5.3 Cultural Resources

This section discusses the potential effects of the Chula Vista Energy Upgrade Project (CVEUP) on cultural resources. This section is consistent with state regulatory requirements for cultural resources pursuant to California Environmental Quality Act (CEQA). Cultural resources include prehistoric and historic archaeological sites;[1] districts and objects; standing historic structures, buildings, districts and objects; and locations of important historic events, or sites of traditional/cultural importance to various groups.[2] The study scope was developed in consultation with the California Energy Commission's (CEC) cultural resources staff and complies with *Instructions to the California Energy Commission Staff for the Review of and Information Requirements for an Application for Certification* (CEC, 1992) and *Rules of Practice and Procedure & Power Plant Site Certification Regulations* (CEC, 2007). This study was conducted by Aaron Fergusson, M.A., RPA, and Clint Helton, M.A., RPA, both Cultural Resource Specialists (CRS) who meet the qualifications for Principal Investigator stated in the Secretary of the Interior's standards and guidelines for archaeology and historic preservation (USNPS, 1983).

Section 5.3.1 describes the cultural resources environment that might be affected by the CVEUP. Section 5.3.2 discusses the environmental consequences of construction and operation of the proposed project. Section 5.3.3 determines whether there will be any cumulative effects from the project. Section 5.3.4 presents mitigation measures that will be implemented to avoid construction impacts. Section 5.3.5 discusses the laws, ordinances, regulations, and standards (LORS) applicable to the protection of cultural resources. Section 5.3.6 lists the agencies involved and agency contacts, and Section 5.3.7 discusses permits. Section 5.3.8 lists reference materials used in preparing this section.

Per CEC Data Adequacy Requirement, Appendix 5.3A provides copies of consultation letters. Appendix 5.3B provides the technical report. Appendix 5.3C provides a copy of the California Historical Resources Information System (CHRIS) literature search results. Appendix 5.3D provides resumes for the individuals conducting the studies. Figure 5.3-1 depicts the areas of intensive cultural resources survey conducted for the project and associated laydown areas.

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[1] Site – "The location of a significant event, a prehistoric or historic occupation or activity, or a building or structure…where the location itself possesses historic, cultural, or archeological value." (U.S. National Park Service [USNPS]-IRD, 1991: 15).

[2] The federal definitions of cultural resource, historic property or historic resource, traditional use area, and sacred resources are reviewed below and are typically applied to non-federal projects.

A cultural resource may be defined as a phenomenon associated with prehistory, historical events or individuals or extant cultural systems. These include archaeological sites, districts and objects; standing historic structures, districts and objects; locations of important historic events; and places, objects and living or non-living things that are important to the practice and continuity of traditional cultures. Cultural resources may involve historic properties, traditional use areas and sacred resource areas.

Historic property or historic resource means any prehistoric district, site building, structure, or object included in, or eligible for, inclusion in the National Register of Historic Places. The definition also includes artifacts, records and remains that are related to such a district, site, building, structure or object.

Traditional use area refers to an area or landscape identified by a cultural group to be necessary for the perpetuation of the traditional culture. The concept can include areas for the collection of food and non-food resources, occupation sites and ceremonial and/or sacred areas.

Sacred resources applies to traditional sites, places or objects that Native American tribes or groups, or their members, perceive as having religious significance.

The CVEUP is subject to CEC and CEQA regulatory requirements. The project does not require review under federal regulations such as the National Historic Preservation Act (NHPA) and the Archaeological and Historic Preservation Act of 1974 (16 USC 469), among others, because it is not a federal undertaking (federally permitted or funded).

5.3.1 Affected Environment

In southern California, cultural resources extend back in time for at least 11,500 years. Written historical sources tell the story of the past 200 years. Archaeologists have reconstructed general trends of prehistory in southern California.

5.3.1.1 Regional Setting

The proposed CVEUP is located within the boundaries of the existing site known as the MMC Chula Vista Power Plant, in Chula Vista, California. The project site is located on a Pleistocene terrace on the north side of the Otay River within the Peninsular Ranges physiographic province of California. The proposed facility site is relatively flat at an approximate elevation 60 feet above mean sea level. A recent geotechnical evaluation indicates the site is underlain by 25 feet of artificial fill (Ninyo & Moore, 2006).

5.3.1.2 Prehistoric Period

The general trend throughout California prehistory has been an increase in population density over time, coupled with greater sedentism and the use of a greater diversity of food resources. There is abundant evidence that humans were present in the New World for at least the past 11,500 years. There is also fragmentary, but growing, evidence that humans were present long before that date. Linguistic and genetic studies suggest that a date of 20,000 to 40,000 years ago for the human colonization of the New World may be possible. The evidence of this earlier occupation is not yet conclusive, but it is beginning to be accepted by archaeologists. The Meadowcroft Rockshelter in Pennsylvania and Monte Verde in Chile, for instance, are two early sites that have produced apparently reliable dates as early as 12,500 years before present. These earliest known remains indicate very small, mobile populations, apparently dependent on hunting of large game animals as the primary subsistence strategy. The first useful chronology for southern California in general was developed by William Wallace (1955), who described four distinct periods applicable to the southern California coastal region. Although dated, the chronology's relative accuracy has been vindicated by more recent radiocarbon dates, and archaeologists still find it applicable.

5.3.1.2.1 Early Period

Wallace's earliest period is called Horizon I: Early Man, and dates from the end of the Pleistocene (approximately 12,000 years ago) to about 7,500 years ago. The surviving material culture of this period consists primarily of large, well-made projectile points as well as large, but crude, stone tools such as scrapers and choppers. Many encampments during this period were not permanent, and were sited near the kills of Pleistocene megafauna (mastodon, mammoth, giant bison). Such an economy, using only a small fraction of the available resources, did not support large populations; and early groups were generally no larger than extended families. As the Pleistocene ended and the megafauna suddenly became extinct, prehistoric people during this period were forced to broaden their resource extraction base.

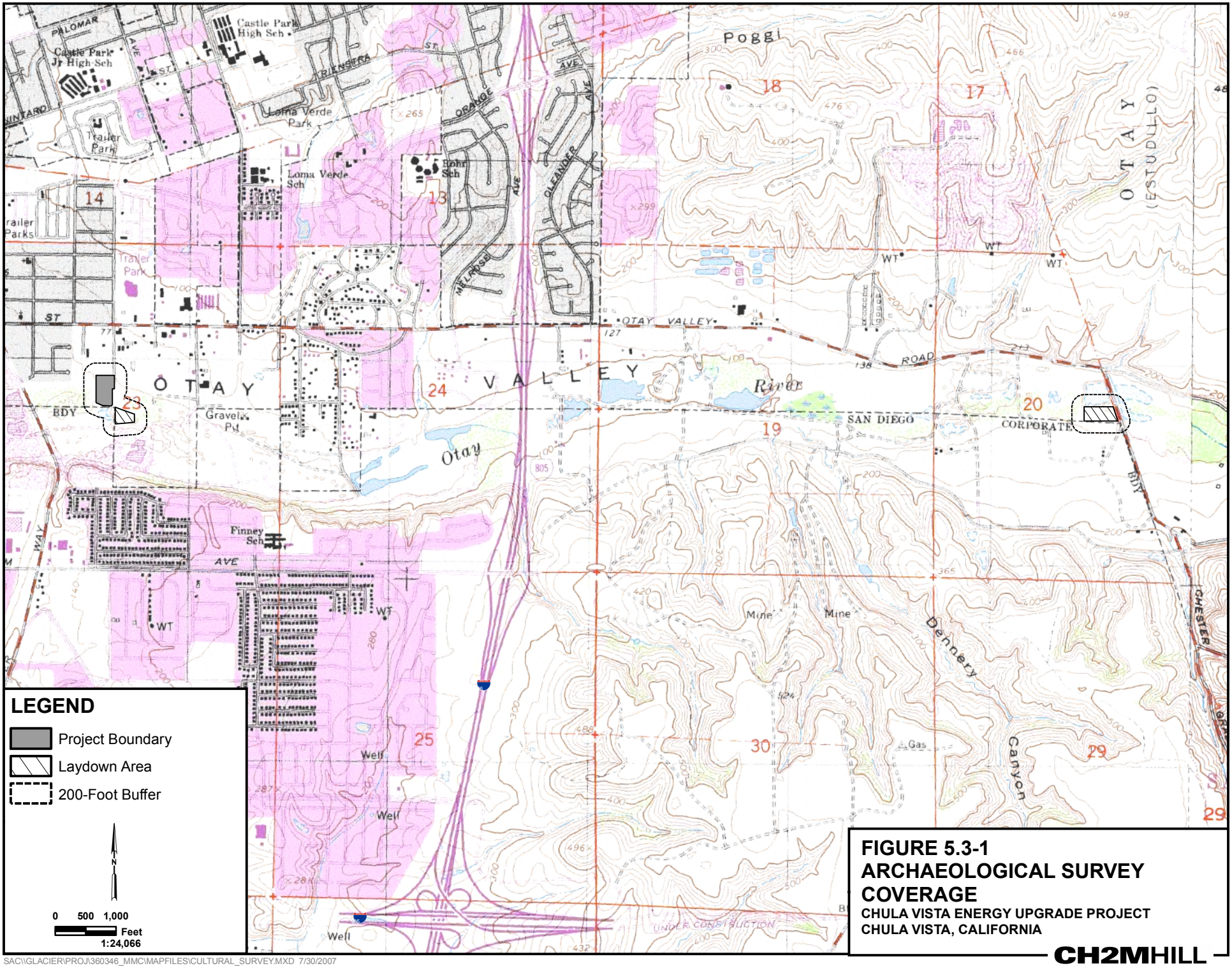

FIGURE 5.3-1
ARCHAEOLOGICAL SURVEY COVERAGE
CHULA VISTA ENERGY UPGRADE PROJECT
CHULA VISTA, CALIFORNIA

CH2MHILL

SAC\\GLACIER\PROJ\360346_MMC\MAPFILES\CULTURAL_SURVEY.MXD 7/30/2007

5.3.1.2.2 Millingstone Period

The succeeding period identified by Wallace, Horizon II: Millingstone Assemblages (7,500 to 5,000 years ago), gets its name from the sudden appearance in the archaeological record stone milling tools, such as the mano (handstone) and slab and basin metate (flat grinding stone). These tools were used to process the small, hard seeds associated with the sage scrub ecological community. Settlement size seems to have increased, compared with the previous period. An annual round of seasonal migrations was likely practiced as movements coincided with ripening vegetal resources and rotated among hunting and gathering grounds to avoid over-exploitation of resources in a given area.

5.3.1.2.3 Intermediate Period

The Millingstone Period is followed, in Wallace's scheme, by Horizon III: Intermediate Cultures (5,000 to 1,000 years ago). The major change marking this new period was the introduction of the mortar and pestle. This tool is an indicator of the intensification of acorn food production. Although the acorn had been present and was no doubt used as a food source earlier than this, the need for labor-intensive processing of this food (grinding and leaching) may have discouraged people from extensive use until increasing population densities made it necessary to extract more food from a given group's territory. Flaked stone tools also became more diverse and plentiful during this period. Along with population growth came the increasing diversification of food resources. Late in this period, the bow and arrow was introduced, as indicated by the greater number of small, finely flaked projectile points. This technology spread across North America about 1,500 years ago from an unknown origin point. It allowed for more accurate, if less powerful, propulsion of projectiles than the previous spear thrower (atl-atl) and dart technology and is thus more useful for shooting smaller game.

5.3.1.2.4 Late Prehistoric Cultures

Wallace's final phase is called Horizon IV: Late Prehistoric Cultures. In the Late Prehistoric (1,000 to 200 years ago), groups increasingly developed extensive trade networks to bring exotic goods over long distances (shell for ornaments and currency from the Pacific Ocean, obsidian for tool-making from distant sources). The pattern of life in Horizon IV was more complex than during earlier periods. More classes of artifacts were being produced and they exhibited a more sophisticated degree of workmanship. Other items include steatite containers, shell fishhooks, perforated stones, bone tools, personal ornaments, asphalt adhesive and elaborate mortuary customs. In addition, the population increased and larger, more permanent villages evolved (Wallace, 1955).

5.3.1.3 Ethnographic Setting

The project area and much of southern San Diego County was occupied ethnographically by the Kumeyaay (Kroeber, 1925). The Kumeyaay were hunters/gatherers, relying on seasonally available animals for subsistence and local resources supplemented by the fruits of trade for all their needs. Each Kumeyaay band was adapted to the ecological region of its home territory. In the coast region, this pattern is expressed in a heavy reliance upon shellfish augmented by acorns.

On the basis of archaeological evidence, Hector (1984) proposes that settlement patterns during the Late Prehistoric period focused throughout the area upon the occupation of base camps, supported by nearby special-use camps. The base camp was in an optimum location

for everyday living. The site included water, a hospitable sheltered environment, and proximity of necessities, such as food mainstays and stone tool raw materials, outlying special-use support camps were located close to a particular resource, and the location might not have related to any other habitation requirement. For instance, acorn grinding areas were close to bedrock and oaks. Shell harvesting took place immediately adjacent to the lagoon or open seacoast. It also appears that some resources were completely processed at the special-use camps and others were brought back to the base camp (Wade and Hector, 1986).

Occupation patterns in this interpretation are seen as flexible, with functional variations sometimes occurring over time: a site might thus serve as a base camp during one period and as a temporary camp during another. Bands followed a seasonal round, moving up and downslope as resources became seasonally available. The pre-contact cultural patterns of the coastal bands of the Kumeyaay are not well known. The coastal groups were the earliest to be affected by "missionization."

The ethnographic description that follows is drawn from that of Katherine Luomala (1978).

Each Kumeyaay band was autonomous and had its own chief. A communal territory was claimed by each band, but there was some sharing of resources and even occasional co-occupation of villages by several bands. Structures varied according to locality and need from a simple windbreak in summer, to more substantial dwellings at base camps or in winter. A dwelling might be round or rectangular, with a slightly sunken floor covered by a dome or gable set on the ground. A pole framework was thatched and covered with grass and earth.

Individuals and families did not accumulate much material wealth and material culture was not much elaborated. The deceased was cremated with all his possessions, and tangible goods were not usually inherited.

Coastal Kumeyaay supplemented local resources through the trade of salt, dried seafood, greens, and abalone shell (for ornaments) to eastern groups in exchange for acorns, agave, mesquite beans, and gourds. There was probably considerable contact with groups with influences being seen, for example, in the use of pots as well as baskets.

The entry of Spanish missionaries into the coastal region in 1769 brought about the end of the natives' way of life there. Bands were not missionized wholesale, as the missions could not support large numbers of people. Individuals were captured, sometimes converted, educated to Spanish ways, and released. After the secularization of the missions in 1821, the Indians were essentially abandoned.

Some of those who had survived the disease and violence of early missionization returned to their former ways of life, which became increasingly difficult to pursue because the lands from which the Kumeyaay had derived subsistence were granted to immigrants from Mexico. Most Indians gradually moved away from the coast. Many of the marshes and tideflats important to Kumeyaay who had lived on the margins of San Diego Bay were filled and were used for waterfront business construction.

5.3.1.4 Historic Setting

Commencement of the Historic period for San Diego County is generally accepted as 1769. Although there was contact with Spanish explorers as early as 1542, it was not until 1769

that colonial forces occupied this territory and claimed it for Spain. This action brought about the beginning of the Spanish period and saw the gradual acculturation of all aboriginal peoples in this area.

Through the development of a series of missions and presidios, Spain laid claim to virtually all of California. The first of the Alta California missions was founded on July 16, 1769, on a hill overlooking the San Diego Bay. This mission later moved east, into present-day Mission Valley, to the site of a large Kumeyaay village known as Nipaguay. The Presidio remained at the original location, above the area, which would later be known as Old Town.

The Spanish period spans the years from 1769 to 1822 with the Presidio and Mission San Diego de Alcala, the Mission San Luis Rey, Padre Dam and Flume, and several poorly preserved adobe structures within the county representing this period. It is known that a number of family ranchos were established during this period; however, little remains of these early settlements. It is also possible that elements of Spanish period sites and structures were incorporated into later building efforts.

The Mexican period (1822–1848) follows the Spanish period with Mexican independence from Spain. One of the early changes was the granting of land to private citizens and the secularization of vast Mission holdings. The Union Title Company shows 30 ranchos between Oceanside and Otay and the Pacific Ocean and the Laguna Mountains. Generally, these ranchos constituted vast land holdings over which cattle and sheep were grazed. The practice of utilizing natural valleys and slopes as open range for live stock is a typical practice for this region, well into the American period. Political responsibility for the region was transferred to the United States with the signing of the Treaty of Guadalupe Hidalgo on February 2, 1848. However, the economic and demographic makeup of the San Diego area remained almost unchanged until years after California became a state on September 9, 1850.

During the American period, in addition to cattle and sheep ranches, a growing number of farms appeared. A rural community cultural pattern existed in the study area from approximately 1870 to 1930. This pattern consisted of communities made up of population aggregates that lived within well-defined geographic boundaries, shared common bonds, and cooperated to solve shared problems. They lived on farmsteads, tied together by a common school district, church, post office, and country store. These farmsteads and dispersed farming communities gave way to horse ranches, dairies, and nurseries, which in turn were replaced by the establishment of the roadside service complex. The roadside service industry thrived in the highly mobile, mechanized pre- and post-war society, which was linked by state and federal roadways.

The area later to be developed as Chula Vista, immediately east of the project was used during the mission and Mexican periods as grazing land for cattle and horses belonging to the mission, and later as private ranches. There was little development of these lands until, 1886, when leveling and layout began on the Chula Vista development.

By 1888, there were over 100 houses being built in Chula Vista, and population in this area boomed (Menzel 1942; Gross 1975). About that time, the National City and Otay Railroad built a line through Chula Vista, which probably crossed the project area. The salt evaporation ponds in San Diego Bay immediately south of the project area are not discussed in Menzel's

history of the region, but this area has been used for salt collection probably fairly continuously since prehistoric times. Most Kumeyaay had left the vicinity by the 1920s.

5.3.1.5 Resources Inventory

The CVEUP site and associated laydown areas were subject to a 100 percent cultural resources inventory. This inventory is based on both archive/background research and surface pedestrian survey. The results of the resource inventory are presented in the sections below. Because initial surveys indicated a lack of buildings and structures older than 50 years on parcels adjoining the project site, a specific architectural resources survey was not conducted.

5.3.1.5.1 Archival Research

Staff of the CHRIS South Coastal Information Center conducted a file search for the CVEUP using a definition of a one-mile buffer zone around the project site and associated laydown areas. There are no offsite linear facilities associated with this project, because the CVEUP will reuse the existing transmission, water, and natural gas connections. A copy of the record search report materials and an archaeological survey report are being provided to CEC Staff separately under a request for confidentiality.

According to information available in the CHRIS files, there have been 57 previous cultural resource surveys conducted within this project area and proposed laydown areas (Table 5.3-1). Five previous cultural resource surveys covered the same areas as the proposed project area and laydown areas (marked with an asterisk * in Table 5.3-1).

TABLE 5.3-1
Authors, Dates, and CHRIS Catalog Number of Reports of Cultural Resources Reports of Surveys Near CVEUP

*ASI (1991) – SCIC – ASI 07	ASM (1992) – SCIC – ASM21
Banks (1980) – SCIC – Banks 02	Berry (1987) – SCIC – BERRYS63
Bonner and Williams (2006) - SCIC - BONNEW18	CALTRANS (2002) – SCIC – CALTRANS78
Carrico (1979) – SCIC – Carrico121	Carrico (1993) – SCIC – CARRICO159
Cheever (1989) – SCIC – Cheever36	Cheever and Gallegos (1988) – SCIC – CHEEVER54
*City of San Diego (1990) – SCIC – CITYSD23	City of San Diego (1992) – SCIC – CITYSD 45
City of San Diego (1995) – SCIC – CITYSD80	City of San Diego (1998) – SCIC – CITYSD 112
City of San Diego (1998) – SCIC – CITYSD209	City of San Diego (1999) – SCIC – CITYSD174
City of San Diego (2000) – SCIC – CITYSD191	Cook (1992) – SCIC – COOKJ57
Douglas (2005) - SCIC - DouglasD01	Fink (1973) – SCIC – Fink 25
Fink (1973) – SCIC – Fink 45A	Fink (1974) – SCIC – Fink 45B
Fink (1975) – SCIC – Fink 29	Gallegos and Cheever (1988) – SCIC – Gallego 54
Gallegos and Kyle (1997) – SCIC – GALLEGO172	Gallegos and Kyle (1997) – SCIC – GALLEGO187
Hargrove (1985) – SCIC – Hargrove 1	*Hector (2005) - SCIC - HECTOR131
*Hector (2006) - SCIC - HECTOR148	Hix (1993) – SCIC – CITYSD1054
Johnna and Smith (2000) – SCIC – BUYSSEJ22	Kidder (1984) – SCIC – CRMC 01

TABLE 5.3-1
Authors, Dates, and CHRIS Catalog Number of Reports of Cultural Resources Reports of Surveys Near CVEUP

Kidder (1984) – SCIC – CRMC 01	Kyle (2000) – SCIC – KYLE118
Kyle (2000) – SCIC – KYLE90	Kyle and Gallegos (1996) – SCIC – KYLE 76
Lauko and Taniguchi (2004) - SCIC - LAUKOK06	McKenna (2000) - SCIC - MCKENNAJ06
Monserrate (1998) – SCIC – MONSER 55	Monserrate (2000) – SCIC – MONSERR10
Mooney (1992) – SCIC – MOONEY 07	Ogden (1992) – SCIC – OGDEN9
Pigniolo et. al. (1986) – SCIC – Pigniolo05	Robbins-Wade et. al. (1987) – SCIC – ROBBIN148
Rosen (2003) – SCIC – ROSEN106	Schaefer et. al. (1994) – SCIC – SCHAEFER25
Smith (1987) – SCIC – SmithB 49	Smith (1988) – SCIC – SMITH345
Smith (1988) – SCIC – SmithB310	Smith (1989) – SCIC – SmithB 26
Smith (1996) – SCIC – SMITHB 301	Smith (2003) – SCIC – SMITHB 431
Smith and Moriarty (1984) – SCIC – SMITHB 282	*SRS (1980) – SCIC – SRS74
SRS (1984) – SCIC – SRS 33	US Department of Interior – SCIC – DEPTINT23
Wade and Hector (1991) – SCIC – WADE 127	

Source: California Historical Resources Inventory System, South Coastal Information Center. See Appendix 5.3C for full bibliographic references.

The record search indicated that there are 62 previously recorded properties within a mile of the project site and laydown areas (see Table 5.3-2). Despite five previous surveys of the proposed project site and laydown areas dating back to 1980, no cultural resources have been identified within the proposed CVEUP area. Each recorded property is located well outside of the project area of potential effects, and the project will have no effect on them.

TABLE 5.3-2
Summary of Sites within One-Mile of the Project Area

Site	Description	NRHP/CRHR Status	Potential CVEUP Effect
37-014534	Isolated scraper	Not Evaluated	None
37-014739	Two isolated scrapers	Not Evaluated	None
37-014793	Isolated flake	Not Evaluated	None
37-014794	Isolated flake	Not Evaluated	None
37-014795	Isolated flake	Not Evaluated	None
37-014796	Isolated core	Not Evaluated	None
37-014799	Isolated scraper	Not Evaluated	None
37-014800	Isolated chopper	Not Evaluated	None
37-014801	Isolated scraper	Not Evaluated	None
37-015148	Isolated flake tool	Not Evaluated	None
37-015149	Isolated core	Not Evaluated	None

TABLE 5.3-2
Summary of Sites within One-Mile of the Project Area

Site	Description	NRHP/CRHR Status	Potential CVEUP Effect
37-015333	Isolated flake	Not Evaluated	None
37-015335	Isolated flake and core	Not Evaluated	None
SDI-761	Prehistoric lithic scatter	Not Evaluated	None
SDI-4639	Prehistoric lithic scatter	Not Evaluated	None
SDI-4783	Prehistoric Site	Not Evaluated	None
SDI-7940	Prehistoric lithic scatter	Not Evaluated	None
SDI-8912	Prehistoric lithic scatter	Not Evaluated	None
SDI-10056	Prehistoric lithic scatter	Not Evaluated	None
SDI-10057	Prehistoric lithic scatter	Not Evaluated	None
SDI-10058	Prehistoric village or base camp	Not Evaluated	None
SDI-10059	Prehistoric lithic scatter	Not Evaluated	None
SDI-10060	Daneri Winery and prehistoric lithic scatter	Not Evaluated	None
SDI-10191	Prehistoric lithic scatter	Not Evaluated	None
SDI-10201	Prehistoric temporary campsite	Not Evaluated	None
SDI-10452	Prehistoric habitation site	Not Evaluated	None
SDI-10649	Prehistoric lithic scatter	Not Evaluated	None
SDI-10650	Prehistoric lithic scatter	Not Evaluated	None
SDI-10738	Prehistoric lithic scatter	Not Evaluated	None
SDI-10739	Prehistoric campsite	Not Evaluated	None
SDI-10783	Prehistoric habitation	Not Evaluated	None
SDI-11145	Prehistoric campsite	Not Evaluated	None
SDI-11146	Prehistoric campsite	Not Evaluated	None
SDI-11362	Prehistoric lithic scatter	Not Evaluated	None
SDI-11378	Prehistoric lithic scatter	Not Evaluated	None
SDI-11386	Historic ranch	Not Evaluated	None
SDI-11826	Historic home foundation	Not Evaluated	None
SDI-11962	Prehistoric lithic scatter	Not Evaluated	None
SDI-11964	Prehistoric shell scatter	Not Evaluated	None
SDI-11965	Prehistoric shell scatter	Not Evaluated	None
SDI-11966	Prehistoric lithic scatter	Not Evaluated	None
SDI-11968	Prehistoric lithic scatter	Not Evaluated	None

TABLE 5.3-2
Summary of Sites within One-Mile of the Project Area

Site	Description	NRHP/CRHR Status	Potential CVEUP Effect
SDI-12290	Prehistoric lithic scatter	Not Evaluated	None
SDI-12291	Prehistoric campsite	Not Evaluated	None
SDI-12292	Prehistoric lithic scatter	Not Evaluated	None
SDI-12293	Prehistoric lithic scatter	Not Evaluated	None
SDI-14178	Prehistoric lithic scatter	Not Evaluated	None
SDI-14179	Prehistoric lithic scatter	Not Evaluated	None
SDI-14180	Prehistoric lithic quarry	Not Evaluated	None
SDI-14181	Prehistoric lithic scatter	Not Evaluated	None
SDI-14183	Prehistoric lithic scatter	Not Evaluated	None
SDI-14185	Prehistoric lithic scatter	Not Evaluated	None
SDI-14203	Prehistoric campsite	Not Evaluated	None
SDI-14204	Prehistoric lithic scatter	Not Evaluated	None
SDI-14211	Prehistoric lithic scatter	Not Evaluated	None
SDI-14244	Prehistoric lithic scatter	Not Evaluated	None
SDI-16437	Prehistoric lithic scatter	Not Evaluated	None
SDI-17415	Historic trash pit and scatter	Not Evaluated	None
1427 Hermosa Av	Historic address	Not Evaluated	None
3060 Coronado Av	Historic address	Not Evaluated	None
339 Orange Av	Historic address	Not Evaluated	None
35 Tamarindo Way	Historic address	Determined Not Eligible	None

CRHR = California Register of Historical Resources
NRHP = National Register of Historic Places

5.3.1.5.2 Field Survey

Site Conditions

A cultural resources survey of the existing Chula Vista Power Plant was conducted on October 10, 2006 by LSA Associates, Inc. (Fulton, 2006) did not locate any cultural resources. The revised CEC *Rules of Practice and Procedure & Power Plant Site Certification Regulations* (CEC, 2007) require survey of a 200-foot-wide buffer around the project site, so additional surveys of this buffer zone and the two laydown areas were completed on July 10, 2007 by Clint Helton of CH2M HILL (Helton, 2007). The proposed CVEUP is located entirely within the existing MMC Chula Vista Power Plant property. The existing Chula Vista Power Plant site has been heavily disturbed by the construction and operation of the existing plant, and areas that have not been developed have been graded and landscaped with non-native vegetation. Recent geotechnical investigations indicate the entire property is underlain by 25 feet of artificial fill (Ninyo & Moore 2006).

Given the amount of previous ground disturbance in the area for the existing Chula Vista Power Plant site, in addition to the large amounts of fill material used, it seems very likely that any potential cultural resources in the area would have been disturbed or destroyed. The archaeological sensitivity of the CVEUP site is considered low.

Similarly, the archaeological sensitivity of the proposed laydown sites is considered low due to the disturbed nature of both laydown sites, which are comprised of fill material and are heavily disturbed from prior or current uses. Whichever laydown site is selected, it will be used as a temporary staging area during construction and will have no permanent use or subsurface disturbance.

5.3.1.5.3 Archaeological Survey

Plant Site

For completeness, a pedestrian archaeological survey was conducted over all parts of the project site that were accessible (not covered by structures) using 10-meter parallel transects. The CVEUP site has been impacted by construction and operation of the existing power plant.

During this survey, no prehistoric or historic cultural remains were observed.

Laydown Areas

A pedestrian archaeological survey was conducted over all parts of both of the proposed laydown areas using 10-meter parallel transects (Helton, 2007). One of the laydown areas is a former pallet storage yard located adjacent to and southeast of the project site. Ground visibility of this parcel was excellent, but consists entirely of recent fill. The second alternative laydown area is located approximately three miles west of the project site and is a former gravel pit. Ground visibility in this site was poor, as the site was covered in gravel.

During this survey, no prehistoric or historic cultural remains were observed.

5.3.1.5.4 Architectural Survey

In order to assess potential impacts to the historic built environment, CH2M HILL examined the CVEUP site and, in accordance with CEC guidance, no less than one parcel's distance from the proposed plant boundaries. The existing MMC Chula Vista Power Plant was constructed in 2000 and has no buildings or structures over 45 years old. The parcels to the east and the west possess new business parks, constructed only within the past five years. The parcel to the south includes the Otay Valley Regional Park and is densely vegetated and has no nearby structures. The parcel to the north contains an auto salvage and storage yard with no buildings or structures over 45 years old. Similarly, the two temporary laydown areas do not possess structures over 45 years old either within or abutting them. Therefore, no separate architectural survey was required for the project, in accordance with CEC Data Adequacy guidelines.

5.3.1.5.5 Native American Consultation

CH2M HILL contacted the Native American Heritage Commission (NAHC) by letter on June 19, 2007, to request information about traditional cultural properties such as cemeteries and sacred places in the project area. The NAHC responded on June 21, 2007, with a list of Native Americans interested in consulting on development projects. Each of these individuals/groups was contacted by letter on June 22, 2007. As of July 20, 2007, no

responses have been received. Copies of the letters sent are provided in Appendix 5.3A. Also, a detailed summary table of the results of consultations with the individual Native American organizations on the NAHC contact list is included in Appendix 5.3A.

The NAHC record search of the Sacred Lands file did not indicate the presence of Native American cultural resources in the immediate project area. The record search conducted at the South Coastal California Information Center of CHRIS for CH2M HILL also did not indicate the presence of Native American traditional cultural properties.

5.3.1.5.6 Local Historical Societies

Four local historical societies were contacted on July 2, 2007. No additional historical resources were identified. A summary of these contacts is provided as part of Appendix 5.3A. The groups contacted are the Chula Vista Historical Society, San Diego Historical Society and Museum, National City Historical Society and Museum, and Coronado Historical Association.

5.3.2 Environmental Consequences

This subsection describes the environmental impacts of CVEUP demolition, construction, and operations. CH2M HILL conducted a complete survey of the project area and associated laydown areas.

5.3.2.1 Significance Criteria

Appendix G, Environmental Checklist Form, of the CEQA guidelines addresses significance criteria with respect to cultural resources (Public Resources Code Sections 21000 et seq.). Appendix G (V)(a,b,d) indicates that an impact would be significant if the project will:

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

Project investigations included archival research, review of all cultural resource investigation reports within the CVEUP area; contacts with all other interested agencies, Native American groups, and historical societies; and a complete archaeological field survey. These studies indicated that there are no significant prehistoric or historic archaeological remains, or traditional cultural properties in the CVEUP area of potential effects. Therefore, no impacts to cultural resources are expected to occur.

5.3.2.2 Demolition Impacts

The literature search and pedestrian inventory have shown that there are no prehistoric or historic sites located within the CVEUP site or laydown areas. Therefore, the project is unlikely to have an adverse effect on significant historical or archaeological sites (that are eligible for listing in the California Register of Historical Resources). In addition, there are no known cemeteries in the project area or laydown areas that project construction might disturb.

It is unlikely, due to the presence of 25 feet of artificial fill, that the project would encounter buried cultural resources that have not previously been discovered during project demolition (Ninyo & Moore 2006).

5.3.2.3 Construction Impacts

The literature search indicated that there are no previously recorded prehistoric or historic sites within the CVEUP site or laydown areas and therefore the project will have no construction impacts to cultural resources.

5.3.2.4 Operation Impacts

No ground disturbance would be required during project operation; therefore, impacts to cultural resources are not anticipated during operation of the proposed facility. Maintenance of all project facilities will not cause any effects outside of the initial construction area of impact.

5.3.3 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 (Pub. Resources Code § 21083; Cal. Code Regs., tit. 14, §§ 15064(h), 15065(c), 15130, and 15355).

Applications for 26 proposed projects have been filed in the City of Chula Vista. These are mostly residential development projects, with some commercial developments, and one warehouse development and one manufacturing development. One of these projects, a proposed sewing manufacturing and wholesale sales business, is located within 1,000 feet of the CVEUP.

As described above, the CVEUP will not cause any adverse impacts to archaeological or historic resources or traditional cultural properties. The project is located on fill, furthermore, making the likelihood of encountering buried archaeological resources extremely low. The project is very unlikely, therefore, to have impacts that would combine cumulatively with those of other projects.

5.3.4 Mitigation Measures

Significant archaeological and historical sites were not found during the project field survey, and it is unlikely that subsurface construction could encounter buried archaeological remains because the project is located on recent fill that is up to 25 feet deep. For this reason, the CEC's standard mitigation measures that are designed to identify and evaluate buried archaeological resources may not be applicable to this project.

These measures include: (1) designation of a cultural resources specialist to be on-call to investigate any cultural resources finds made during construction, (2) implementation of a construction worker training program, (3) monitoring during initial clearing of the power plant site and excavation at the plant site, (4) procedures for halting construction in the event that there is an inadvertent discovery of archaeological deposits or human remains, (5) procedures for evaluating an inadvertent archaeological discovery, and (6) procedures to mitigate adverse impacts on any inadvertent archaeological discovery determined significant.

It is recommended that a CRS be designated for the project in the unlikely event that deep excavations for the project unexpectedly encounter native soils. Other standard measures,

however, such as construction worker training and construction monitoring, are not necessary because project construction-related excavation would not take place in native soils. The CEC's standard procedures for halting construction in case of an inadvertent discovery should be implemented, however, for the unlikely contingency that native soils are inadvertently encountered and they contain archaeological deposits or in case there are project changes that would involve excavations in native soils.

5.3.4.1 Designated Cultural Resources Specialist

The Applicant will retain a designated CRS who will be available during the earth-disturbing portion of the CVEUP demolition and construction periods to inspect and evaluate any finds of buried archaeological resources that might occur during the construction or demolition phases. If there is a discovery of archaeological remains during construction or demolition, the CRS, in conjunction with the construction superintendent and environmental compliance manager, will make certain that construction or demolition activity stops in the immediate vicinity of the find until the find can be evaluated. The CRS will inspect the find and evaluate its 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 would mitigate adverse impacts of construction or demolition on a significant find.

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 addition to site detection, to evaluate the significance of the deposits, consult with regulatory agencies, and plan site evaluation and mitigation activities.

5.3.4.2 Emergency Discovery

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

5.3.4.3 Site Recording and Evaluation

The CRS will follow accepted professional standards in recording any find and will submit the standard Department of Parks and Recreation historic site form (Form DPR 523) and locational information to the South Coastal Information Center of the California Historic Resources Information System.

If the CRS determines that the find is not significant, and the CEC CPM concurs, construction or demolition will proceed without further delay. If the CRS determines that further information is needed to determine whether the find is significant, the designated

CRS will, in consultation with the CEC, prepare a plan and a timetable for evaluating the find.

5.3.4.4 Mitigation Planning

If the CRS, CEC staff, and CPM determine that the find is significant, the CRS will prepare and carry out 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 or demolition delays. Construction or demolition will resume at the site as soon as the field data collection phase of any data recovery efforts is completed. The CRS will verify the completion of field data collection by letter to the project owner and the CPM so that the project owner and the CPM can authorize resuming construction or demolition.

5.3.4.5 Curation

The CRS will arrange for curation of archaeological materials collected during an archaeological data recovery mitigation program. Curation will be 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.

5.3.4.6 Report of Findings

If a data recovery program is planned and implemented during construction or demolition as a mitigation measure, the CRS will prepare a detailed scientific report summarizing 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 materials recovered, and draw scientific conclusions regarding the results of the excavations. This report will be submitted to the curation facility with the collection.

5.3.4.7 Inadvertent Discovery of Human Burials

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

5.3.5 Laws, Ordinances, Regulations and Standards

Among the local LORS discussed in this section are certain ordinances, plans or policies of the City of Chula Vista and the State of California. Federal LORS are not applicable because the project is not a federal undertaking (federal ownership, funding, or permit).

A summary of applicable LORS is provided in Table 5.3-3.

TABLE 5.3-3
Applicable Cultural Resource Laws, Ordinances, Regulations, and Standards

Law, Ordinance, Regulation, or Standard	Applicability	Project Conformity?
California Environment Quality Act Guidelines	Project construction may encounter archaeological and/or historical resources	Yes
Health and Safety Code Section 7050.5	Construction may encounter Native American graves; coroner calls the NAHC	Yes
Public Resources Code Section 5097.98	Construction may encounter Native American graves; NAHC assigns Most Likely Descendant	Yes
Public Resources Code Section 5097.5/5097.9	Would apply only if some project land were acquired by the state (currently no state land)	Yes
City and County of San Diego	Resources Protection Ordinance No. 7631.	Yes
City of Chula Vista	*City of Chula Vista Archaeological/Historical Guidelines*	Yes

5.3.5.1 State LORS

CEQA requires review to determine if 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 CRHR (CEQA Guidelines). CEQA equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment (Section 21084.1 of the Public Resources Code) and defines substantial adverse change as demolition, destruction, relocation, or alteration that would impair historical significance (Section 5020.1). Section 21084.1 stipulates that any resource listed in, or eligible for listing in, the CRHR[3] is presumed to be historically or culturally significant.[4]

Resources listed in a local historic register or deemed significant in a historical resource survey (as provided under Section 5024.1g) 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, nor deemed significant in a historical

[3] The CRHR is a listing of "…those properties which are to be protected from substantial adverse change." Any resource eligible for listing in the California Register is also to be considered under CEQA.

[4] A historical resource may be listed in the CRHR if it meets one or more of the following criteria: "(1) is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; (2) is associated with the lives of persons important to local, California or national history; (3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or (4) has yielded or has the potential to yield information important in prehistory or history (…of the local area, California or the nation)" (Public Resources Code §5024.1, Title 14 CCR, Section 4852). Automatic CRHR listings include National Register of Historic Places (NRHP)-listed and determined eligible historic properties (either by the Keeper of the NRHP or through a consensus determination on a project review); State Historical Landmarks from number 770 onward; and Points of Historical Interest nominated from January 1998 onward. Landmarks prior to 770 and Points of Historical Interest may be listed through an action of the State Historical Resources Commission.

resource survey, may nonetheless be historically significant (Section 21084.1; see Section 21098.1).

CEQA requires a Lead Agency to identify and examine environmental effects that may result in significant adverse effects. Where a project may adversely affect a unique archaeological resource,[5] Section 21083.2 requires the Lead Agency to treat that effect as a significant environmental effect and prepare an Environmental Impact Review. 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. Sections 21083.2 and 21084.1 operate independently to ensure that potential effects on archaeological resources are considered as part of a project's environmental analysis. Either of these benchmarks may indicate that a project may have a potential adverse effect on archaeological resources.

Other state-level requirements for cultural resources management appear in the California Public Resources Code Chapter 1.7, Section 5097.5 (Archaeological, Paleontological, and Historical Sites), and Chapter 1.75, beginning at Section 5097.9 (Native American Historical, Cultural, and Sacred Sites) for lands owned by the state or a state agency.

The disposition of Native American burials is governed by Section 7050.5 of the California Health and Safety Code and Sections 5097.94 and 5097.98 of the Public Resources Code, and falls within the jurisdiction of the NAHC.

If human remains are discovered, the San Diego County Coroner must be notified within 48 hours and there should be no further disturbance to the site where the remains were found. If the remains are determined by the coroner to be Native American, the Coroner is responsible for contacting the NAHC within 24 hours. The NAHC, pursuant to Section 5097.98, will 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.

5.3.5.2 Local LORS

As discussed above, among the local LORS discussed in this section are certain ordinances, plans or policies of the City of Chula Vista. For informational purposes, this section reviews compliance of the project with these requirements.

5.3.5.2.1 San Diego County

The following San Diego County ordinances may apply:

San Diego County Administrative Code, Section 396.7 establishes the San Diego County Local Register of Historical Resources; defines eligible properties, sets forth criteria to determine significance, and lists nomination procedures.

[5] Public Resources Code 21083.2 (g) defines a unique archaeological resource to be: An archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information; (2) has a special and particular quality such as being the oldest of its type or the best available example of its type; or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

The *Resources Protection Ordinance No. 7631* requires a resource protection study to protect "environmentally sensitive lands" including significant prehistoric and historic sites. The ordinance defines significant cultural resources and prohibits damaging such resources. The ordinance also provides exemptions for essential public facilities, which are defined as "any structure or improvement necessary for the provision of public services, which must be located in the particular location to serve its purpose and for which no less environmentally damaging location, alignment, or non-structural alternative exists."

5.3.5.2.2 City of Chula Vista

The City of Chula Vista's General Plan which describes preservation of cultural resources may apply:

Municipal Code Title 2 Chapter 2.32 Section 2.32.030 protects finite cultural resources which provide the only record of our historic, prehistoric and natural past.

5.3.6 Involved 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 California Office of Historic Preservation.

TABLE 5.3-4
Agency Contacts for Cultural Resources

Issue	Contact	Title	Telephone
Native American traditional cultural properties	Dave Singleton Native American Heritage Commission	Associate Governmental Program Analyst	(916) 653-4082
Federal agency NHPA Section 106 compliance	Milford Wayne Donaldson Office of Historic Preservation	State Historic Preservation Officer	(916) 653-6624

5.3.7 Permits Required

Other than certification by the CEC, no state, federal, or local permits are required by the project for the management of cultural resources. Consultation with the State Historic Preservation Officer and Advisory Council on Historic Preservation would be required under Section 106 of the National Historic Preservation Act if, for example, as the result of a later project change, the project were to become a federal undertaking and significant cultural resources could be were likely to be affected by the project.

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