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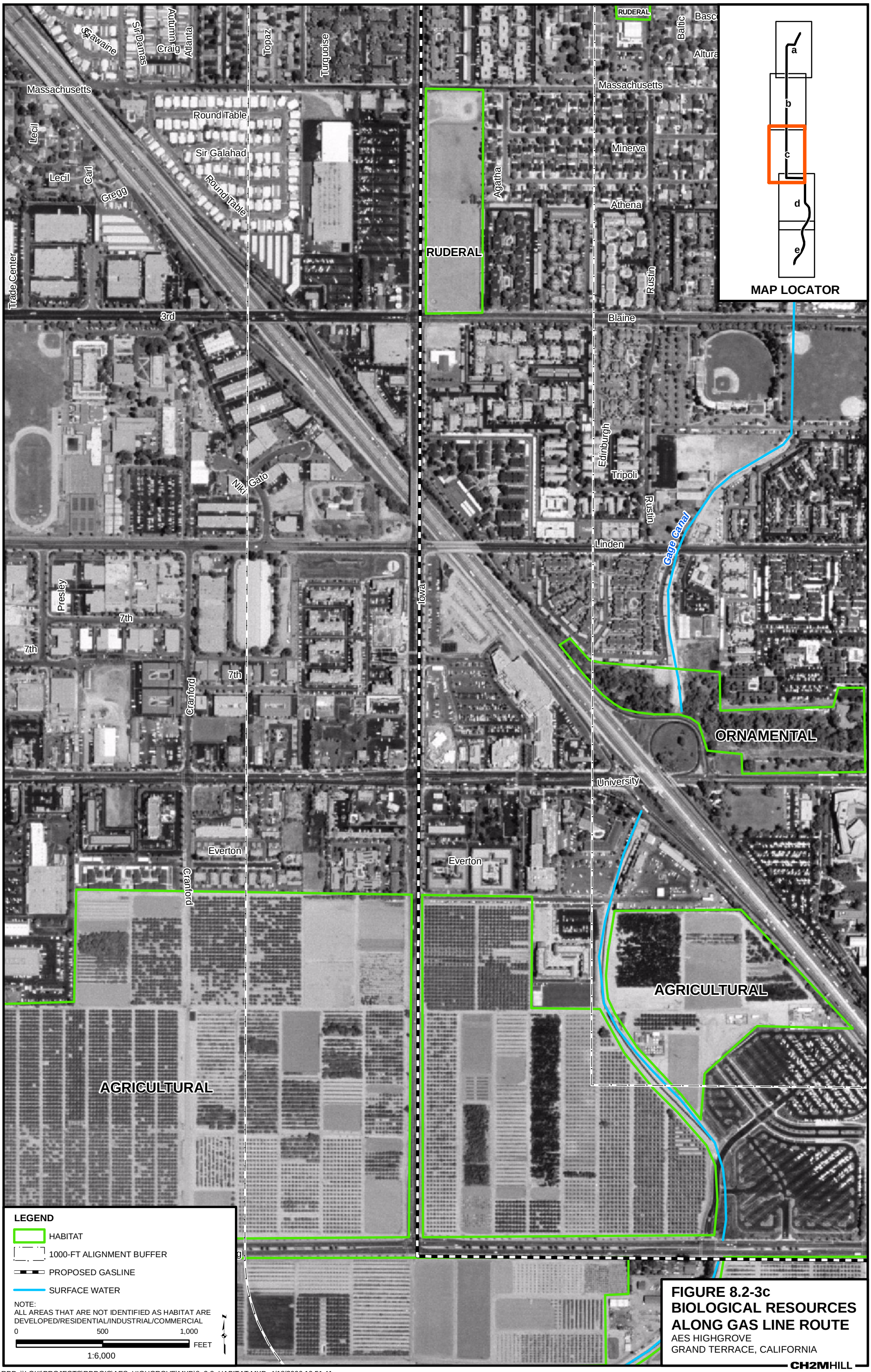
Docket Number:	06-AFC-02
Project Title:	High Grove Power Project AES 300 Megawatt Simple Cycle Power Plant, City of Grand Terrance San Bernardino County
TN #:	233647-5
Document Title:	Application for Certification AES Highgrove PT 7
Description:	Document was on proceeding webpage and is now moved over to the docket log.
Filer:	Raquel Rodriguez
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	6/25/2020 11:41:58 AM
Docketed Date:	6/25/2020



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Rosehill
Brookhill
La Subida
Los Altos
La Mesita
Monte Vista
Windhill
Cherry Hill
Fairhill
Cedarhill
Castle
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Monte Carlo
Lyndhurst
Lamart
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Grovehill
Upperhill
Chequers
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Via Pueblo
COASTAL SAGE SCRUB
Dahlia
Daffodil
Blazewood
DRAINAGE
Central
Via Zapata
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Via Mesa Verde
Via del Tecolote
Via Pintada
Via Donoso
Via Chepo
Via Ponte de Oro
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ORNAMENTAL (GOLF COURSE)

MAP LOCATOR

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LEGEND

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- 1000-FT ALIGNMENT BUFFER
- PROPOSED GASLINE
- SURFACE WATER

NOTE:
ALL AREAS THAT ARE NOT IDENTIFIED AS HABITAT ARE DEVELOPED/RESIDENTIAL/INDUSTRIAL/COMMERCIAL

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FIGURE 8.2-3d
BIOLOGICAL RESOURCES ALONG GAS LINE ROUTE

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Via Mensabe
Via Sotelo
Country Club
Via Junipero Serra
Via Terreno
Via Cerezo
Shaker
Via Mindi
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Via Susana
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Cadwell
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Ransom
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Tareyton
Grossmont
Omega
Lynridge
Ballinger
Danbrook
Nettleton
Baylor
Atwater
Parkside
Century
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8.3 Cultural Resources

8.3.1 Introduction

This subsection determines whether cultural resources are present and could be affected adversely by the AES Highgrove Project. The significance of any potentially affected resources is assessed, and measures are proposed to mitigate potential adverse project effects. This study was conducted by Clint Helton, Registered Professional Archaeologist (RPA) and Cultural Resource Specialist (CRS) who meets the qualifications for Principal Investigator stated in the Secretary of the Interior's standards and guidelines for archaeology and historic preservation (USNPS, 1983).

The Highgrove Project is the proposed construction of a nominal 300 megawatt peaking facility consisting of three natural-gas-fired turbines, and associated equipment. The proposed generating facility site is located on the property of Southern California Edison's (SCE's) former Highgrove Generating Station in the City of Grand Terrace, immediately east of Colton in San Bernardino County. It will connect to SCE's electrical transmission system via the adjacent 115-kV Highgrove Substation. Natural gas for the facility will be delivered to the generating station via a natural gas pipeline that will connect to an existing Southern California Gas transmission line located approximately 7 miles (11 km) south of the AES Highgrove project site in Riverside County.

This subsection is consistent with state regulatory requirements for cultural resources pursuant to the California Environmental Quality Act (CEQA). The study scope was developed in consultation with the California Energy Commission's (CEC's) 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, 1997).

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]

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." (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.

Subsection 8.3.2 discusses the laws, ordinances, regulations, and standards (LORS) applicable to the protection of cultural resources. Subsection 8.3.3 describes the cultural resources environment that might be affected by the Highgrove Project. Subsection 8.3.4 discusses the environmental analysis of construction of the proposed development. Subsection 8.3.5 determines whether there are any cumulative effects from the project, and Subsection 8.3.6 presents mitigation measures that will be implemented to avoid construction impacts. Subsection 8.3.7 lists the agencies involved and agency contacts, and Subsection 8.3.8 discusses permits and the permitting schedule. Subsection 8.3.9 lists reference materials used in preparing this section.

Appendix 8.3A provides copies of agency consultation letters. Appendix 8.3B provides the resume for Clint Helton. Figure 8.3-1 depicts the ethnographic distribution in the project area per CEC Data Adequacy requirements.

The Highgrove Project 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 (AHPA) of 1974 (16 USC 469), among others, because it is not a federal undertaking (federally permitted or funded)

8.3.2 Laws, Ordinances, Regulations and Standards

A summary of applicable LORS is provided in Table 8.3-1.

TABLE 8.3-1
Laws, Ordinances, Regulations, and Standards Applicable to Cultural Resources

Law, Ordinance, Regulation, or Standard	Applicability	Project Conformity?
California Environment Quality Act Guidelines	Project construction may encounter archaeological resources	Yes
Health and Safety Code Section 7050.5	Construction may encounter Native American graves, Coroner calls Native American Heritage Commission (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
Riverside County	Sets goals to protect valuable architectural, historical, archaeological and cultural resources.	Yes

8.3.2.1 State of California Statutes

CEQA requires a 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 California Register of Historical Resources (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 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 (EIR). 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.

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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 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.

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.

If human remains are discovered, the Riverside County or San Bernardino 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.

8.3.2.3 Local Laws and Regulations

8.3.2.3.1 Riverside and San Bernardino Counties

The County of Riverside has drafted its own requirements regarding the preparation of cultural resources reports for privately initiated development projects (updated March 1993), entitled, Requirements for the Preparation and Review of Archaeological and Biological Reports.

There are no applicable LORS for San Bernardino County, nor the cities of Grand Terrace and Riverside, regarding cultural resources.

8.3.3 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.

8.3.3.1 Regional Setting

The Highgrove Project is located in the Inland Empire area of southern California between the San Bernardino and San Jacinto Mountains of the Transverse Ranges to the east, and the Chino Hills and Santa Ana Mountains to the west. The plant site lies south of the Santa Ana River, north of the San Bernardino/Riverside County line and east of Interstate 215 in the City of Grand Terrace, San Bernardino County. The associated gas pipeline travels south from the plant site for approximately 7 miles and will be constructed within the public right of way. Only a portion of the line between the plant boundary and Main Street will cross private property. This rural agricultural community is expected to experience rapid residential and commercial development over the next several years.

The Highgrove Project area elevations range from approximately 1000 feet at the plant site to about 1200 feet above sea level near the southern terminus of the proposed gas pipeline. The topography is mostly flat. Some of the land bordering the plant site on the east is currently agricultural with most of the surrounding land being low to moderately dense residential, commercial, or light industrial (or in the process of being converted to residential and commercial land use patterns).

The dominant hydrological feature is the Santa Ana River to the west and north. Native vegetation outside drainages is sparse, due to agricultural uses and seasonal discing for weed abatement. Some of the identifiable plants noted in the area include sunflower, mustard, wild tobacco, various palm trees, eucalyptus, buckwheat, and non-native grasses and shrubs. Along drainages some flora observed included cottonwood, walnut, and willow trees, with mulefat and riparian understory. Fauna included ravens, pigeons, Red-tailed

hawks, and lizards. Today, little native vegetation remains. As shown by recent archaeological research, the project area provided a favorable environment for human occupation with riparian/marsh-wetland and inland resources readily available and other natural resources of the area in relatively close proximity.

Disturbance in the area is widespread. Commercial and residential development can be found along Taylor Street, Pico, on the west by Interstate 215, and on the south by Interstate 60. Agricultural crops are currently grown along Pico and Taylor Streets. The routes analyzed for the associated gas pipeline are surrounded by extensive commercial, industrial, and residential development.

Sections 8.9 and 8.15 of this AFC provide detailed descriptions of regional soil conditions and geology. Some of the cultural resources in the area have been disturbed or eliminated by past agricultural practices and urban development characteristic of late 20th century population growth. Overall, the immediate project area is one of low to moderate archaeological sensitivity that is embedded within the larger Riverside region which is of moderate to high archaeological sensitivity.

8.3.3.2 Prehistoric Background

Paleoindian Period – (11,500-10,500 B.P.)

Paleoindian populations were small and it is presently believed that their subsistence consisted of generalized hunting and gathering including big game hunting of now extinct mammoth and mastodon, and considerable emphasis on marine resources. Evidence from this period is sparse but includes basketry, seagrass cordage, seed-milling stones, beads, chert tools and a fish-like effigy. Known sites include Santa Rosa Island, San Miguel Island, Vandenberg Air Force Base, and near Nipomo. Many coastal sites were submerged as glacial ice melted and sea levels rose.

Early Holocene Cultures (10,550 – 7200 B.P.)

Early cultures and peoples were adapted to the post-Pleistocene environment in which megafauna had largely disappeared and the hotter, drier climate had forced groups to settle near reliable water sources. As defined by Warren (1967), San Dieguito was a hunting culture with a flaked stone industry that included large flake and core scrapers, choppers, hammerstones, drill, and gravers. While plant processing artifacts were nearly absent from the assemblage Warren described, there is now little doubt that these cultures used plant resources (Basgall and Hall, 1993). Archaeologists are still not sure about the origin of the San Dieguito culture and its transition to later periods. Erlandson and Colten (1991) suggested three models: (1) in situ development from earlier groups, (2) desert groups migrating to the coast to avoid Altithermal conditions, and (3) coastal migration from the north. The second model is the most widely accepted explanation for early coastal groups; as coastal settlement is pushed further back in time, however, the third model seems more likely (Grenda, 1997).

Early-Middle Holocene Cultures

Rogers (1939, 1945) was the first to describe the San Dieguito and La Jolla cultures, but he failed to explain the transition from one to the other. Warren and True (1961) and Warren and Pavesic (1963) proposed that the La Jolla culture began around 7500 B.P. when desert foragers moved west to avoid unfavorable Altithermal climates. Kowta (1969) suggested

that the movement coincided with the diffusion of agave to the coast – and that the primary function of the scraper assemblage was to process agave and yucca. Moriarty (1966, 1967), Kaldenberg (1976), and Koerper et al. (1991) found continuity between the San Dieguito and La Jolla culture and claimed the La Jolla developed from the earlier San Dieguito. Some, like Bull (1987) and Ezell (1987) believe the two cultures were functional variants of the same culture while others (Hayden, 1987; Moriarty, 1987; Smith, 1987) believe them to be distinct cultures. Moratto (1984) combined some of these models:

> Climatic warming after circa 6000 B.C. may have stimulated movements to the coast of desert peoples who then borrowed littoral adaptations from older groups while sharing with them their millingstone and scraper-plane technologies and seed- and agave- processing skills.

Another popular theory is coastal migration (Fladmark, 1979). Chartkoff and Chartkoff (1984) claim that as coastal settlement is pushed further back in time, the more likely it is that the settlers were not related to the Pleistocene hunters of the interior deserts. Meighan (1989) sees similarities between California and British Columbia/Alaska assemblages while Erlandson and Colten (1991) see more close resemblance to interior desert assemblages. As Grenda (1997) explained, the major obstacle to resolving this controversy is that about 17,000 square kilometers of land have been inundated since the end of the last glacial (Carbone, 1991), effectively drowning most coastal sites. If Meighan (1989) is correct, there should be evidence of a coastal migration route at inundated offshore sites along the coast, and larger habitation sites with a material culture reflecting the Transitional period.

Scholars believe that subsistence patterns showed marked changes starting around 8500 B.P.; probably in response to Altithermal climatic conditions and the changing flora and fauna (Erlandson and Colten, 1991; Gallegos and Hector, 1987). These changes are seen as reduced numbers of projectile points, scrapers, and choppers, and an increase in ground stone artifacts. While hunting and fishing were not replaced by hard seed processing, the reliance on animals and fish decreased and the diet became more diversified (Koerper, 1981) and diversity of adaptation was apparently the norm for middle Holocene cultures.

Middle Holocene Cultures (7200 to 3440 B.P.)

Middle Holocene cultures are commonly referred to as Milling Stone cultures and the La Jolla culture was the coastal region's representative from this period (Wallace, 1978; Warren, 1967). La Jolla sites were usually located near the coast, especially around lagoons and bays suggesting an ecological adaptation to shellfish and other coastal resources. Inland sites from the same time period are typically described as belonging to the Pauma culture; these sites had a similar material culture but were more sedentary and lacked shellfish (Meighan, 1954; True, 1958; Warren and True, 1961). Farther inland, the Sayles culture was a mixture of the Pinto culture and the Milling Stone groups of the coastal region (Grenda, 1997).

La Jolla Culture

La Jolla culture exploited the coastal regions of Orange and San Diego Counties and are recognized by ground stone assemblages in shell middens, usually on terraces around lagoons or bays. Rogers (1945) and Harding (1951) divided the La Jolla into two phases, La Jolla I and II. The latter phase was defined by the presence of cemeteries, trade with the Channel Islands, and an improved lithic technology. The technology at La Jollan sites indicates a mixture of coastal and desert traits since both scraper-plane and ground stone

artifacts are found. La Jollan sites include shell middens, fire hearths, ground stone, flexed burials, and a very basic lithic assemblage. It appears that La Jollan assemblages represent a transitional phase from San Dieguito to Late Prehistoric cultures rather than a culture with distinct spatial and temporal boundaries (Grenda, 1997).

Pauma Culture

Pauma sites are distinguished from La Jollan sites solely on their location. Pauma sites are generally found in inland valleys and sheltered canyons, out of reach of marine resources, whereas La Jollan sites hug the coastline and dot lagoon edges. True (1958), Warren and True (1961), and Meighan (1954) describe Pauma sites as those which display a relatively more sedentary lifestyle and a greater reliance on gathering when compared to the San Dieguito culture. Pauma sites also contain many ground stone artifacts, a greater tool variety and lack shellfish remains. Artifact assemblages are similar to La Jollan sites, but subsistence practices are apparently more focused on terrestrial resources. Grenda (1997) summarizes:

> The difference between La Jollan and Pauma sites is primarily based on functional differences in the artifact assemblage. A greater tool variety indicates a greater reliance on terrestrial resources than La Jollan sites. This adaptation is most likely the result of terrestrial resource availability in the settlement area rather than cultural differences. It appears that any "close relationship" between the two could be explained by viewing the two cultures as functional variants of the same culture.

Sayles Culture

Between the Mojave Desert (exploited by the Pinto Basin culture) and the coast (exploited by the La Jollan and Pauma cultures) was a culture that apparently used resources from both the desert and coastal regions. The Sayles culture sites exhibit ground stone assemblages that also include percussion –flaked scraper planes, cores, planoconvex scrapers, choppers, and hammerstones (Kowta, 1969). Moratto (1984) views this culture as one that blended between the Pinto Basin culture of the Mojave Desert and the Milling Stone cultures of southern California. Sayles culture subsistence patterns were based on opportunistic hunting of deer, rabbit, and other small game animals, as well as floral resources such as juniper berries and hard seeds (Basgall and True, 1985). While investigations suggest that resources were available on a year-round basis, a limited variety of tools within artifact assemblages suggests a more seasonal use of sites. From what little is known about the Sayles culture, it probably represented the Transitional period between the early hunting and later gathering cultures (Grenda, 1997).

Late Holocene Cultures (3440 to 168 years B.P.)

While in many areas of southern California, Millingstone cultures survived into the late Holocene, some clear changes took place around A.D. 500. Late Prehistoric cultures in the region reflected both in situ cultural adaptations in response to environmental changes and outside influences from the Shoshonean (Takic) intruders of the desert regions (Moratto, 1984). As with earlier periods, cultural distinctions are often subtle. The Late Prehistoric period in the project area is represented by the San Luis Rey (SLR) culture and has been equated with the historically known Luiseño (True, 1966). The SLR has been divided into two phases, San Luis Rey I (A.D. 1400-1750) based on the absence of ceramics, cremations and rock paintings and San Luis Rey II (A.D. 1750-1850) which included use of ceramics,

cremations, and rock paintings. The SLR culture's subsistence pattern probably consisted of small game hunting and the gathering of seeds and nuts, especially acorns. As summarized by Grenda (1997), three relatively distinct settlement patterns occurred during the SLR period:

> The first pattern was characterized by scattered temporary sites, suggesting a relatively mobile population. A shift to more sedentary settlements located where streams emerged from canyons took place in the late SLR I or early SLR II period. True and Waugh (1981) propose that, accompanying this shift, a formalized winter-summer seasonal round became established. Finally, during late prehistoric or protohistoric times, the "one village per drainage" pattern shifted to a more complex consolidated village pattern. This last shift was probably stimulated by contact with missionaries and other settlers, and other factors such as drought and resource competition. At that time, the subsistence patterns of the San Luis Rey culture began to incorporate nonnative plants and animals and focus less on coastal resources (Bean and Shipek, 1978; Kroeber, 1925; Moratto, 1984; Strong, 1929). Based on ethnographic and ethnohistoric accounts of early contacts with the culture, the settlement pattern was similar to the later Luiseño rancherias. Small settlements were located from the river basin to the higher mountain slopes and were occupied on a seasonal basis depending on resource availability.

8.3.3.3 Ethnographic Background

The Luiseño Indians are those California aboriginal peoples and their descendants who were brought under the jurisdiction of Mission San Luis Rey de Francia, which is located near Oceanside, California. The Luiseño Indians are part of the Takic branch of the Uto-Aztekan language family (Bean and Shipek, 1978). Kroeber suggested that they were part of the Shoshonean drift that originated in the Great Basin, and migrated into the Southern California coastal region at least 1500 years ago (Kroeber, 1925). The Luiseño cultural territory covers about 1,500 square miles and includes parts of San Diego and Riverside Counties. According to Bean and Shipek (1978), Luiseño territory extended from Agua Hediona Creek northwest to Aliso Creek along the coast, then east to Santiago Peak and south through the Lake Elsinore area to just south of Mount Palomar.

The Luiseño, through complex social organizations and mechanisms such as clan-governed districts and seasonal movements of populations throughout the region, followed a planned program of resource use to exploit the abundant plants and animals and support a large population. Seasonal exploitation of acorns and small game was combined with the exploitation of coastal resources during the balance of the year.

The terrestrial biomes indigenous to the Luiseño territory included Montane Forests, Riparian Woodland, and Chaparral. The Montane Forests are located at elevations between 2,000 feet and 8,000 feet. The principle trees utilized by the Luiseño Indians in this environment were members of the oak family. Acorns were the most important food resource for the Luiseño Indians. Riparian Woodland areas are located along waterways, streams, and perennial rivers. Plants indigenous to this area are deciduous trees, shrubs, and herbaceous plants. Many of these plants were also important sources of food and medicine for the Luiseño (Parker, 1965). Chaparral includes those grasses, shrubs, and low

vegetation typical of the dry, hot Southern California lowlands. The Luiseño utilized the grasses and desert plants typical of this area for both food and medicines (Bean and Shipek 1978). Early explorers to the region noted that the area had more locally available water than it does today, and they provided descriptions of lush vegetation and numerous mentions of water pools.

The Luiseño Indians while predominately sedentary also traveled within their territory for seasonal harvests. Their territorial domain ranged in elevation from sea level at the coast to over 6,000 feet at the Mount Palomar summit. The diversity of their natural habitat includes "every ecological zone from the ocean, sandy beaches, shallow inlets, marshes, coastal chaparral, lush interior grassy valleys, extensive oak groves, up to the pines and cedars on the top of Mount Palomar" (Bean and Shipek, 1978). It was this vast ecological diversity that allowed the Luiseño to establish and maintain a more sedentary life style without the necessity for agriculture. For food, the Luiseño utilized a wide range of both plant and animal life. Acorns, various seeds, cactus, fruits, plant leaves, stems and roots were all processed for food. Animals utilized as food by the Luiseño were deer, rabbit, wood rats, ground squirrels, mice and grasshoppers.

Luiseño villages were usually located in defendable canyons or coves along the slopes near good water supplies (Bean and Shipek, 1978). Village populations ranged between 50 and 200, with the larger ones spawning nearby satellite villages. Kroeber (1925) estimated ancient Luiseño population to be around 4000; in 1925, their population was less than 500. White (1963) estimated Luiseño population to have been 10,000 (based on 50 villages with an average of 200 people in each). Cook (1976) estimated the aboriginal population of California to be 310,000 or 3 people per habitable square mile – the Luiseño population would have been around 4,500.

Geography is an important factor in predicting the location of Luiseño archaeological sites. It is known that the Mediterranean type climate provided a diverse ecological niche for the Luiseño that these prehistoric people to lead a predominately sedentary lifestyle without agriculture. The, all important acorns were only a day's walk from the villages. Grasses, fruits, deer, rabbit and a variety of other plants and animals used by the Luiseño were all locally available. The geologic aspect of the geography also played an important role in the Luiseño lifestyle because the landscape was scattered with outcrops of granitic bedrock. The mortar holes used in food processing are found throughout the vicinity in these outcroppings. An analysis of their pottery has revealed that the Luiseño used locally available clays and rock in their ceramic production. Manos, metates, projectile points, knives, scrapers and other stone implements were also fashioned from locally available quartzite, quartz crystals, and basalt. It is surmised that the Luiseño traded with their neighbors to the north and south by sourcing the obsidian (volcanic glass) found at the site. Obsidian source analysis indicates that the Luiseño often traded for obsidian with people from sources near the Salton Sea to the south, and from the Coso Range to the north.

Ethnographic accounts of the Luiseño are presented by Henshaw (1972), Sparkman (1905, 1908a, b), Du Bois (1904, 1908), and Kroeber (1906, 1908, 1909, 1917, 1925) as well as studies by Gifford (1918, 1922), Harrington (1933, 1934), Strong (1929) and White (1963).

8.3.3.4 Historical Background

The project area was somewhat marginal to human occupation after the first Spanish contact in the 1500s. The small towns in the project area, like those in most other parts of Southern California, went through three historic phases of Euro-American development: Spanish imperialism and missionization (1540-1821), Mexican and American frontier development (1821-1881), and post railroad modernization (1880- present). Significant settlement didn't occur throughout the project area until the period of Mexican and American frontier development.

As explained by Grenda (1997), the Spanish were interested in establishing a mission between San Diego and San Juan Capistrano and were drawn to the San Luis Rey River valley because of its water supply, abundant vegetation and large native Luiseño Indian population. Many Luiseño were brought to the mission, where they were taught the Christian faith, the Spanish language, and crafts (Bean and Shipek,1978). For the most part, however, the Luiseño maintained their previous settlement patterns and political leadership. The success of the mission started to decline in 1833 when a decree of emancipation of the Indians was passed and in 1835 the mission was confiscated by the Mexican government.

A number of factors led to the decline of Native American lifeways including the Gold Rush and the granting of Statehood to California (and the great numbers of Euroamericans who came to settle). Additional stress to the Luiseño lifeway came with the secularization of the mission and the split-up of the lands to private individuals. Thus, the local Indians were forced to either work on the ranchos or become rebels (Moratto and Greenwood, 1991).

It was the railroad's arrival that brought permanent American settlements to the area in the 1870s. During the early 20th century, the Luiseño turned away from traditional hunting and gathering toward agriculture, stock raising, and wage labor, so that by 1920 most Luiseño were integrated into the regional economic system. The Great Depression of the 1930s actually led to a resurgence of traditional hunting and gathering activities, which were used as a means of survival during a period of high unemployment.

Historically, regional land use consisted mainly of dryland farming. Beginning in the early 1960s, with the inception of the Del Webb Sun City development, land use steadily became oriented toward residential and retail/commercial development.

8.3.3.4.1 Spanish Period

Spain claimed Alta California since 1542 when Cabrillo made his voyage. In the mid 1700s, the Spanish established defensive settlements along coastal Alta California to deter encroachment from Russian and British interests. An army garrison and Indian mission was established in San Diego in 1769 and another in Monterey in 1770.

8.3.3.4.2 Mexican Period

During the Mexican Period (1822 to 1846) and into the American Period, the project area was situated partially within Rancho El Pescadero). As explained by Bramlette, et al. (1991), the newly created Mexican government had to deal with secularization of the missions. Of the 21 missions, 10 were released in 1834, five in 1835 and the remaining six in 1836 (Beck and Williams, 1972). While some resident Indians received land allotments, none retained

their lands for more than a few years (Bean and Shipek, 1978) with the result that most Indians served as laborers on the ranchos spreading throughout Mexican California.

Between 1834 and 1846, more than 800 land patents, comprising more than 12 million acres, were issued to individuals by the Mexican government (Lavender, 1976). Under the rancho system, land outside of towns was considered valuable only for grazing purposes. Any citizen of good character could get a grant for a grazing tract. The grantee was required to submit a *diseno* (description and map) of the area he desired. By 1845, most of the land holdings were in the form of large ranchos. Increasingly bad relations between the United States and Mexico led to the Mexican-American War of 1847, which resulted in Mexico releasing California to the United States under the Treaty of Guadalupe Hidalgo in 1848.

8.3.3.4.3 American Period

As explained by Fong, et al. (1991), throughout the Spanish and Mexican Periods, land was abundant and settlers were few in number and land had minimal value. It was not until the American takeover of California in 1846 was land coveted and valued. As early as March 13, 1847, the *California Star* published complaints about the good agricultural land claimed by a few *Californios* who held large ranchos. By the mid-19th century, most of the rancho and pueblo lands in California were subdivided as the result of population growth and the American takeover. California's rapid growth was attributed to the Gold Rush (1848), the completion of the transcontinental railroad (1869), and construction of local railroads. Later, the development of the refrigerator railroad car (ca. 1880s), which was used to transport local agricultural produce to distant markets, had a major impact on population growth (Guedon, 1978; Hart, 1978).

8.3.3.5 Resources Inventory

The Highgrove project site and linear facilities were subject to 100 percent (or complete) cultural resources inventory by CH2M HILL. This inventory is based on both archive/background research and surface pedestrian reconnaissance survey. The results of the resource inventory are presented in the subsections below. The affected project environment (APE) for cultural resources is considered as the footprint of the power plant site and 50 feet on either side of the centerline of alternative natural gas pipeline alignments.

8.3.3.5.1 Field Survey

Site Conditions

A survey of the proposed power plant location and appurtenant linear facilities was conducted in January and February, 2005. The entire project area is currently, or has in the past, been the subject of intense agricultural activity as well as industrial and residential development. As a result, extensive ground disturbance is prevalent across the project area. The area of the plant site provided the best opportunity to observe exposed soil surfaces. Very little natural soil or vegetation is visible along the natural gas pipeline routes. Project elements subject to intensive field survey included the plant site location and natural gas pipeline. Other linear utilities are contained entirely within the existing disturbed power plant site. No new archaeological sites were located as a result of field survey of the plant site and the alternative natural gas pipeline alignments.

Pedestrian field survey of all Highgrove Project elements was conducted on January 25 and February 1, 2005, by Mr. Clint Helton using 20-meter intervals between survey transects.

Mr. Helton is a Registered Professional Archaeologist, holds a M.A. degree in anthropology, and has over 10 years of experience in cultural resource management and archaeological research.

A 100-foot-wide survey corridor (50 feet each side of the centerline) was employed for gas pipeline alignments. Variations in ground conditions (paved areas, vegetation cover, access restrictions, etc.) required some use of an opportunistic survey strategy.

The Highgrove APE for cultural resources is considered as the footprint of the power plant site and 50 feet on either side of the centerline of alternative natural gas pipeline alignments.

Along the gas pipeline alignments, a pedestrian survey by the archaeologist revealed no new archaeological resources.

Given the amount of previous ground disturbance in the area for buildings, utilities, and other infrastructure, it seems likely any resources in the area would have been disturbed or destroyed. The archaeological sensitivity of the power plant location and linear facility routes are considered low.

Architectural Reconnaissance

Homes, farmsteads, and commercial/industrial facilities older than 45 years are potentially significant historic resources in the project area. An architectural reconnaissance was conducted to determine whether potentially significant historic architecture is located within 50 feet of the gas pipeline centerline, and if so, whether the project could affect the structures. While there are structures present in the vicinity of the project area that are older than 45 years, none meet any of the criteria to be considered significant. No significant historic buildings or structures within the proposed Highgrove plant site or gas line alignments were observed.

Plant Site

The 17.7-acre Highgrove project site is located at 12700 Taylor Street in the City of Grand Terrace, in southwestern San Bernardino County, California. The Project Site is a 9.8 acre parcel comprised of the Tank Farm Property, owned by the City of Grand Terrace Redevelopment Agency, and the Generating Station Property owned by the applicant, as described in Section 2, Project Description. The Cage Park Property, a 6.5-acre parcel (owned by the applicant) is located to the south of the Generating Station Property. SCE's Highgrove Substation (3.1 acres) is located immediately to the west of the Generating Station Property. Neither the Cage Park Property or Highgrove Substation are part of the project. The proposed facility will be located mostly on property, which contained large circular fuel storage tanks, and was substantially modified by contouring and berming of the soil to provide spill containment.

For completeness, a pedestrian archaeological survey was conducted over all parts of the Highgrove project site that were accessible (not covered by existing structures) using 30-meter parallel transects. Where not otherwise obscured, open grassy areas were carefully inspected. Visibility was fair over most portions of this area. No evidence of surface or subsurface archaeological deposits was observed in this area.

Gas Line

Three alternative alignments for a natural gas pipeline have been identified. An architectural reconnaissance of all gas pipeline alignments was conducted to determine whether potentially significant historic architecture is located within 50 feet of the gas pipeline centerline. Other than a short segment that follows the Riverside Canal from the plant site to Main Street, the gas line will be installed and construction will occur entirely within city streets and/or sidewalks, within existing asphalt and concrete. All alignments on both sides were heavily developed and disturbed from previous construction and all routes are paved in asphalt and concrete or are within city street rights-of-way. No new sites were located as a result of field survey. None of the structures that border the roadway will be impacted by installation of the gas pipeline.

8.3.3.5.2 Archival Research

CH2M HILL commissioned a detailed record search by staff of the California Historical Resources Information System (CHRIS) Eastern Information Center for portions of the project in Riverside County, and the Archaeological Information Center at the San Bernardino County Museum for project components within San Bernardino County. The literature search used a definition of a half-mile buffer zone around the plant site and an area 0.25 miles on either side of the centerlines of linear facilities as the "project area." The searches determined that some portions of the project area have been surveyed previously for cultural resources.

The Archaeological Information Center reported 4 archaeological sites (CA-SBR-7168H/ CA-RIV-4768H, CA-SBR-7169H, CA-SBR-6847H, CA-SBR-6101H), and 4 isolated finds (36-060233, 34, 35, 38) located within 1 mile of the plant site in San Bernardino County. No sites were reported within the plant site APE. Eleven individual investigation reports have been filed in the CHRIS archives for the portion of the project area lying within San Bernardino County.

The Eastern Information Center reported 36 archaeological sites (CA-RIV-11475, CA-RIV-13535, CA-RIV-4768H/CA-SBR-7168H, CA-RIV-4787H/CA-SBR-7169H, CA-RIV-6925, CA-RIV-6927, CA-RIV-6928, CA-RIV-6929, CA-RIV-6931, CA-RIV-6932, CA-RIV-6933, CA-RIV-6934, CA-RIV-6935, CA-RIV-6937, CA-RIV-6938, CA-RIV-6939, CA-RIV-6940, CA-RIV-6941, CA-RIV-6942, CA-RIV-6943, CA-RIV-6944, CA-RIV-6945, CA-RIV-6952, CA-RIV-6953, CA-RIV-6954, CA-RIV-6955, CA-RIV-6956, CA-RIV-6957, CA-RIV-6958, CA-RIV-6959, CA-RIV-6960, CA-RIV-6961, CA-RIV-6962, CA-RIV-7378, CA-RIV-9529, CA-RIV-9774) in the project vicinity and 11 individual investigation reports for the portion of the project area within Riverside County.

A total of 23 historic sites are located within the project APE, that is, within 50 feet of the plant site and gas pipeline alignments. Of these, four linear historic sites, CA-RIV-4768H/ CA-SBR-7168H, CA-RIV-4787H/CA-SBR-7169H, CA-SBR-6847H, and CA-RIV-9774, will be crossed by construction of the gas pipeline. Three of these sites, CA-RIV-4768H/ CA-SBR-7168H, CA-RIV-4787H/ CA-SBR-7169H, and CA-SBR-6847H have been previously determined to be eligible for nomination to the NRHP and/or CRHP. These historic sites represent linear features, an active water canal, and two active rail lines.

All four of these sites will be completely avoided by project design. The rest of the sites are late 19th and early 20th century homes. None of these sites are considered significant, and

none will be directly or indirectly impacted by construction of the gas pipeline, as the pipeline will be located in a buried trench and construction activities will take place entirely within existing disturbed roadway rights-of-way.

No other known city, county, state and/or federal historically or architecturally significant structures or landmarks are located in or adjacent to the project. One point of historical interest, CA-RIV-9529, is noted adjacent to the project. This site was completely destroyed in 1915 and no longer physically exists. A description of all these sites relative to the project component is provided below.

Each of these previously-recorded sites within the project APE is described in Table 8.3-2.

TABLE 8.3-2
Impacts to Cultural Resources from the Proposed Project—Sites within APE (50' of centerline of gas pipeline, footprint of power plant)

Site	Site Description	NRHP Eligibility	Impacts	Mitigation
Highgrove Plant Site				
None Present	—	—	None	No mitigation required
Gas Pipeline Alignments				
CA-RIV-6925	Single-story Vernacular wood-frame cottage. 971 Center Street	Not Eligible	None	No mitigation required
CA-RIV-6927	Colonial Revival style home (moved from its original location). 1079 Center Street	Not Eligible	None	No mitigation required
CA-RIV-6928	Two-story vernacular ranch house. 1112 Center Street (moved from its original location)	Not Eligible	None	No mitigation required
CA-RIV-6929	Single-story wood-frame cottage. 1142 Center Street	Not Eligible	None	No mitigation required
CA-RIV-6931	Gothic Revival wood-frame church. Center Street and Prospect Avenue	Not Eligible	None	No mitigation required
CA-RIV-6934	Two-story mixed-style Victorian home. 227 Commercial	Not Eligible	None	No mitigation required
CA-RIV-6940	Single-story California Ranch style home. 900 Marlborough	Not Eligible	None	No mitigation required
CA-RIV-6943	Our Lady of Guadalupe Church. 209 Pacific Avenue	Not Eligible	None	No mitigation required
CA-RIV-6952	Two-story Vernacular wood-frame home. 391 Prospect Avenue	Not Eligible	None	No mitigation required

TABLE 8.3-2
Impacts to Cultural Resources from the Proposed Project—Sites within APE (50' of centerline of gas pipeline, footprint of power plant)

Site	Site Description	NRHP Eligibility	Impacts	Mitigation
CA-RIV-6953	Single-story bungalow style home. 422 Prospect Ave	Not Eligible	None	No mitigation required
CA-RIV-6954	Vernacular wood-frame cottage. 430 Prospect Avenue	Not Eligible	None	No mitigation required
CA-RIV-6955	Single-story Vernacular wood-frame home. 456 Prospect Avenue	Not Eligible	None	No mitigation required
CA-RIV-6956	Two-story mixed-style Victorian home. 466 Prospect Avenue	Not Eligible	None	No mitigation required
CA-RIV-6957	Single-story Vernacular wood-frame home. 474 Prospect Avenue	Not Eligible	None	No mitigation required
CA-RIV-6958	Single-story Vernacular style home. 484 Prospect Avenue	Not Eligible	None	No mitigation required
CA-RIV-6959	Single-story mixed-style Victorian home. 510 Prospect Avenue	Not Eligible	None	No mitigation required
CA-RIV-6960	Mixed-style Victorian home. 558 Prospect Avenue	Not Eligible	None	No mitigation required
CA-RIV-9529	Point of Historical Interest. Highgrove Hydroelectric Plant destroyed by fire in 1915	Site previously destroyed	None	No mitigation required
CA-RIV-9774	Southern Pacific Railroad, now the Union Pacific line	Not Eligible	Project Design Avoids Impact—Directional Drill Beneath Site	No mitigation required
CA-RIV-13535	Two-story Craftsman style home. 1793 Chicago	Not Eligible	None	No mitigation required
CA-RIV-4768H/ CA-SBR-7168H	Gage Canal	Eligible	Project Design Avoids Impact—Directional Drill Beneath Site	No mitigation required
CA-RIV-4787H/ CA-SBR-7169H	Riverside-Warm Creek Canal	Eligible	Project Design Avoids Impact—Directional Drill Beneath Site	No mitigation required

TABLE 8.3-2
Impacts to Cultural Resources from the Proposed Project—Sites within APE (50' of centerline of gas pipeline, footprint of power plant)

Site	Site Description	NRHP Eligibility	Impacts	Mitigation
CA-SBR-6847H	Railroad tracks associated with Atchison Topeka and Santa Fe Railroad system	Eligible	Project Design Avoids Impact—Directional Drill Beneath Site	No mitigation required

8.3.3.5.3 Native American Consultation

CH2M HILL contacted the NAHC by letter on January 20, 2005, requesting information about traditional cultural properties such as cemeteries and sacred places in the project area. The NAHC responded on February 9, 2005, with a list of Native Americans interested in consulting on development projects (see Appendix 8.3A). Each of these individuals/groups was contacted by letter and follow-up phone calls were made (a summary table as of 4/17/04 is provided in Appendix 8.3A). The NAHC record search of the Sacred Lands file failed to indicate the presence of Native American cultural resources in the immediate project area. The record search conducted at the Archaeological Information Center and the Eastern Information Center of the CHRIS also failed to indicate the presence of Native American traditional cultural properties.

8.3.4 Environmental Analysis

No historic or archaeological sites were recorded or otherwise discovered to be present within the direct area of impact of the Plant site and associated gas pipeline alignment alternatives.

Four linear historic sites, CA-RIV-4768H/CA-SBR-7168H, CA-RIV-4787H/CA-SBR-7169H, CA-SBR-6847H, and CA-RIV-9774, will be crossed by construction of the gas pipeline. Three of these sites, CA-RIV-4768H/CA-SBR-7168H, CA-RIV-4787H/ CA-SBR-7169H, and CA-SBR-6847H have been previously determined to be eligible for nomination to the NRHP and/or CRHP. All four of these sites will be completely avoided by project design. The rest of the sites will not be impacted by the project and no further work is recommended.

It is considered highly unlikely that presently undetected archaeological sites could be affected by the proposed project.

8.3.4.1 Highgrove Plant Site and Construction Laydown Area

The field survey of the proposed plant site and laydown area resulted in negative findings. No prehistoric or historic archaeological remains were detected from surface examination of exposed soils. No historically or architecturally significant buildings or structures are present within the area of direct impact. The site has been heavily modified, as large holding tank structures associated with the former Highgrove Generating Station were located here. There will be no impact to cultural resources as a result of construction at the Plant site.

8.3.4.2 Natural Gas Supply Lines

Installation of underground gas pipeline requires excavation of trenches that would be several feet wide and deep. Trench excavations and all associated construction activity will take place within existing city streets, within disturbed rights-of-way. Project design calls for directional drilling and other construction methods that will completely avoid linear cultural resources sites CA-RIV-4768H/CA-SBR-7168H, CA-RIV-4787H/CA-SBR-7169H, CA-SBR-6847H, and CA-RIV-9774. Construction confined within the existing city streets will not affect the historic built environment.

8.3.5 Cumulative Effects

Because the Highgrove Project would not affect known significant cultural resources, it would not likely cause significant cumulative impacts. If construction were to encounter a large, stratified, buried prehistoric archaeological site or discrete filled-in historic period features, the possibility of cumulative impacts would arise because such sites might be highly significant, and many have been destroyed or damaged by agricultural activity and/or commercial/industrial/residential development in the project vicinity. Given the relative low level of impact to such a site that the project would cause, it is also possible that proposed project activities would not lead to significant cumulative impacts, depending on the extent of project impact to any such discovered archaeological deposits. Any potential impact to an unknown site would be minimized by a stop-work procedure if a site were uncovered. No impacts on architectural resources are expected to occur.

8.3.6 Mitigation Measures

Although significant archaeological and historical sites were not found during project field survey, it is possible that subsurface construction could encounter buried archaeological remains. For this reason, the Applicant proposes to implement measures to mitigate any potential adverse impacts that could occur if there were an inadvertent discovery of buried cultural resources. 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; (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.

8.3.6.1 Designated Cultural Resources Specialist

The project owner will retain a designated CRS who will be available during the entire construction period to inspect and evaluate any finds of buried archaeological resources that might occur during construction. 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 all construction 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 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.

8.3.6.2 Construction Worker Sensitivity Training

The project owner will prepare a construction worker sensitivity training program to ensure implementation of procedures to follow in the event that cultural resources are discovered during construction. This training will be provided 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 will describe the specific steps that will be taken in the event of an unanticipated discovery of cultural material, including human remains. It 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.

8.3.6.3 Monitoring

The project owner will retain a qualified archaeologist to monitor initial clearing at the plant site. If archaeological material is observed by the monitoring archaeologist, ground-disturbing activity will be halted in the vicinity of the find so that its significance (CRHR eligibility) can be determined. If evaluated as significant, mitigation measures (avoidance or data recovery) will be developed in consultation with the CEC.

8.3.6.4 Emergency Discovery

If the archaeological monitor, construction staff, or others identify archaeological resources during construction, they will immediately notify the CRS and the site superintendent, who will halt construction in the immediate vicinity of the find, if necessary. The archaeological monitor or CRS will use flagging tape, rope, or some other means as necessary to delineate the area of the find within which construction 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 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.

8.3.6.5 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 Central 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 will proceed without further delay. If the CRS determines that further information is needed to determine whether the find is significant, the Designated Cultural

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

8.3.6.6 Mitigation Planning

If the CRS and 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 delays. Construction 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.

8.3.6.7 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.

8.3.6.8 Report of Findings

If a data recovery program is planned and implemented during construction, the CRS will prepare a detailed scientific report summarizing results of the excavations to recover data from an archaeological site as a mitigation measure. 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.

8.3.6.9 Inadvertent Discovery of Human Burials

If human remains are found during construction, 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 (MLD), and requests the MLD to inspect the burial and make recommendations for treatment or disposal.

8.3.7 Involved Agencies and Agency Contacts

Table 8.3-3 lists the state agencies involved in cultural resources management for the project and a contact person at each agency. These agencies include the California NAHC and, for federal lands, the California Office of Historic Preservation.

TABLE 8.3-3
Agency Contacts

Issue	Contact	Title	Telephone
Native American traditional cultural properties	Ms. Carol Gaubatz NAHC	Program Analyst	(916) 653-4082
Federal agency NHPA Section 106 compliance	MIlford Wayne Donaldson California Office of Historic Preservation	State Historic Preservation Officer	(916) 653-6624

8.3.8 Permits Required and Schedule

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 (SHPO) and Advisory Council on Historic Preservation (ACHP) 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 were likely to be affected by the project.

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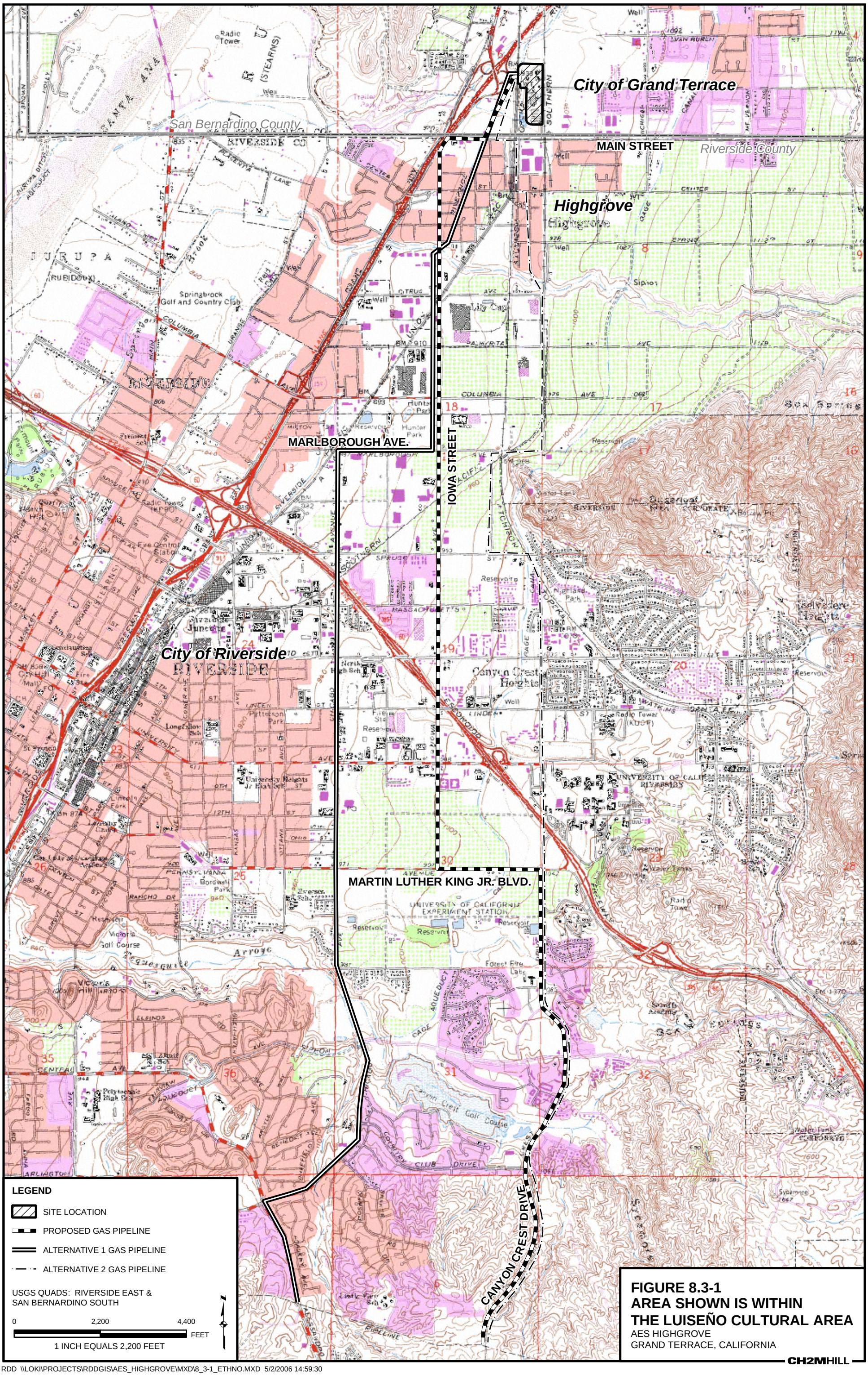

FIGURE 8.3-1
AREA SHOWN IS WITHIN THE LUISEÑO CULTURAL AREA
AES HIGHGROVE
GRAND TERRACE, CALIFORNIA

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8.4 Land Use

8.4.1 Introduction

This subsection provides an inventory of existing and designated land uses in the Study Area and an analysis of the effects of the project on land use. It describes existing land uses and zoning districts in the Study Area and includes a discussion of the discretionary reviews to be initiated by public agencies or completed in the 18 months prior to filing the AFC. It also describes the land use planning and control framework surrounding the project, and local, regional, state, and federal land use plans and permits applicable to the proposed project. This subsection includes an assessment of potential land use impacts of the project, and the project's compatibility with existing and designated land uses and applicable plans and policies. It also presents a discussion of cumulative impacts and provides appropriate mitigation measures.

For purposes of this analysis, the Study Area is defined as those areas within 1 mile of the proposed project site and within 0.25 mile of the proposed linear facilities. Linear facilities include the proposed natural gas supply line and domestic water supply. The transmission line, which will interconnect the project to the electrical grid, will be located on the project site and will not cross any property owned by a third party.

8.4.2 Affected Environment

8.4.2.1 General Description of the Project Site and Vicinity

The Project Site is located at 12700 Taylor Street in the City of Grand Terrace, in southwestern San Bernardino County, California, in an urban area zoned M2 (Industrial). Nearby development consists primarily of commercial and light industrial land uses.

The project site is bounded by Burlington Northern Santa Fe (BNSF) Railway on the west; Taylor Street, Union Pacific Railroad (UPRR), an agricultural field, and a former chrome plating facility to the east; and a heavily disturbed vacant field, used for industrial storage, to the north. Interstate 215 (I-215) is located approximately 600 feet west of the site.

The site is the location of SCE's former Highgrove Generating Station, which included a four-unit 154 MW thermal power plant, fuel oil storage tanks, and electrical substation constructed in the 1950s. As described in Section 2.1.2 Project Site Overview, the proposed new facility will be located on property on which the oil storage tanks were once located (the Tank Farm Property) and a portion of the property on which the existing Generating Station is located (Generating Station Property). The oil storage tanks were removed by SCE before selling the property to its current owner and the Tank Farm Property site is currently vacant. Although the power plant has been decommissioned, the thermal generating units cannot be demolished until substation controls integral to the generating plant are relocated.

Parcels directly to the west and south of the Generating Station Property include the existing SCE Highgrove 115-kV Substation, a parcel known as the Cage Park Property, and a parcel owned by Riverside Highland Water Company. The new AES Highgrove Project power plant will connect to the grid via the Highgrove Substation, which is located directly to the west of the Generating Station Property. The Cage Park Property, to the south of the

Generating Station Property, was part of the Generating Station when the plant was owned and operated by SCE, and includes a basin once used for cooling water discharge, a warehouse used for storage, and an area used for private gatherings. The Cage Park Property is not part of the project site and will not be affected by the project. The property at the corner of Taylor and Main Streets is owned by Riverside Highland Water Company; a well located on the property is used to serve water supply to the City.

When the Generating Station was constructed in the 1950s, the surrounding area was primarily undeveloped. The Generating Station was built with a very narrow buffer zone between the generating equipment and Taylor St and minimal visual screening. The SCE substation on the west side of the property prevents the plant from being moved further away from Taylor St. As a result, the new facility is proposed to be constructed further to the north, allowing a greater setback from Taylor St.

AES currently owns the Generating Station Property (Assessor's Parcel No. 1167-151-67-0000); however, the Tank Farm Property (the south portion of Assessor's Parcel No.1167-151-63-1000) is currently under different ownership, having been sold by SCE to the City of Grand Terrace Redevelopment Agency after removal of the oil storage tanks. Both land owners have an agreement to "exchange" parcels for mutual benefit: AES prefers the new facility be constructed with a greater setback from the road and the Redevelopment Agency prefers land with more developable frontage. Part of the land exchange will include a parcel split and lot line adjustment before an ownership change occurs, as further described in Section 2.1.2. The parcel split is required to legally separate the Tank Farm Property from the larger parcel owned by the Redevelopment Agency (Assessor's Parcel No. 1167-151-63-1000) that includes property north of the Tank Farm Property. The lot line adjustment is necessary to legally move the boundary currently dividing the Generating Station Property and Tank Farm Property to accommodate the proposed Project Site boundaries. Change of ownership is contingent upon the applicant receiving a permit for the new facility, demolition of the existing facility, and any outstanding environmental issues being addressed.

The Tank Farm Property was recently part of a Specific Plan development proposed by the City of Grand Terrace for parcels to the north and northeast of the project site.[1] The City approved an amendment to the Specific Plan in 2005 that removed the Tank Farm Property from the Specific Plan, which resulted in the zoning for the Tank Farm Property reverting to its former M2 Industrial designation (see Appendix 8.4A).

Land uses within a 1-mile radius of the project site include agricultural fields, residences, and Pico Park to the east, and undeveloped open space lands to the north. To the west of the project site, land uses include a motel, a bar, several light industrial businesses, and undeveloped open space lands near the I-215 interchange. Land uses south of Main Street, in Riverside County, include light industrial uses and residences.

The proposed natural gas pipeline will be routed in southern San Bernardino County and northern Riverside County. The proposed alignment will be located in an urban area. The proposed pipeline will be approximately 7 miles long and connect to a Southern California

[1] Refer to the Outdoor Adventures Center Specific Plan (SP04-01) adopted on September 9, 2004.

Gas Company main line south of the site, would be constructed primarily within existing roadways.

Physical landmarks relatively near the City of Grand Terrace include the Santa Ana River, the La Loma Hills, Blue Mountain and the San Bernardino National Forest.

8.4.2.2 Land Use Designations

8.4.2.2.1 General Plan and Specific Plan Land Use Designations

The City of Grand Terrace's General Plan is applicable to the Project Site. This section addresses the General Plan and Specific Plan land use designations within the Study Area established for the project. The Study Area is defined as land located within a 1-mile radius around the project site and within 0.25 mile of the proposed gas line route.

The General Plan for the City of Grand Terrace applies to the Project Site and for a short segment of the proposed gas line as it exits the Project Site. The Plan establishes "Plan Goals," a Land Use Policy Map, and Plan Implementation Tools. The current General Plan Land Use Map, updated in 2003, is shown in Figure 8.4-1. Figure 8.4-2 shows the General Plan land use designations of the power plant site, within a 1-mile radius of the site, along the proposed gas line alignment, and within 0.25 mile of the alignment according to the City of Grand Terrace, the City of Colton, the City of Riverside, and Riverside County (Highgrove Area). Allowable uses for each land use designation shown on Figure 8.4-2 are described in Table 8.4-1. Figures 8.4-1 and 8.4-2 show the Project Site and surrounding properties classified as Industrial.

According to the General Plan, the Plan is intended to be a tool to be used by the City in ongoing decision-making to be implemented through zoning ordinances, capital improvement programs, and other official actions. The primary means of implementing the General Plan is the City's zoning ordinance.

The "Community Development Element" of the General Plan addresses Land Use. The Land Use Policy Map "should be interpreted as a general guide to the amount, type, and relationship of land uses. The Goal for Industrial land uses is as follows: "The City shall promote the development of labor intensive, light, non-polluting industry which is compatible with the present land use pattern." Implementation policies related to the Industrial classification are cited in the General Plan. Conformance with these policies and the zoning ordinance applicable to the Project Site is addressed in Section 8.4.6.3.

General Plan land use designations applicable to the proposed gas line in Riverside County, the City of Riverside, and for the Study Area are shown in Figure 8.4-2, and allowable uses for those designations are described in Table 8.4-1.

Table 8.4-1 also lists Outdoor Adventures Center Specific Plan land use designations that apply to land within the Study Area but are not applicable to the Project Site or land surrounding the linear features.

8.4.2.2.2 Zoning Designations

The Project Site and surrounding parcels within the City of Grand Terrace are currently zoned M2-Industrial or RM-Restricted Manufacturing based on the zoning map for the City of Grand Terrace (Figure 8.4-3). The City Planning Commission has provided a letter

confirming that power generation facilities are a permitted use within the M2 Industrial Zone (refer to Appendix 8.4A).

Once the proposed gas line route crosses from the City of Grand Terrace into Riverside County, applicable zoning designations along the route vary. Line construction in Riverside County will be within existing roadways and aligned in areas that are nearly completely developed into urban land uses; surrounding lands are zoned Industrial, Open Space, Park, Residential, Commercial, Manufacturing, and Public.

Applicable zoning designations for the Project Site and linear features are summarized in Table 8.4-2. The zoning designations for land within the vicinity (Study Area) are shown on Figure 8.4-4.

TABLE 8.4-1
General Plan & Specific Plan Land Use Designations Within the Study Area (1-mile Radius of Power Plant Site and 0.25 mile of Linears)

Designation	Allowable Uses
City of Grand Terrace General Plan	
Industrial	**Light Industrial (LI): Goal:** The City shall promote the development of labor intensive, light, non-polluting industry which is compatible with the present land use pattern. Non-polluting light manufacturing, warehousing, and distribution uses.
Commercial	**General Commercial (GC):** Retail and related commercial uses, including neighborhood shopping centers.
Residential	**Low Density Residential (LDR):** 1 to 5 units per acre; either have been developed previously or are proposed to be developed with traditional single-family homes and/or duplexes, triplexes, and fourplexes.
	Medium Density Residential (MDR): 6 to 12 units per acre; intended for the development of multiple residential unit projects including townhomes, condominiums, and apartments at a density up to 12 units per acre.
Public	**Public (P):** Public facilities including school sites, parks, civic center, and fire station.
Riverside County Highgrove Area Plan	
Industrial	**Light Industrial (LI):** Industrial and related uses including warehousing/ distribution, assembly and light manufacturing, repair facilities, and supporting retail uses.
Commercial	**Commercial Retail (CR):** Local and regional serving retail and service uses.
Residential	**Rural Residential (RR):** 5-acre minimum; single-family residences with a minimum lot size of 5 acres.
	Low Density Residential (LDR): 0.5-acre minimum; single-family detached residences on parcels of 0.5 to 1 acre.
	Medium Density Residential (MDR): 2 to 5 dwelling units per acre; single-family detached and attached residences.
	Medium High Density Residential (MHDR): Single-family attached and detached residences with a density range of 5 to 8 dwelling units per acre.
	High Density Residential (HDR): Single-family attached and detached residences, including townhouses, stacked flats, courtyard homes, patio homes, and zero lot line homes with a density range of 8 to 14 dwelling units per acre.
	Highest Density Residential (HHDR): 20+ dwelling units per acre. Multi-family dwellings; includes apartments and condominiums.

TABLE 8.4-1
General Plan & Specific Plan Land Use Designations Within the Study Area (1-mile Radius of Power Plant Site and 0.25 mile of Linears)

Designation	Allowable Uses
Open Space	**Open Space – Conservation (OS-C):** The protection of open space for natural hazard protection, and natural and scenic resource preservation.
	Open Space – Recreation (OS-R): Recreational uses including parks, trails, athletic fields, and golf courses.
City of Riverside	
Industrial	**Industrial – Light (ILT):** Includes uses such as less intensive manufacturing and warehousing.
	Industrial – General (IGN): Includes such uses as construction yards, heavy manufacturing, and factories.
	Industrial – Business Park (IBP): High quality businesses and industry – strict design standards.
Commercial	**Commercial – Shopping Centers (CSC):** Regional, community, and neighborhood shopping centers.
	Commercial – Business and Office (CBO): Moderate intensity office, indoor commercial uses, and visitor commercial.
Office	**Office – Low Rise (OLR):** One- to three-story professional office.
	Mixed Use – Office Emphasis (MXO): Predominantly office and commercial with some residential use.
Residential	**Residential – Hillside (RHS):** Residential development in hillsides with slopes over 15 percent.
	Residential – Low Density (RLD): Single-family houses on moderately large lots.
	Residential – Medium Density (RMD): Single-family houses on standard urban lots.
	Residential – Medium High Density (RMH): Predominantly low density apartments, duplexes, or cluster development.
	Residential – High Density (RHD): Apartments.
Public	**Public Facilities and Institutions (PFI):** Includes educational facilities, fire stations, libraries, and hospitals.
Park	**Park – Public (PKP):** Publicly owned and managed open space and recreation facilities.
	Park – Other Recreation (PKO): Includes private and public golf courses, equestrian centers, and health clubs.
Open Space	**Natural Open Space (NOS):** Environmentally sensitive open space that includes hillsides, arroyos, and wildlife habitat.
City of Colton	
Industrial	**Light Industrial (LI):** Includes low-intensity packing, assembly, storage, and similar uses that do not adversely affect surrounding residential, office, educational, or commercial land uses.
	Heavy Industrial (HI): Intensive industrial activities such as the Aqua Mansa Industrial Corridor and Enterprise Zone. Includes heavy manufacturing, distribution, assembly, resource extraction, storage, and similar activities not normally compatible in proximity to residential activities.
	Industrial Park (IP): Master planned industrial parks that have a high level of visual amenities and high quality design standards. The minimum parcel size should be 5 acres for any individual industrial park.

TABLE 8.4-1
General Plan & Specific Plan Land Use Designations Within the Study Area (1-mile Radius of Power Plant Site and 0.25 mile of Linears)

Designation	Allowable Uses
Commercial	**General Commercial (GC):** Higher intensity uses such as fast food and sit-down restaurants, offices, auto services, and community-wide and regional retail establishments.
Residential	**Residential Estates (RE):** Up to 2 dwelling units per acre.
	Low Density Residential (LD): Up to 8 dwelling units per acre.
	High Density Residential (HD): Up to 22 units per acre.
City of Grand Terrace Outdoor Adventures Center Specific Plan	
Planning Area 1: Gateway Commercial	A portion of this area is currently developed as commercial/industrial uses including service stations, limited retail commercial, a skating rink, and wholesale distribution businesses. Proposed uses include, but are not limited to: general retail; wholesale trade; service commercial; entertainment-oriented commercial; and restaurants.
Planning Area 2: Hospitality Commercial	This area is intended to provide service and travel-oriented commercial uses anchored by a hotel/motel. Uses within this area may include, but not be limited to: hotels/motels; restaurants; fitness clubs; conference facilities; and service stations. Expansion of the Essco Electric facility in Planning Area 1 is also a potential land use for this Planning Area.
Planning Area 3: Waterfront Recreation Commercial	Primary uses focus on recreation-oriented commercial retail facilities. Planned uses for this area include, but are not limited to: boat and personal watercraft sales, motor sports sales (motorcycles on-road and off-road); recreational vehicles sales; sporting goods retail; outdoor lifestyle retail. Pads will also be available for restaurants.
Planning Area 4: Specialty Retail	This area is intended to provide general retail commercial services designed to support the primary recreation commercial land uses. Typical uses that would be developed in this Planning Area include: general retail; restaurants; and indoor recreation facilities.
Planning Area 5: Vehicle Retail/Support	Uses focus on retail and service commercial activities designed to support recreational vehicles. Planned uses include, but are not limited to: automobile, RV, and boat supply outlets; RV, off-road vehicle, and boat repair and customizing services; and event parking lots.
Planning Area 6: Support Services	Uses include those that do not require freeway visibility and focus on providing support to higher intensity commercial uses. Planned uses include, but are not limited to: RV and boat repair and servicing; RV parking/self-store facilities; and light industrial uses associated with RV and boat accessories and support such as warehousing and mail order facilities.
Planning Area 7: Freeway Open Space	Uses focus on providing an open space buffer to the freeway and support services to the commercial activities. Planned uses include, but are not limited to: natural open space; lakes and water features; bicycle trail; and site identification, signage, and monuments.

Source: City of Colton, 1987, 2005a; City of Grand Terrace, 1988, 2003a, 2004; City of Riverside, 1994, 2005a; and Riverside County, 2003a

TABLE 8.4-2
Applicable Zoning Designations for the Project and Study Area

Project Component	Zoning Designation
Project Site, Potable Water Line, and Transmission Line	**City of Grand Terrace:** M2 Industrial
Proposed Gas Line	**City of Grand Terrace:** M2 Industrial **Riverside County:** C-1/C-P General Commercial; C-P-S Scenic Highway Commercial; C-O Commercial Office **City of Riverside:** MP Manufacturing Park Zone; C-1-A Community Shopping Center Zone; C-2 Restricted Commercial Zone; C-3 General Commercial Zone; RO Restricted Office Zone; RA Residential Agricultural Zone; RC Residential Conservation Zone; R-1-65 Single Family Residential Zone; R-1-80 Single Family Residential Zone; R-3 Multiple Family Residential Zone; Official Zone, Water Course
Balance of Study Area	**City of Grand Terrace:** M2 Industrial; MR Restricted Manufacturing; C2 General Commercial; CM Commercial Manufacturing; BRSP-GC BRSP-General Commercial; BRSP-VC BRSP-Village Commercial; R-1-7.2 Single Family Residential; R1-20 V. Low Density Single Family; R2 Low Medium Density Residential; R3 Medium Density Residential; PUB Public Facilities **City of Colton:** M1 Light Industrial; M2 Heavy Industrial; IP Industrial Park; C2 General Commercial; RE Residential Estates; R1 Single Family Residential; R3 Multiple-Family Residential **City of Riverside:** MP Manufacturing Park Zone; M-1 Light Manufacturing Zone; M-2 General Manufacturing Zone; C-1-A Community Shopping Center Zone; C-2 Restricted Commercial Zone; C-3 General Commercial Zone; RO Restricted Office Zone; RA Residential Agricultural Zone; RC Residential Conservation Zone; R-1-65 Single Family Residential Zone; R-1-80 Single Family Residential Zone; R-3 Multiple-Family Residential Zone; O Official Zone; WC Water Course Zone **Riverside County:** IP Industrial Park; M-SC Manufacturing – Service Commercial; C-1/C-P General Commercial; C-P-S Scenic Highway Commercial; C-O Commercial Office; R-1, R-1-200, R-1-65 One-Family Dwellings; R-2 Multiple-Family Dwellings; R3 General Residential; R-T Mobilehome Subdivisions and Mobilehome Parks; R-R Rural Residential; A-1-2 1/2 Light Agriculture; SP Specific Plan Zone

Source: City of Colton, 2005b; City of Grand Terrace, 2003b; City of Riverside, 2005b; and Riverside County, undated.

8.4.2.3 Recreation, Scenic, Agricultural, Natural Resource Protection, Natural Resource Extraction, Educational, Religious, Cultural, and Historic Land Uses

One public park[2] is located within one-quarter mile from the proposed power plant site, and 1 recreation center is located within 4 miles of the site. Two preschools, 2 public schools and 1 private school are located within 1 mile of the power plant site. Also, 7 church organizations are located 1 mile from the site. Many areas within Grand Terrace have scenic views of nearby hills and the valley to the north of the City as well as more distant mountain ridges. No cultural, historical, unique, natural resource protection, or natural resource extraction areas are located at the project site or within the study area. Agricultural land uses exist to the east and northeast of the proposed power plant site. Orchards and

[2] Since the Cage Park Property is not a public park, it was not included in this analysis.

agricultural fields are found along portions of the gas line alignment and in areas beyond the 0.25 mile buffer of the proposed gas alignment.

A review of the "Important Farmlands" mapping by the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) indicates that, within the 1-mile buffer around the power plant site, there are lands designated as Urban and Built Up Land and Grazing Land. In addition, there are three types of Important Farmlands mapped within the 1-mile buffer: Prime Farmlands, Farmland of Local Importance, and Farmland of Statewide Importance. The agricultural fields located to the east of the power plant site are mapped as Prime Farmlands and Farmland of Statewide Importance. Along the natural gas pipeline route, 74 percent of the land is classified as Urban and Built Up land. The orchards associated with the U.C. Riverside campus are classified as Prime Farmland, and make up 13 percent of the pipeline length. In addition, there are lands along the proposed pipeline alignment that are designated Other Land (13 percent of the pipeline length).

In addition, the power plant site and gas pipeline alignment are not located in an area that has a Williamson Act contract (California Department of Conservation, 2005).

8.4.3 Future Growth Trends

Land use and growth trends identified for the Study Area are based on approved development projects within the area and include proposals for a new high school, commercial and retail development, and residential area development.

Within the Highgrove area of Riverside County, few relatively small parcels of land exist along the proposed alignment that are undeveloped or not slated for development. Within the City of Riverside area, few relatively small parcels of land exist along the proposed alignment that are undeveloped or not slated for development. Recent discretionary approvals in the vicinity are listed below.

8.4.4 Recent Discretionary Reviews by Public Agencies

Discretionary reviews in the City of Grand Terrace, Riverside County, and the City of Riverside within the past 18 months include:

8.4.4.1 City of Grand Terrace

Recent discretionary reviews by the City of Grand Terrace include:

- Adoption of The Outdoor Adventure Center Specific Plan, including Taylor Street widening and Commerce Way extension
- Development of the planned high school across the street from project site
- Development of the Town Square Shopping Center on Barton between Canal Street and Michigan Avenue

8.4.4.2 Riverside County

A review of County Comprehensive Project Review Agendas from October 2004 through March 2006 include the following projects that are planned in the County:

- Subdivide several parcels
- Legalize an existing auto dealership
- Establish a lumber and wood product storage and distribution facility
- Change the land use designation of a parcel
- Expand facilities at an existing church by adding classes, offices, and meeting areas, eliminating the existing modular classrooms, and enhancing landscaping
- Construct a reservoir facility, which will occupy 1.2 acres of a 12-acre parcel
- Construct a reservoir facility, which will occupy 1.75 acres of a 73.9-acre parcel
- Construct and operate a sewer lift station

8.4.4.3 City of Riverside

A review of City Planning Commission Agendas from October 2004 through March 2006 include the following projects that are planned in the City:

- Design review of a fitness center
- Design review of several residential developments
- Design review of senior citizens housing projects
- Design review of exterior remodeling of office-industrial buildings
- Design review of an educational/gymnasium building and parking facilities
- Design review of a drug store
- Design review of commercial buildings
- Design review of medical office buildings
- Design review to renovate a motel
- Design review for the expansion of a shopping mall
- Subdivide several parcels of land
- Amend the General Plan land use designation of several parcels of land
- Amend several Specific Plans
- Acquisition of land for schools
- Rezoning of several parcels of land
- Conditional use permit to establish a private school

- Conditional use permit and design review to construct fire stations
- Conditional use permit for a carwash and auto detail center
- Conditional use permit to establish a service station and mini mart, to expand an existing service station, and for automotive repair facilities
- Conditional use permit to establish and operate a wireless communications facility
- Conditional use permit to establish a market
- Conditional use permit to establish a religious assembly building
- Conditional use permit to expand an elderly board and care facility
- Conditional use permit to install and operate drive-thru automatic teller machines
- Conditional use permit to establish a vocational school
- Conditional use permit to establish a library
- Conditional use permit to establish a multiple screen movie theater
- Conditional use permit to construct and operate the Riverside Energy Resource Center (96 MW natural gas-fired simple-cycle power plant)
- Conditional use permit to establish an underground booster water pumping station
- Conditional use permit to install a 2,000 gallon aboveground fuel tank
- Conditional use permit and design review of hospital buildings
- Conditional use permit to establish a recreational facility
- Conditional use permit to establish a gymnastic training facility
- Conditional use permit to establish a homeless shelter
- Conditional use permit to establish a precinct police station
- Revised conditional use permits and design review to establish a multiple purpose building, office, and classroom space and to expand a convalescent hospital
- Extension of conditional use permit to develop a manufactured home facility
- Construct fast food restaurants
- Construct an automotive oil change facility
- Several variances related to installation of two freestanding signs, to permit direct alley access to a commercial building, for building height and setbacks, for a dog and cat boarding kennel, and to establish a sign program throughout the university campus

8.4.5 Laws, Ordinances, Regulations, and Standards

This section and Table 8.4-3 lists the types of land use laws, ordinances, regulations, and standards (LORS) that are applicable to the project and the agency contacts at the applicable

agencies. Presented in Section 8.4.6.3 are the General Plan policies that are relevant to the project, and the conformity of the project with those policies.

TABLE 8.4-3
Laws, Ordinances, Regulations, and Standards Applicable to AES Highgrove Project Land Use

LORS	Purpose	AFC Section Explaining Conformance	Agency Contact
City of Grand Terrace General Plan (1988, 2003), and Zoning (2001, 2003)	To guide development in the City of Grand Terrace	8.4.6.3	John Lampe Planner City of Grand Terrace 22795 Barton Road Grand Terrace, CA 92313-5295 (909) 430-2225
City of Riverside General Plan (1994) and Zoning (1994)	To guide development in the City of Riverside	8.4.6.3	Sal Quintanilla Planner City of Riverside Planning Department 3900 Main Street Riverside, CA 92522 (951) 826-5371
Riverside County General Plan and Highgrove Area Plan (2003) and Zoning (2005, 2006)	To guide development in Riverside County	8.4.6.3	John Guerin, Senior Planner Riverside County Transportation and Land Management Agency, Planning Department Riverside County Administrative Center 4080 Lemon Street Riverside, CA 92502-1629 (951) 955-1872

8.4.5.1 Federal

No federal LORS for land use are applicable to the site or project.

8.4.5.2 State

The AFC process is CEQA-equivalent under the Warren-Alquist Act, and therefore, fulfills the requirements of CEQA. CEQA is codified in the California Public Resources Code, Sections 21000-21178.1. Guidelines for implementation of CEQA are codified in the California Code of Regulations (CCR) Sections 15000-15387.

8.4.5.3 Local

8.4.5.3.1 General Plans and Zoning Ordinances

The City of Grand Terrace's General Plan and Zoning Ordinance are the planning documents applicable to the Project Site, as well as the proposed transmission line and water line alignments. The City of Riverside General Plan and the Riverside County General Plan and Highgrove Area Plan are additional planning documents that are applicable to the gas line alternative alignments. The San Bernardino County General Plan and City of Colton General Plan are not directly applicable to the project because the project is not located on unincorporated land within the County or within The City of Colton.

8.4.5.3.2 Related Permits

No local discretionary approvals are required by the City of Grand Terrace (Koontz, 2005). Construction permits will be required by the City of Riverside and Riverside County, and possibly by U.C. Riverside to construct the natural gas pipeline within local roadway.

8.4.6 Environmental Analysis

8.4.6.1 Significance Criteria

Significance criteria for impacts to land use were determined through review of applicable state and local regulations. Because the Warren-Alquist Act is equivalent to CEQA review, the following criteria that were developed from the CEQA Guidelines and the CEQA Checklist are used to evaluate the potential environmental impacts of the project:

- Will the project physically divide an established community?
- Will the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?
- Will the project conflict with any applicable habitat conservation plan or natural community conservation plan?
- Will the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- Will the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

8.4.6.2 Potential Effects on Land Use

8.4.6.2.1 Project Site and Surrounding Area

The proposed power plant constitutes a permitted use in the industrial zoning district and is therefore consistent with the City of Grand Terrace's General Plan and Zoning Ordinance. The power plant would not: physically divide an established community, would not conflict with any applicable habitat conservation plan or natural community conservation plan, would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), and would not involve other changes in the existing environment that could result in the conversion of land to a non-agricultural use.

8.4.6.2.2 Transmission Line, Water Lines, and Natural Gas Pipeline

The proposed transmission line, water line, and natural gas pipeline would not have a significant impact on land uses of the surrounding area. The natural gas supply and potable water supply pipelines would be underground, so would not limit the continued uses of these areas for their currently designated uses. The 600-foot-long transmission line (average length) would connect the proposed power plant to the adjacent SCE substation, and, as it does not cross any property not owned by the Project owner or SCE, would not conflict with existing or future land uses along that proposed alignment.

The proposed transmission line, water line, and natural gas pipeline would not: physically divide an established community, would not conflict with any applicable land use plan, policy, or regulation, would not conflict with a habitat conservation plan or natural community conservation plan**,** would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, and would not result in the conversion of farmland to a non-agricultural use.

8.4.6.3 Compatibility with Plans and Policies

The proposed project is consistent with the goals and policies of applicable plans. Table 8.4-4 provides a summary of the project's conformity with these applicable plans.

The proposed project will not impact or conflict with other nearby land uses within the cities of Grand Terrace or Riverside, or Riverside County. Analyses of the project location and potential impacts from construction and operation indicate it is unlikely that the proposed project would significantly affect any of the species or their critical habitat targeted in the western Riverside County MSHCP.

TABLE 8.4-4
AES Highgrove Project Land Use Conformity with Applicable Plans and Policies

Element/Provision	Conformity?
City of Grand Terrace General Plan	
The General Plan is a tool to be used by the City Planning Commission and City Council in ongoing decision-making. The primary means of implementing the General Plan is the City's zoning ordinance. (City of Grand Terrace General Plan, Page II-2). **Section VI. Community Development Element, Industrial** **Goal:** The City shall promote the development of labor intensive, light, non-polluting industry which is compatible with the present land use pattern. **Implementation Policies:** • Only light non-polluting industrial uses shall be allowed in Grand Terrace. • Industrially designed areas shall include specific "industrial park" type development standards and guidelines. • Buffering to prevent potential land use incompatibilities between industrial areas and other areas shall be given special consideration. Specific features could include increased setbacks, walls, berms, and landscaping.	The proposed power plant is located in an area designated for industrial uses and is compatible with the present land use pattern. On February 22, 2005, the City of Grand Terrace issued a letter specifically indicating that the City determined that power generation facilities are permitted uses within that zone. See Appendix 8.4A. The proposed power plant is not an industrial park type development, so "industrial park" development standards are inapplicable. The development standards applied will be in compliance with the requirements of the M2 zoning ordinance. The project site has been chosen to maximize setback from Taylor Street. Walls and berms are proposed to be constructed along the Taylor Street frontage to provide additional screening for the proposed project. (Refer to the Visual Resources, Section 8.11, for additional information).

TABLE 8.4-4
AES Highgrove Project Land Use Conformity with Applicable Plans and Policies

Element/Provision	Conformity?
City of Riverside General Plan	
Section VII – Growth Management:	
Goal LU 1: To provide for continuing growth within the Riverside General Plan Area, with land uses and intensities appropriately designated to meet the needs of anticipated growth and to achieve the community's goals related to resource conservation, community enhancement, and growth management.	Implementation of the proposed natural gas pipeline would have no effect on the City of Riverside's ability to provide for continuing growth in the City.
Policy LU 1.1: The General Plan Land Use Diagram should identify sufficient locations for residential and non-residential development to accommodate growth anticipated through the year 2010.	Implementation of the proposed natural gas pipeline would have no effect on the City of Riverside's ability to develop and implement its Land Use Diagram.
Policy LU 1.4: In adopting and amending the Land Use Diagram, the City should promote future patterns of urban development and land use that reduce infrastructure construction costs and make better use of existing and planned public facilities.	Implementation of the proposed natural gas pipeline would have no effect on the City of Riverside's ability to promote future patterns of development.
Policy LU 1.7: The City should protect industrially designated areas from encroachment by incompatible uses and from the effects of incompatible uses in adjacent areas. Uses adjacent to planned industrial areas should be compatible with the planned industrial uses and should employ appropriate site design, landscaping, and building design to buffer the non-industrial uses.	Implementation of the proposed natural gas pipeline would have no effect on the City of Riverside's ability to protect industrially designated areas from encroachment by incompatible uses.
Policy LU 1.8: The City Council should protect residentially designated areas from encroachment by incompatible uses and from the effects of incompatible uses in adjacent areas. Uses adjacent to planned residential uses should be compatible with the planned residential uses and should employ appropriate site design, landscaping, and building design to buffer the non-residential uses.	Implementation of the proposed natural gas pipeline would have no effect on the City of Riverside's ability to protect residentially designated areas from encroachment by incompatible uses.
Policy LU 1.9: The City should set minimum property size standards for various types of land uses, particularly when the conversion of residential use is expected to occur as follows: For office or commercial uses – 20,000 square feet and 100 feet of frontage on the primary street serving the site; except in specific areas such as Magnolia Center where the unique character of the area makes the site appropriate for adaptive reuse of an existing building, a minimum lot size of 12,000 square feet is allowable. For industrial or business park use – 40,000 square feet and 100 feet of frontage on the primary street serving the site. For mixed use development – 80,000 square feet and 150 feet of frontage on the primary street serving the site.	Implementation of the proposed natural gas pipeline would have no effect on the City of Riverside's ability to set minimize property size standards for office, commercial, industrial, business park, or mixed use development.

TABLE 8.4-4
AES Highgrove Project Land Use Conformity with Applicable Plans and Policies

Element/Provision	Conformity?
Goal LU 2: To establish the General Plan Land Use Diagram as a key statement of City development policy to be used as a guide for decisions on individual development proposals.	Implementation of the proposed natural gas pipeline would have no effect on the City of Riverside's ability to develop and implement its Land Use Diagram.
Policy LU 2.2: Land development approvals shall be in accordance with prevailing development regulations.	Implementation of the proposed natural gas pipeline would have no effect on the City of Riverside's ability to approve land development proposals.
Policy LU 2.3: The City should not approve amendments to the Land Use Diagram which would reduce the supply of industrially designated land below levels needed to support projected non-residential development during the Plan's time frame.	Implementation of the proposed natural gas pipeline would have no effect on the City of Riverside's ability to approve amendments to the Land Use Diagram.
Goal LU 4: To provide for the appropriate timing of development in accordance with the future land uses designated in the Land Use Element.	Implementation of the proposed natural gas pipeline would have no effect on the City of Riverside's ability to provide for the appropriate timing of development.
Policy LU 4.1: The City should discourage the premature development of non-urbanized areas and should encourage growth first in undeveloped and under-developed areas within, adjacent to, or in close proximity to existing urbanized neighborhoods.	Implementation of the proposed natural gas pipeline would have no effect on the City of Riverside's ability to discourage the premature development of non-urbanized areas.
Policy LU 4.2: The City should prepare its Capital Improvements Program and construct its capital improvement projects to provide adequate public facilities and services to the population and employment levels projected through the year 2010, according to the land uses designated in the Land Use Diagram. The level of service or capacity of public facilities and services should be increased in phases when phasing is more cost effective.	Implementation of the proposed natural gas pipeline would have no effect on the City of Riverside's ability to prepare its Capital Improvements Program and construct its capital improvement projects.
Riverside County General Plan – Highgrove Area Plan	
Community Plan Goals: a. To encourage a varied future pattern of development that will promote greater economic self-sufficiency in Highgrove.	Implementation of the proposed natural gas pipeline would have no effect on Riverside County's ability to encourage a varied future pattern of development.
b. To identify existing and future residential areas with land use and zoning designations that will discourage incompatible development, encourage reinvestment in homes and businesses, and support property values.	Implementation of the proposed natural gas pipeline would have no effect on Riverside County's ability to identify such existing and future residential areas.
c. To enhance the Highgrove community's ability to respond to changing future development conditions through flexible planning policies.	Implementation of the proposed natural gas pipeline would have no effect on Riverside County's ability to enhance the Highgrove community.
d. To recommend future infrastructure improvements necessary to provide for adequate public facilities and services for the Highgrove Community Policy Area.	Implementation of the proposed natural gas pipeline would have no effect on Riverside County's ability to recommend future necessary infrastructure improvements.

TABLE 8.4-4
AES Highgrove Project Land Use Conformity with Applicable Plans and Policies

Element/Provision	Conformity?
e. To help sustain Highgrove's rural character as the community develops in the future.	Implementation of the proposed natural gas pipeline would have no effect on Riverside County's ability to sustain Highgrove's rural character.
f. To safeguard the Box Springs Mountains and Springbrook Wash from development impacts that would diminish their value as fish and wildlife habitat or as natural areas for public enjoyment.	Implementation of the proposed natural gas pipeline would have no effect on Riverside County's ability to safeguard the Box Springs Mountains and Springbrook Wash from development impacts.
HAP 1.4: Development applications for commercial or industrial projects at locations designated for residential uses within the Highgrove Area Plan Land Use Plan must satisfy the following requirements, in addition to those specified under the "Commercial" or "Industrial" policies described in the Local Land Use Policies section. a. The project shall be buffered with landscaping, berms, additional setbacks, or other features necessary to reduce the impacts on adjacent residential uses. b. Approval of a General Plan amendment is required.	The proposed natural gas pipeline would be installed underground within roadway easements and, therefore, would have no effect on nearby residential land uses.
HAP 2.1: The Land Use Plan associated with the Highgrove Area Plan determines the location, extent, density, and intensity of land uses.	The proposed natural gas pipeline would be installed underground within roadway easements and, therefore, would have no effect on the location, extent, density, and intensity of land uses.
HAP 2.2: The Highgrove Area Plan constitutes a portion of the Riverside County General Plan. In addition to the Highgrove Community Plan Area, all countywide policies, objectives, programs, and standards in the Riverside County General Plan apply in the determination of General Plan consistency for a land use development proposal.	Conformity of the proposed natural gas pipeline is discussed below under Riverside County General Plan.
HAP 5.5: All MDR, MHDR, HDR, VHDR, HHDR land uses require a full range of public services, as described in the Land Use Element of the Riverside County General Plan, including adequate and available circulation, water service from the City of Riverside Water Utilities OR Riverside Highland Water Company's distribution system (as applicable), sewage collection, and utilities including electricity and telephone (and, usually, natural gas and cable television) service.	The proposed natural gas pipeline would provide natural gas to a proposed power plant, to be located in the City of Grand Terrace that would provide electricity to nearby land uses.
HAP 7.2: Commercial development requires a full range of public services, including adequate and available circulation (including location on a paved road), community water service, sewage disposal, and utilities. Use of subsurface sewage disposal systems may be authorized by the County of Riverside; however, commercial facilities may be required to be connected to a community (District) sewer system if the County of Riverside determines that such connection is necessary to provide for the public life and property.	The proposed natural gas pipeline would provide natural gas to a proposed power plant, to be located in the City of Grand Terrace that would provide electricity to nearby land uses.

TABLE 8.4-4
AES Highgrove Project Land Use Conformity with Applicable Plans and Policies

Element/Provision	Conformity?
Riverside County General Plan	
Land Use Element: **LU 2.1:** Accommodate land use development in accordance with the patterns and distribution of use an density depicted on the General Plan Land Use Map and the Area Plan Land Use Maps, in accordance with the following: a. Provide a land use mix at the countywide and area plan levels based on projected need and supported by evaluation of impacts to the environment, economy, infrastructure, and services. b. Accommodate a range of community types and character, from agricultural and rural enclaves to urban and suburban communities. c. Provide for a broad range of land uses, intensities, and densities, including a range of residential, commercial, business, industry, open space, recreation, and public facilities uses. d. Concentrate growth near community centers that provide a mixture of commercial, employment, entertainment, recreation, civic, and cultural uses to the greatest extent possible. e. Concentrate growth near or within existing urban and suburban areas to maintain the rural and open space character of Riverside County to the greatest extent possible. f. Site development to capitalize upon multi-modal transportation opportunities and promote compatible land use arrangements that reduce reliance on the automobile. g. Prevent inappropriate development in areas that are environmentally sensitive or subject to severe natural hazards.	Implementation of the proposed natural gas pipeline would have no effect on Riverside County's ability to accommodate land use development according to the County's requirements.
LU 3.1: Accommodate land use development in accordance with the patterns and distribution of use and density depicted on the General Plan Land Use Maps and the Area Plan Land Use Maps in accordance with the following concepts: a. Accommodate communities that provide a balanced mix of land uses, including employment, recreation, shopping, and housing. b. Assist in and promote the development of infill and underutilized parcels which are located in Community Development areas, as identified on the General Plan Land Use Map. c. Promote parcel consolidation or coordinated planning of adjacent parcels through incentive programs and planning assistance.	Implementation of the proposed natural gas pipeline would have no effect on Riverside County's ability to accommodate land use development according to the County's requirements.

TABLE 8.4-4
AES Highgrove Project Land Use Conformity with Applicable Plans and Policies

Element/Provision	Conformity?
d. Create street and trail networks that directly connect local destinations, and that are friendly to pedestrians, equestrians, bicyclists, and others using non-motorized forms of transportation.	
e. Re-plan existing urban cores and specific plans for higher density, compact development as appropriate to achieve the RCIP Vision.	
f. In new towns, accommodate compact, transit-adaptive infrastructure (based on modified standards that take into account transit system facilities or street network).	
g. Provide the opportunity to link communities through access to multi-modal transportation systems.	
LU 6.1: Require land uses to develop in accordance with the General Plan and areas plans to ensure compatibility and minimize impacts.	Implementation of the proposed natural gas pipeline would have no effect on Riverside County's ability to require that land uses develop in accordance with its General Plan.
LU 6.4: Retain and enhance the integrity of existing residential, employment, agricultural, and open space areas by protecting them from encroachment of land uses that would result in impacts from noise, noxious fumes, glare, shadowing, and traffic.	Implementation of the proposed natural gas pipeline would have no effect on Riverside County's ability to retain and enhance the integrity of existing land uses.

Sources: City of Grand Terrace, 1988, 2003a, 2004; City of Riverside, 1994, 2005a; Riverside County, 2003a, 2003b.

8.4.7 Cumulative Impacts

The CEQA Guidelines (Section 15355) define cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."

The CEQA Guidelines further note that:

> The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time.

As discussed above, the proposed project is consistent with the City of Grand Terrace's, City of Riverside's, and Riverside County's goals, objectives, and policies for industrial development. The proposed power plant would be sited in an area zoned for such purposes on land that was previously developed into a similar use. The proposed project is consistent with the current land use designation and zoning district for the site. Potential impacts to other environmental resources are discussed throughout this AFC, and are mitigated where impacts are deemed to be significant.

In addition, the proposed project would not physically divide an established community, it would not conflict with a habitat conservation plan or natural community conservation plan, it would not result in the conversion of Prime or Unique Farmland or Farmland of Statewide Importance, and it would not convert any agricultural land. The project (power plant site and linears) is being sited within a highly urbanized area, one that is nearly completely built out. Therefore, project development would not contribute to significant cumulative land use impacts.

8.4.8 Mitigation Measures

Because no significant impacts have been identified, no mitigation is required.

8.4.9 References

California Department of Conservation. 2005. California Williamson Act GIS Data Map. Printed May 23.

City of Colton. 1987. Final Preliminary General Plan for the City of Colton. May 5.

City of Colton. 2005a. City of Colton General Plan Map. Updated June 22.

City of Colton. 2005b. City of Colton Zoning Map. Updated August 10.

City of Grand Terrace. 1988. City of Grand Terrace General Plan. Adopted December 8.

City of Grand Terrace. 2003a. City of Grand Terrace General Plan Land Use Map. March.

City of Grand Terrace. 2003b. City of Grand Terrace Zoning Map. March.

City of Grand Terrace. 2004. Outdoor Adventures Center Specific Plan for the City of Grand Terrace. Approved September 9.

City of Grand Terrace. 2005. Ordinance No. 215. Adopted on June 9.

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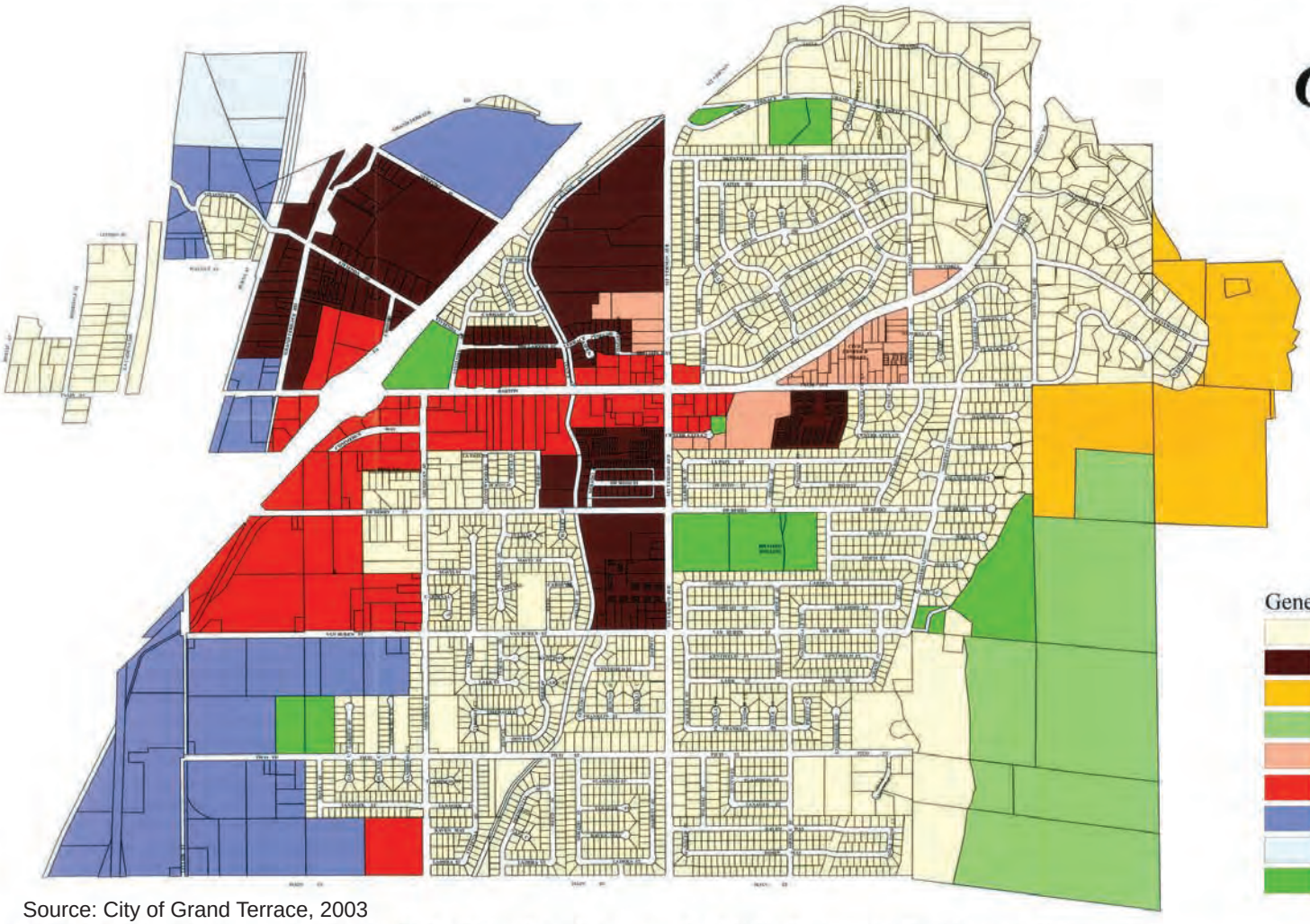
General Plan Land Use Map

City of Grand Terrace



Community
Development Department
March 2003

750 500 250 0 500 1000
Scale: 1" = 500'

General Plan Land Use:
- Low Density Residential
- Medium Density Residential
- Hillside-Low Density Residential
- Hillside-Open Space
- Office Commercial
- General Commercial
- Industrial
- Floodplain-Industrial
- Public

Source: City of Grand Terrace, 2003

This Map is for reference only. For detailed information, please consult with the Community Development Department.

FIGURE 8.4-1
CITY OF GRAND TERRACE GENERAL PLAN MAP
AES HIGHGROVE
GRAND TERRACE, CALIFORNIA

CH2MHILL