaeological Site CA-KER-2821/H (Bean Spring) for Listing in the California Register of Historical Resources and Data Recovery Program for Mitigating Unavoidable Impacts to the Site That May Result from Activities Associated with Construction of Segment 3 of the Tehachapi Renewable Transmission Project
KE-04953	2017	Whitley, David, Carey, Peter, and Azpitarte, Robert	Phase I Survey/Class III Inventory, AVEP Solar Project, Kern County, California
KE-05013	2017	Gilbert, Rebecca	Archaeological Survey Report for Southern California Edison's (SCE) North Rosamond Project near Whirlwind Substation, Kern County, California
KE-05043	2016	Whitley, David S. and Carey, Peter A.	Phase I Survey/Class III Inventory, Rosamond 5 and 6 Solar Project Areas, Kern County, California
KE-05163	2019	Hudlow, Scott M.	A Phase I Cultural Resource Survey for Property at the Northeast Corner of 170th Street West and Rosamond Boulevard, Rosamond, Kern County, California
KE-05178	2019	Gilbert, Rebecca	Cultural and Paleontological Resources Monitoring Report for the Valentine Solar Project Located in Kern County, CA
KE-05192	2009	Harper, Veronica and Glover, Amy	Archaeological Assessment, Tehachapi Renewable Transmission Project, Segments 4 and 10 Rosamond to Whirlwind and Rosamond to Windhub Proposed Telecommunications Line, Kern County, California
KE-05194	2014	Valasik, Molly and Gust, Sherri	Pacific Wind and Catalina Solar DIMP Cultural Resources Assessment, Kern County, California

Source: PaleoWest 2021.

The Applicant's architectural historian performed a desktop analysis of the built environment in September 2021. As part of the background research for this project, the architectural historian reviewed the State Built Environment Resources Directory, National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historical Landmarks, California Points of Historic Interest, and the California Office of Historic Preservation Archaeological Determinations of Eligibility. **Table 5.3-2** presents a list of 36 built-environment resources located within, or intersect portions of, the architectural study area.

Table 5.3-2: Historic Built-Environment Resources in the Project area

Primary/ Temporary No.	Address	Parcel Number	Resource Type/Style
1	--	--	Transmission Line
2	14205 Irone Ave, Rosemond	358-132-12	House with multiple buildings, including potentially a barn, appears to be surrounded by a fence
3	--	358-132-10	Large complex with several buildings, located just east of 14205 Irone Avene
4	14070 Lodestar Ave, Rosemond	358-132-07	House with 1-3 structures
5	4301 140th Street Rosemond	358-131-26	Pole barn, smaller barns, sheds, corrals
6	14037 Brighstar Avenue, Rosemond	358-131-12	House with barn and another outbuilding
7	10837 Hamilton Road, Rosemond	358-051-30	Multiple bars, trailers
8	10145 Hamilton Road, Rosemond	358-052-08	Possibly a house with 2 outbuildings
9	10085 Hamilton Road, Rosemond	358-052-07	House with multiple additions 2-3 additional structures of various ages, possible orchard remnants
10	10057 Hamilton Road, Rosemond	358-052-06	Huge property, dozen buildings and/or structures, possible orchard remnants, junkyard, animal pens/cages
--	--	315-230-10; 315-012-07	Transmission line corridor for LADWP
12	9714 Rosamond Blvd, Rosamond	374-042-03	Single-family residence
13	9668 Rosamond Blvd, Rosamond	374-042-04	Single-family residence with multiple outbuildings
14	9650 W Rosamond Blvd, Rosamond	374-042-39	Single-family residence with a garage, surrounded by trees
15	9580 Rosamond Blvd, Rosamond	374-042-07	Single-family residence with multiple trailers, outbuildings and surrounded by a chain-link fence
16	2973 95th Street, Rosamond	374-042-08	Single-family residence with 2 outbuildings at the SW corner of 95th Street and Rosamond Blvd
17	9009 Rosamond Blvd., Rosamond	252-352-33	Single-family residence located east of the commercial building at the corner of 90th St W and Rosamond Blvd, include 7 outbuildings

Primary/ Temporary No.	Address	Parcel Number	Resource Type/Style
18	9009 Rosamond Blvd., Rosamond	252-352-33	Commercial building on the NW corner of Rosamond Blvd and 90th St W, former gas station
19	3045 90th Street West, Rosamond	252-352-32	Commercial building, tree row on the north side of the property.
20	3972 90th Street, Rosamond	252-341-07	Multiple buildings, possible corral, or paddock
21	--	252-341-05	Single-family residence, several outbuildings with a pool, surrounded by trees.
22	4040 Manly Road, Rosamond	315-012-01	The 70-acre parcel contains many of the buildings in the town. Appears to be a single-family residence with an addition and a barn, surrounded by trees on 2 sides and a grape vineyard on the other.
23	--	252-341-06	55-acre parcel that contains many of the buildings in the town.
24	--	252-341-06	55-acre parcel that contains many of the buildings in the town. Appears to be a single-family residence
25	--	252-341-06	55-acre parcel that contains many of the buildings in the town. Unknown building, located behind trees and a fence.
26	4040 Manly Road, Rosamond	315-012-01	70-acre parcel that contains many of the buildings in the town. Appears to be 4 buildings behind trees and a fence. Includes a stone house, with possibly 3 smaller stone houses or bunkhouses.
27	4040 Manly Road, Rosamond	315-012-01	70-acre parcel that contains many of the buildings in the town. Stone building "Willow springs company reserve systems Inc."
28	4040 Manly Road, Rosamond	315-012-01	The 70-acre parcel containing many of the buildings in the town. Long rectangular building located on the north side of Many Road at the west end. Appears to be a gas station/garage with pumps, has a loading dock, and is constructed of adobe.
29	4040 Manly Road, Rosamond	315-012-01	70-acre parcel that contains many of the buildings in the town. 2-story stone building east of 16B with swinging doors.
30	4040 Manly Road, Rosamond	315-012-01	70-acre parcel that contains many of the buildings in the town. Two stone structures encircled by a stone wall.

Primary/ Temporary No.	Address	Parcel Number	Resource Type/Style
31	4040 Manly Road, Rosamond	315-012-01	70-acre parcel that contains many of the buildings in the town. Appears to be a pole barn and second structure, encircle by grape or vineyards with potential orchard remnants.
32	4040 Manly Road, Rosamond	315-012-01	70-acre parcel that contains many of the buildings in the town. Appears to be a single-family residence, encircle by grape or vineyards with potential orchard remnants.
33	4040 Manly Road, Rosamond	315-012-01	70-acre parcel that contains many of the buildings in the town. Appears to be a pole barn on the east side of Manly Road.
34	4167 Venus Way, Rosamond	315-134-01	Possible residence with outbuildings and a corral
35	4340 Venus Way, Rosamond	315-082-03	Single-family residence with outbuildings
36	4652 Tehachapi- Willow Springs Road, Rosamond	315-081-07	Pole barn and warehouse

Source: PaleoWest 2021.
--= data not available or applicable

5.3.2.1.2 Archaeological Field Survey

The primary goal of the pedestrian survey was to identify and document cultural resources and analyze their cultural constituents. It was anticipated that the results obtained from the survey would not only allow for the potential project effects to be better assessed but would also provide data with which to confirm or elaborate our current understanding of the prehistory and history of the region.

PaleoWest archaeologists conducted an intensive pedestrian surface survey and site inventory of the approximately 400-acre GESC project area between August 23 and September 28, 2021. The pedestrian survey was directed and supervised by Dr. Kyle Knabb and Dr. James Potter, and Gena Granger, all of whom meet the Secretary of Interior's Professional Qualifications Standards for Archaeology.

The survey methods followed CEC standards consisting of parallel pedestrian transects spaced at 10- to 15-meter (33- to 50-foot) intervals when allowed by terrain and vegetation. Crew members also opportunistically examined any subsurface exposures, including rodent burrows and cut banks. Survey crews navigated the transects using georeferenced maps on tablets using the Environmental Systems Research Institute *Fieldmaps* application and handheld global position system units.

All cultural materials and features of an eligible age were recorded during the surveys in accordance with the California Office of Historic Preservation (OHP) guidelines (OHP 1995). Materials and features that could not be accurately dated in the field were also recorded. Historic period indicators include standing buildings, objects, structures such as sheds, or concentrations of materials at least 45 years in age, such as domestic refuse (e.g., glass bottles, ceramics, toys, buttons, and leather shoes), refuse from other pursuits such as agriculture (e.g., metal tanks, farm machinery parts, and horseshoes) or structural materials (e.g., nails, glass windowpanes,

corrugated metal, wood posts or planks, metal pipes and fittings, and railroad spurs). Prehistoric site indicators include areas of darker soil with concentrations of ash, charcoal, animal bone (burned or unburned), shell, flaked stone, ground-stone, pottery, or even human bone.

5.3.2.1.3 Architectural Survey

The Applicant's architectural historian has not yet performed a field survey of the study area's built environment; however, all cultural materials and features of an eligible age were recorded during the archeological pedestrian surveys in accordance with OHP guidelines (OHP 1995).

5.3.2.1.4 Native American Consultation

A Sacred Lands File search request was sent to the Native American Heritage Commission (NAHC) for the Hydrostor A-CAES Project site. The objective of the Sacred Lands File search was to determine if the Native American Heritage Commission had any knowledge of Native American cultural resources (e.g., traditional use or gathering area and place of religious or sacred activity) within the immediate vicinity of the Project area. A response from the NAHC was received on August 24, 2021. The response indicated that no sacred lands listed in the Sacred Lands File are present in the Project Area (Appendix 5.3A). All tribal contacts were sent a letter via email on August 27, 2021, to gather information regarding cultural resource issues related to the proposed Project. The first round of follow-up calls was placed on September 21, 2021, and the second round of follow-up calls was placed on October 1 to tribes and tribal contacts who had yet to respond. An example of the SLF search request letter, the list of contacts, a sample scoping letter, a contact/response matrix, and copies of correspondence are included in Appendix 5.3A.

5.3.3 Environmental Analysis

This section describes the environmental impacts of GESC construction and operation.

5.3.3.1 Significance Criteria

Appendix G of the CEQA Guidelines addresses significance criteria concerning cultural resources (PRC Sections 21000 et seq.). Appendix G (V) (a, b, d) indicates that an impact would be significant if the project will have the following effects:

- Cause a substantial adverse change in the significance of a historical resource,
- Cause a substantial adverse change in the significance of an archaeological resource, and
- Disturb any human remains, including those interred outside formal cemeteries.

5.3.3.2 Construction Impacts

The Applicant's cultural resources team indicates that impacts to historic resources are possible during GESC construction. The Applicant's cultural resources team recommends avoidance and preservation of historic resources. The team states that through careful design efforts, the GESC project can avoid at least some of the potential historic resources. If historic resources cannot be avoided through Project redesign, then additional cultural resources work will be required to mitigate the potential for adverse effects of the undertaking on these resources. With the incorporation of mitigation measures described in Section 5.3.5, continued consultation with the cultural resources team, and additional surveys, construction impacts to archaeological resources are expected to be less than significant.

5.3.3.3 Operations Impacts

GECS's operations will occur primarily within the main facility and will not require additional ground disturbing activity. Section 5.13, Visual Resources discusses impacts and mitigation measures related to GESC's aesthetics. As such, impacts to cultural resources from the PESC's operations will be less than significant or no impact.

5.3.4 Cumulative Effects

A cumulative impact refers to a proposed project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project (PRC Section 21083; CCR, Title 14, Sections 15064[h], 15065[c], 15130, and 15355).

Most of the projects in the vicinity of GESC involve minor modifications to existing buildings and are likely to impact cultural resources that are not significant. As such, GESC is unlikely to have impacts that would combine cumulatively with other closely related past, present, and reasonably foreseeable future projects to cumulatively impact cultural resources.

5.3.5 Mitigation Measures

5.3.5.1 Undiscovered Archaeological Sites

The Applicant will implement measures, based on state and federal regulations and guidelines, to mitigate any potential adverse impacts that could occur if there were an inadvertent discovery of buried cultural resources. These measures include, but are not limited to, the following:

- Designation of a CRS to investigate any cultural resource finds made during construction,
- Implementation of a construction worker training program,
- Monitoring during the initial clearing of the power plant site and excavation at the plant site,
- Procedures for halting construction if there is an inadvertent discovery of archaeological deposits or human remains,
- Procedures for evaluating an inadvertent archaeological discovery, and
- Procedures to mitigate adverse impacts on any inadvertent archaeological discovery determined significant.

5.3.5.1.1 Designated Cultural Resources Specialist

The Applicant will retain a designated CRS who will be available during the earth-disturbing portion of the GESC construction periods. The CRS will inspect and evaluate any finds of buried archaeological resources that might occur during the construction phase. The CRS will meet the minimum qualifications for Principal Investigator on federal projects under the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation. The CRS will be qualified in site detection, evaluation of deposit significance, consultation with regulatory agencies, and plan site evaluation and mitigation activities.

If there is a discovery of archaeological remains during construction, the CRS, in conjunction with the construction superintendent and environmental compliance manager will make certain that construction activity stops near the find. Construction in the find's area will remain stopped until the CRS can evaluate the find and make a significance determination. The CRS will inspect the find and evaluate their potential significance in consultation with CEC staff and the CEC compliance project manager (CPM). The CRS will make a recommendation as to the

significance of the find and any measures that will mitigate adverse impacts of construction on a significant find. Once the Applicant's CRS has completed the process, construction within the area of the find will resume.

5.3.5.1.2 Construction Worker Training

The Applicant's CRS will prepare a construction worker sensitivity training program to ensure that employees implement mitigation measures if cultural resources are discovered during GESC construction. The Applicant's CRS will provide this training to each construction worker as part of their environmental, health, and safety training. The training will include photographs of various types of historic and prehistoric artifacts, and it will describe the specific steps that workers will take in the event of an unanticipated discovery of cultural material, including human remains. The construction worker sensitivity training program will explain the importance of, and legal basis for, the protection of significant archaeological resources. The training will also be presented in the form of a written brochure.

5.3.5.1.3 Emergency Discovery

If construction staff or others identify archaeological resources during construction, they will immediately notify the CRS and the site superintendent, who will halt construction near the find, if necessary. The archaeological monitor or CRS will use flagging tape, rope, or other means as necessary to delineate the area of the find within which construction will halt. The delineated area will include the excavation trench from which the archaeological finds came and any piles of dirt or rock spoil from that area. Construction will not occur within the delineated find area until the CRS, in consultation with the CEC staff and CEC CPM, can inspect and evaluate the find.

5.3.5.1.4 Site Recording and Evaluation

The CRS will follow accepted professional standards in recording any find and will submit the standard Form DPR 523 and location information to the CHRIS at the SSJVIC. If the CRS determines that the find is not significant and the CEC CPM concurs, construction will proceed without further delay. If the CRS determines that they need additional information to determine if the find is significant, the designated CRS will, in consultation with the CEC, prepare a plan and a timetable for evaluating the find.

5.3.5.1.5 Mitigation Planning

If the CRS and CPM determine that a find is significant, the CRS will prepare and conduct a mitigation plan in accordance with state guidelines. This plan will emphasize the avoidance, if possible, of significant archaeological resources. If avoidance is not possible, recovery of a sample of the deposit from which archaeologists can define scientific data to address archaeological research questions will be considered an effective mitigation measure for damage to or destruction of the deposit.

The mitigation program, if necessary, will be carried out as soon as possible to avoid construction delays. Construction will resume at the site as soon as the CRS completes the field data collection phase of any data recovery efforts. The CRS will verify the completion of field data collection by letter to the Applicant and the CPM so that they can authorize the continuation of construction activities.

5.3.5.1.6 Curation

The CRS will arrange for the curation of archaeological materials collected during an archaeological data recovery mitigation program. Curation will be performed at a qualified curation facility meeting the standards of the California Office of Historic Preservation. The CRS will submit field notes, stratigraphic drawings, and other materials developed as part of the data recovery/mitigation program to the curation facility along with the archaeological collection, in accordance with the mitigation plan.

5.3.5.1.7 Report of Findings

If a data recovery program is planned and implemented during construction as a mitigation measure, the Applicant's CRS will prepare a detailed scientific report summarizing the results of the excavations to recover data from an archaeological site. This report will describe the site soils and stratigraphy, describe, and analyze artifacts and other recovered materials, and draw scientific conclusions regarding the results of the excavations. The Applicant's CRS will submit this report to the curation facility with the collection.

5.3.5.2 Inadvertent Discovery of Human Burials

If human remains are found during GESC's construction, project officials are required by the California Health and Safety Code (Section 7050.5) to contact the Kern County Coroner. If the coroner determines that the find is Native American, he or she must contact the NAHC. The NAHC, as required by PRC Section 5097.98, determines, and notifies the Most Likely Descendant with a request to inspect the burial and make recommendations for treatment or disposal.

5.3.6 Law, Ordinances, Regulations, and Standards

Among the local LORS discussed in this section are certain ordinances, plans, or policies of Kern County and the State of California. Federal LORS will likely not be applicable because GESC will not require a Prevention of Significant Deterioration (PSD) permit, Clean Water Act permit, or other federal authorization. Table 5.3-3 presents a summary of applicable LORS.

Table 5.3-3: Laws, Ordinances, Regulations, and Standards for Cultural Resources

Jurisdiction	LORS	Requirements / Applicability	Administering Agency	Application for Certification Section Explaining Conformance
Federal	Section 106, NHPA	Applies if the project would require a federal permit (such as a PSD permit). The lead federal agency must consider the effect of issuing the permit on significant cultural resources.	California Office of Historic Preservation	Section 5.3.6.1
State	The Warren-Alquist Act 1974, as amended	Requires cultural, historic, and aesthetic resources are considered in consideration of an AFC. Requires that a portion of any such resources on public land be set aside for public access.	CEC	Section 5.3.6.2

Jurisdiction	LORS	Requirements / Applicability	Administering Agency	Application for Certification Section Explaining Conformance
State	CEQA Guidelines	Project construction may encounter archaeological and/or historical resources.	CEC	Section 5.3.6.2
State	California PRC Section 5020-5029.5	Establishes the criterion for the California Register of Historical Resources and creates the California Historic Landmarks Committee and authorizes the Department of Parks and Recreation to designate Registered Historical Landmarks and Registered Points of Historical Interest; establishes criteria for the protection and preservation of historic resources.	CEC; State Historic Preservation Office; Department of Parks and Recreation	Section 5.3.6.2
State	PRC Section 5097.98	Construction may encounter Native American graves; NAHC assigns Most Likely Descendant.	State of California	Section 5.3.6.2
State	PRC Section 5097.5/5097.9	Would apply only if some project land were acquired by the state (currently no state land).	State of California	Section 5.3.6.2
Kern County	General Plan: Policy 25	The County will promote the preservation of cultural and historic resources which provide ties with the past and constitute a heritage value to	Kern County Planning and Natural Resources Department	Section 5.3.6.3

Jurisdiction	LORS	Requirements / Applicability	Administering Agency	Application for Certification Section Explaining Conformance
		residents and visitors.		
Kern County	Willow Springs Specific Plan: Cultural Resources Goal 1 Policy 1.	To preserve cultural resources contained on sensitive sites located within the Willow Springs Specific Plan area.	Kern County Planning and Natural Resources Department	Section 5.3.6.3

5.3.6.1 Federal LORS

Section 106 of the NHPA, as amended, and implemented by 36 CFR Part 800, requires Federal agencies to consider the effects of their actions on historic properties and provide the Advisory Council on Historic Preservation an opportunity to comment on federal projects that affect historic properties. This action must take place before the expenditure of federal funds or permits. The NHPA only covers historic properties determined to be eligible for listing on the NRHP. Section 106 applies when the following two thresholds are met:

- There is a Federal or federally licensed action, including grants, licenses, and permits; and
- That action has the potential to affect properties listed in or eligible for listing in the NRHP.

5.3.6.2 State LORS

Warren-Alquist Act of 1974, as amended: This Act requires cultural, historic, and aesthetic resources to be taken into account in consideration of an AFC. The Warren-Alquist Act of 1974 requires that a portion of any such resources on public land be set aside for public access.

California Environmental Quality Act: CEQA requires a cultural resource review to determine whether a project will have a significant effect on archaeological sites or a property of historic or cultural significance to a community or ethnic group eligible for inclusion in the California Register of Historical Resources (CRHR). CEQA equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment and defines substantial adverse change as demolition, destruction, relocation, or alteration that would impair historical significance. CEQA requires a lead agency to identify and examine environmental effects that may result in significant adverse effects. The following public resource codes (PRC) considered under CEQA are relevant to this analysis of archaeological and historical resources:

- **PRC Division 13 Environmental Quality – Chapter 2.6 General**:
  - Section 21084.1 stipulates that any resource listed in, or eligible for listing in, the CRHR is presumed to be historically or culturally significant. Resources listed in a local historic register or deemed significant in a historical resource survey are presumed historically or culturally significant unless the preponderance of evidence demonstrates they are not. A resource that is not listed in or determined to be eligible for listing in the CRHR, is not included in a local register of historic resources, or is not deemed significant in a historical resource survey may nonetheless be historically significant.

- When an archaeological resource is listed in or is eligible to be listed in the CRHR, Section 21084.1 requires that any substantial adverse effect to that resource be considered a significant environmental effect.
- Where a project may adversely affect a unique archaeological resource, Section 21083.2 requires the lead agency to treat that effect as a significant environmental effect and prepare an environmental impact report.

- **PRC Division 5 Parks and Monuments - Chapter 1.7 Archaeological, Paleontological, and Historical Sites**:
  - If human remains are discovered, the county coroner must be notified within 48 hours and there should be no further disturbance to the site where the remains were found.
  - Section 5097.94 requires that if a coroner determines the remains to be Native American, the coroner is responsible for contacting the NAHC within 24 hours.
  - Section 5097.98 requires the NAHC to immediately notify those persons it believes to be most likely descended from the deceased Native American so they can inspect the burial site and make recommendations for treatment or disposal.

GESC will comply with these requirements related to cultural resources through the implementation of the mitigation measures described in Section 5.3.5.

5.3.6.3 Local LORS

Kern County's General Plan promotes the preservation of archaeological, paleontological, cultural, and historical resources. Several archaeological sites are known to exist within the Willow Springs Specific Plan area. The Willow Springs Specific Plan requires that the County stipulate project-by-project mitigation measures to reduce impacts to cultural resources to less than significant levels. Additionally, the Willow Springs Specific Plan requires archaeological investigations for specific properties proposed for development (Kern County 2008a; Kern County 2008b).

5.3.7 Agencies and Agency Contacts

Table 5.3-4 lists the state agencies involved in cultural resources management for the project and a contact person at each agency. These agencies include the NAHC and, for federal undertakings, the OHP

Table 5.3-4: Agency Contacts for Cultural Resources

Issue	Agency	Contact
Native American traditional cultural properties	Native American Heritage Commission	1550 Harbor Blvd Suite 100, West Sacramento, CA 95691 (916) 373-3710
Federal agency NHPA Section 106 compliance	California Office of Historic Preservation	Julianne Polanco, SHPO 1725 23rd Street, Suite 100, Sacramento, CA 95816 916-445-7000

5.3.8 Permits and Permit Schedule

Other than certification by the CEC, no state, federal, or local permits are required by GESC for the management of cultural resources. Consultation with the State Historic Preservation Officer will not be required under Section 106 of the NHPA unless GESC requires a federal permit.

5.3.9 References

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