4.4 CULTURAL RESOURCES

The following discussion focuses on the project's relationship to existing cultural resources, potential impacts to these resources and mitigation measures required to reduce impacts to below a level of significance. A residual impact statement has been included in order to characterize the level of significance of impacts after mitigation measures have been applied. Because of the sensitivity of archaeological resources, in accordance with the CEQA Guidelines Section 15120(d), no information about the precise location of archaeological sites is included in this EIR.

Historical resources are prehistoric and historic archaeological period sites, structures, districts, or other places with evidence of human activity that is considered significant to a community, culture, or ethnic group. The data in this section is summarized from the *Cultural Resource Survey for the Carlsbad Seawater Desalination Plant Project* prepared by Gallegos & Associates in 2004. The Gallegos report included a cultural resource literature review, record search, and field survey for the desalination plant site and portions of the offsite project elements. The record search was conducted for the desalination plant site and offsite project elements, and the field survey was limited to those portions of the project elements that had not been previously surveyed.

For reference purposes, the 2004 cultural resource report for the project is included as APPENDIX F to this EIR. Methods used in the preparation of this report are contained therein.

Paleontological resources are also analyzed in this section. Paleontology is the science dealing with the life of past geologic periods as known from fossil remains.

4.4.1 Existing Conditions

Background - Prehistory

The body of current research of prehistoric occupation in San Diego County recognizes the existence of at least two major cultural traditions, discussed here as Early Period/Archaic and Late Period, based upon general economic trends and material culture. Within San Diego County, the Archaic generally spans the period from 10,000 to 1,300 years ago, while the Late Period spans from 1,300 years ago to historic contact. The Historic Period covers the time from Spanish contact to present.

Early Period/Archaic

The Early Period/Archaic, for this discussion, includes the San Dieguito and La Jolla complexes, which are poorly defined, as are the interrelationship between contemporaneous inland, desert, and coastal assemblages. Initially believed to represent big game hunters, the San Dieguito are better typified as a hunting and gathering society. These people had a relatively diverse and non-specialized economy in which relatively mobile bands accessed and used a wide range of plant, animal, and lithic resources. Movement of early groups into San Diego County may have been spurred by the gradual desiccation of the vast pluvial lake system that dominated inland basins and valleys during the last altithermal period. This hypothesis is supported by the similarity between Great Basin assemblages and those of early Holocene Archaic sites in San Diego County. Several researchers recognized the regional similarity of artifacts and grouped these contemporaneous complexes under the nomenclature of either the Western Pluvial Lakes Tradition or the Western Lithic Co-tradition.

The origin of coastal populations and subsequent interaction between the coastal population and Great Basin/desert groups is a subject of some debate. Whatever their origin, the first occupants immediately exploited the coastal and inland resources of plants, animals, shellfish, and fish.

The development of a generalized economic system indicates that the San Dieguito and related groups can be placed within the general Archaic pattern. Archaic cultures occur within North America at slightly different times in different areas, but are generally correlated with local economic specialization growing out of the earlier Paleo-Indian Tradition. Archaic cultures are often represented by more diverse artifact assemblages and more complex regional variation than occur in Paleo-Indian traditions. This is generally thought to have resulted from the gradual shift away from a herd-based hunting focus to a more diverse and area specific economy.

The earliest sites are found near coastal lagoons and river valleys of San Diego County. These sites are the Harris Site (CA-SDI-149), Agua Hedionda Sites (CA-SDI-210/UCLJ-M-15 and CA-SDI-10695), Rancho Park North (CA-SDI-4392/SDM-W-49), and Remington Hills (CA-SDI-11069), dating from 9,500 to 8,000 years B.P. The northern San Diego County coastal lagoons supported large populations, circa 6,000 years ago, as shown by the numerous radiocarbon-dated sites adjacent to these lagoons. After 3,000 years ago, there is a general absence of archaeological sites in north San Diego County to circa 1,500 years ago. This reduction in number of archaeological sites can be attributed to the siltation of coastal lagoons and depletion of shellfish and other lagoon resources. Archaeological sites dated to circa 2,000 years ago are found closer to San Diego Bay, where shellfish were still abundant and may well represent what can be considered the end of the La Jolla Complex.

The La Jolla and Pauma complexes, which are identified as following the San Dieguito Complex, may simply represent seasonal or geographic variations of the somewhat older and more general San Dieguito Complex. Inland La Jolla occupation sites have been reported in transverse valleys and sheltered canyons and were termed "Pauma Complex" in the 1950s and 1960s. Pauma Complex sites by definition have a predominance of grinding implements (manos and metates), lack shellfish remains, have greater tool variety, seem to express a more sedentary occupation, and have an emphasis on both gathering and hunting.

Archaic sites from 10,000 to 1,300 years ago within San Diego County include coastal habitation sites, inland hunting and milling camps, and lithic quarry sites. Material cultural assemblages during this long period are remarkably similar in many respects. These deposits may well represent a process of relative terrestrial economic stability and presumably slow cultural change. Though various culture traits developed or disappeared during the long span of 10,000 to 1,300 years ago, there is a clear pattern of cultural continuity during this period.

Late Period

During the Late Period (circa 1,300 years ago to historic contact), a material culture pattern similar to that of historic Native Americans first becomes apparent in the archaeological record. The economic pattern during this period appears to be one of more intensive and efficient exploitation of local resources. The prosperity of these highly refined economic patterns is well evidenced by the numerous Kumeyaay/Diegueño and Luiseño habitation sites scattered over San Diego County. This increase in Late Period site density probably reflects better preservation of the more recent archaeological record and a gradual population increase within the region. Artifacts and cultural patterns reflecting this Late Prehistoric pattern include small projectile points, pottery, the establishment of permanent or semi-permanent seasonal village sites, a proliferation of acorn milling sites in the uplands, the appearance of obsidian from Obsidian Butte, and interment by cremation.

Many of the Late Prehistoric culture patterns in southern California were shared with groups along the eastern periphery of the region. Even in the most recent periods, the Native Americans of southern California incorporated many elements of their neighbors' culture into their own cultures. This transference and melding of cultural traits between neighboring groups makes positive associations of archaeological deposits with particular ethnographically known cultures difficult. This is particularly true of the groups within San Diego County. Though significant differences exist between Luiseño and Kumeyaay/Diegueño cultures (including linguistic stock), the long interaction of these groups during the Late Period resulted in the exchange of many social patterns. Archaeologists must rely heavily on ethnographic accounts of group boundaries as recorded during the historic period, although it is not known how long these boundaries had

been in place or the validity of these boundaries as presently reported. The project area, including off-site pipelines, falls within Luiseño territory.

As a result of contact with Spanish, Mexican and American settlers, Native American populations were decimated by resettlement and disease. Presently, Native Americans are found throughout San Diego County, especially within the 17 San Diego County reservations.

Historical Background

An abbreviated history of Spanish, Mexican and American settlement in San Diego County is presented for the purpose of providing a background for discussion of the presence, chronological significance and historical relationship of historical resources within the project area. The history of San Diego County is commonly presented in terms of Spanish, Mexican, and American political domination. A discussion of historic land use and occupation under periods of political rule by people of European and Mexican origin is justified on the basis of characteristics associated with each period, when economic, political, and social activities were influenced by the prevailing laws and customs. Certain themes are common to all periods, such as the development of transportation, settlement, and agriculture.

Spanish Period (1769-1821)

The Spanish Period represents: exploration, establishment of the San Diego Presidio and the San Diego and San Luis Rey missions, the introduction of horses, cattle, and agricultural goods, the introduction of foreign pathogens to the indigenous populations, and a new method of building construction and architectural style. Spanish influence continued after 1821, when California became a part of Mexico. Under Mexican rule, the missions continued to operate as in the past, and laws governing the distribution of land were also retained for a period of time.

Mexican Period (1821-1848)

The Mexican Period includes the initial retention of Spanish laws and practices until shortly before secularization of the missions in 1834, a decade after Spanish rule. Although several grants of land were made prior to 1834, vast tracts of land were dispersed through land grants offered after secularization. Cattle ranching prevailed over agricultural activities and the development of the hide and tallow trade increased during the early part of this period. The Pueblo of San Diego was established and transportation routes were expanded. The Mexican Period ended as a result of the Mexican-American War.

American Period (1848 to Present)

The American Period began when Mexico ceded California to the United States under the Treaty of Guadalupe Hidalgo. Terms of the treaty brought about the creation of the Lands Commission in response to the Homestead Act of 1851 that was adopted as a means of validating land ownership throughout the state through settlement of land claims. Few Mexican ranchos remained intact because of legal costs and lack of sufficient evidence to prove title claims. Much of the land that once constituted rancho holdings became available for settlement by immigrants to California. The influx of people to California and the San Diego region was the result of various factors that included the discovery of gold in the state, the conclusion of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of the county as an agricultural area supported by roads, irrigation systems, and connecting railways. The growth and decline of towns occurred in response to an increased population and the economic boom and bust cycle in the late 1800s.

Record Search Results

Gallegos & Associates conducted a record search for the entire study area, including the desalination plant site and offsite project elements *(Figure 4.4-1).* The record search revealed that no historic structures were identified within the study area (Gallegos 2004).

The literature review conducted for the project identified 80 studies conducted within or immediately adjacent to the plant site and offsite pipeline alignments. Based on the literature review and record search results, 30 cultural resources have been previously recorded adjacent to or within the project area, and therefore have the potential to be impacted by construction of the project. These cultural resources were typed by Gallegos (2004) as:

- 10 habitation sites
- six artifact scatters
- four historic resources
- five lithic scatters
- four milling stations
- six shell scatters

Table 4.4-1 lists these 30 sites and provides summary descriptions of each. Detailed descriptions of the sites can be found in APPENDIX F.

Figure 4.4-1

TABLE 4.4-1
CULTURAL RESOURCES WITHIN PROJECT STUDY AREA

Location	Cultural Resource Site Number	Site Type	Site Status	Site Comment	Level of Project Impact	Mitigation Measures[1]
Desalination plant site	6751	Shell Scatter	Unknown		Significant	Construction monitoring
Desalination plant site, Faraday/Melrose Route	16885	Shell Scatter	Portion of site tested identified as not significant; remaining portion has unknown site status		Significant	Construction monitoring
Faraday/Melrose Route	5117	Milling	Destroyed		Less than Significant	None required
Faraday/Melrose Route	5231	Artifact Scatter	Significant		Less than Significant	None required
Faraday/Melrose Route	5783	Historic	Unknown	This site is the homeplace of Matthew Kelly, Jr., and is located along the Rancho de los Quiotes to Mission San Luis Rey trail	Significant	Construction monitoring
Faraday/Melrose Route	5788	Historic	Destroyed	Homeplace of Brearley family	Less than Significant	None required
Faraday/Melrose Route Route	5792	Historic	Unknown	Native American Trail from Mission San Luis Rey through the San Marcos plains to the Cuyamaca Mountains	Less than Significant	None required
Faraday/Melrose Route	5793	Historic	Unknown	Traditional Rancho de los Quiotes to Mission San Luis Rey trail; site not located during 1988 survey	Less than Significant	None required
Faraday/Melrose Route	6092	Milling	Not significant		Less than Significant	None required
Faraday/Melrose Route	6133	Artifact Scatter, Loci A, B, & C	Loci A & B identified as not significant, Locus C identified as significant	1998 data recovery conducted for Locus C only	Significant	Construction monitoring
Faraday/Melrose Route	6134	Artifact Scatter	Significant		Significant	Avoidance or data recovery, and monitoring
Faraday/Melrose Route Route	7169	Shell Scatter	Unknown		Less than Significant	None required
Faraday/Melrose Route	7229	Shell Scatter	Unknown		Significant	Construction monitoring
Faraday/Melrose Route	9041	Lithic Scatter	Not Significant		Less than Significant	None required
Faraday/Melrose Route	8303	Habitation, Loci A, B, C	Significant	CA-SDI-6832 and CA-SDI-8688 subsumed under CA-SDI-8303	Significant	Construction monitoring

TABLE 4.4-1
CULTURAL RESOURCES WITHIN PROJECT STUDY AREA

Location	Cultural Resource Site Number	Site Type	Site Status	Site Comment	Level of Project Impact	Mitigation Measures[1]
Faraday/Melrose Route	9041	Lithic Scatter	Not Significant		Less than Significant	None required
Faraday/Melrose Route and Avenida Encinas Route	10671	Artifact Scatter	Significant/unknown		Significant	Avoidance or data recovery, and construction monitoring
Faraday/Melrose, Avenida Encinas, and Palomar Airport Routes	13008	Habitation	Significant	CA-SDI-6132, CA-SDI-6832, and CA-SDI-10673 were subsumed under site CA-SDI-13008	Significant	Avoidance or data recovery, and construction monitoring
Faraday/Melrose Route	15588	Lithic Scatter	Destroyed	Site first identified during paleontological monitoring	Less than Significant	None required
Faraday/Melrose Route	16048	Habitation	Significant		Less than Significant	None required
Faraday/Melrose Route	16049	Habitation	Significant		Less than Significant	None required
Palomar Airport Route	6135	Habitation	Not Significant		Less than Significant	None required
Palomar Airport Route	6833	Shell Scatter	Not Significant		Less than Significant	None required
Palomar Airport Route	6834	Artifact Scatter	Destroyed		Less than Significant	None required
Palomar Airport Route	8089	Lithic Scatter	Destroyed		Less than Significant	None required
Palomar Airport Route	8797	Habitation	Significant		Significant	Construction monitoring
Palomar Airport Route	9095	Shell Scatter	Not Significant		Less than Significant	None required
Palomar Airport Route	9615	Artifact Scatter	Unknown		Significant	Construction monitoring
Palomar Airport Route	9653	Lithic Scatter	Not Significant		Less than Significant	None required
Palomar Airport Route	15069	Milling Station	Unknown		Significant	Construction monitoring

[1] In cases where construction monitoring is recommended as mitigation, should monitoring reveal that cultural resources are present, testing to determine site significance would be required. If, after the site testing process is conducted, the site(s) is determined to be significant, then additional mitigation would be recommended through avoidance, or through the completion of a data recovery program.

The significance of the 30 sites was determined by Gallegos (2004) as follows:

- 12 sites were identified as not significant (including five sites that were identified as destroyed)
- one site was identified as partially significant with portions identified as unknown site status
- one site was identified as partially significant and partially not significant
- eight sites were identified as significant
- eight sites were identified as unknown site status

Cultural Resources Previously Identified within the Project Area

For the proposed offsite pipelines, much of the project alignment has been evaluated with regard to potential impacts to cultural resources as part of previous CEQA documents. Previous CEQA documents that have addressed the project alignments are summarized below, and as further discussed in *Section 2.7*, are incorporated by reference pursuant to CEQA Section 15150.

Based on the information available from these previous reports, the Gallegos & Associates study focused on those facilities that would involve disturbed native terrain, and the field survey was limited to portions of the project alignments that had not been previously surveyed. No new sites were identified within the project alignments that were surveyed (Gallegos 2004). The results of the surveys are described in *Section 4.4.3*. *Figure 4.4-1* provides the survey status of the desalination plant site and pipeline alignments.

Carlsbad Golf Course Revised Draft EIR

The Carlsbad Municipal Golf Course project, proposed for 357 acres at the northwest quadrant of the City, north of Palomar Airport Road and on both sides of College Boulevard, included a detailed Cultural Resource Inventory and Assessment Program, prepared by Gallegos & Associates in August 1999. The project site was found to contain 11 previously recorded and four newly recorded cultural resource sites. Implementation of the golf course project would impact significant cultural resource sites CA-SDI-8303 A/H, SDI-8694, SDI-8797, and SDI-14565 (City of Carlsbad 1999). A detailed mitigation program for cultural resource impacts was adopted as part of the Revised Draft EIR; with mitigation, impacts were reduced to less than significant (City of Carlsbad 1999).

Carlsbad Ranch Specific Plan Amendment Final Program EIR

This Program EIR addressed the environmental effects of the development and operation of the following components, located on 471.6 acres in the northwest quadrant of the City of Carlsbad,

generally north of Palomar Airport Road, south of Cannon Road, east of Paseo del Norte, and west of Hidden Valley Road:

- The Carlsbad Ranch Specific Plan, which included 447.4 acres of office, research and development, related light manufacturing, commercial, hotel, destination resort, golf course, agriculture, a vocational school campus, and Legoland Carlsbad.
- Improvements to the I-5/Cannon Road interchange.
- Development of a 24.2-acre parcel immediately adjacent to the northern boundary of the Specific Plan site, proposed as a continuation of the Specific Plan golf course.

The project included an assessment of archaeological resources prepared by Gallegos and Associates in September 1995. The EIR concluded that the project would result in impacts to two significant archeological sites, CA-SDI-6132/W-119 and CA-SDI-8797. Mitigation measures, involving a data recovery program, avoidance, and monitoring during construction, reduced impacts to less than significant levels (City of Carlsbad 1995).

Carlsbad Oaks North Specific Plan

The 2002 Program EIR for this project addressed a proposed 414-acre industrial park in eastern Carlsbad, the 1.3-mile Faraday Avenue roadway extension, the 0.5-mile El Fuerte Street extension, and the 3.4-mile South Agua Hedionda Sewer Interceptor.

The project included an assessment of archaeological resources prepared by Brian F. Smith and Associates in 2002. The EIR concluded that the project would result in impacts to five significant archeological sites, Temp 1, Temp 2, Temp 8, CA-SDI-5231, and CA-SDI-2776. Mitigation measures, involving a data recovery program, avoidance, and monitoring during construction, reduced impacts to less than significant levels (City of Carlsbad 2002).

Palomar Forum Mitigated Negative Declaration

The Mitigated Negative Declaration (MND) for the Palomar Forum project (2001) addressed a 70-acre industrial subdivision located north of Palomar Airport Road between the City's eastern boundary and future Melrose Drive. The cultural resources section of the MND relied on two previous archaeological reports performed by RECON in 1989 and 1999 for separate projects. The two archaeological reports investigated a total of 6 sites. One site, CA-SDI-9041**,** was previously tested as part of a testing program for four archaeological sites on the Wimpey Gentry Property (RECON 1989). The report concludes that no significant subsurface deposits remain on CA-SDI-9041 and no further work or monitoring was determined to be necessary.

Carlsbad Raceway Business Park MND

The MND for the Carlsbad Raceway Business Park project (2001) addressed a 146-acre industrial subdivision located immediately north of the Palomar Forum project, located north of Palomar Airport Road between the City's eastern boundary and future Melrose Drive. The cultural resources section of the MND also relied on the two previous archaeological reports performed by RECON in 1989 and 1999, and therefore contained the same conclusions regarding impacts to cultural resources.

Bressi Ranch Master Plan EIR

The 2002 Final EIR for this project addressed the proposed Bressi Ranch Master Plan, which includes 585 acres in the City of Carlsbad generally located at the southeast corner of Palomar Airport Road and El Camino Real. Development proposed under the Master Plan includes residential, commercial, and industrial uses, as well as community facilities and open space. The EIR concluded that impacts to two significant cultural sites, CA-SDI-14592 and CA-SDI-9846 would be significant. A data recovery program, monitoring, capping, and an easement mitigation plan were recommended as mitigation measures.

Draft Recirculated EIR for the Cantarini/Holly Springs Developments

The May 2004 Draft EIR (SCH# 2002101081) addressed two adjacent residential subdivisions on 277 acres, located approximately 0.5 mile to the north of El Camino Real in the City of Carlsbad's Sunny Creek Specific Plan Area. The future alignment of College Boulevard is to provide the western boundary of the project sites. A total of 228 residential units would be provided, as well as circulation roadways and approximately 120 acres of open space. The EIR's cultural resource analysis by Recon in 1998, 1999, and 2001 recommended monitoring during construction as mitigation; with the monitoring program in place, impacts to archaeological resources were cited as less than significant (City of Carlsbad 2003).

Existing Conditions -- Paleontological Resources

Paleontologically, Quaternary Age deposits exist underneath the desalination plant site, which are potentially significant fossil areas, as shown in *Figure 4.4-2* (City of Carlsbad 1994). Quaternary Age alluvial deposits (Loma Linda Terrace deposits) have the potential to contain fossiliferous rock from Pleistocene terrace deposits of not more than 2 million years in age.

In addition to the Quaternary Age deposits discussed above, the offsite project elements would traverse other formations known to contain significant areas of paleontological resources. These include Cretaceous and Tertiary Age deposits.

Figure 4.4-2

The Lusardi Formation of the Cretaceous Age is the oldest fossiliferous rock unit in the study area that consistently produces significant fossils and consists of sandstones and conglomerates that were deposited in a shallow sea that covered the region approximately 74 million years ago (City of Carlsbad 1994). With respect to the project study area, Cretaceous Age deposits occur in central-eastern Carlsbad, including the area surrounding the El Camino Real/Faraday Avenue intersection.

The sandstones and siltstones of the La Jolla Group Formation (Santiago Formation, Del Mar Formation) of the Tertiary Age overlie the Lusardi Formation. This formation is approximately 45 million years old and has produced a large number of vertebrate and invertebrate fossils. This formation has a high potential for containing significant fossils. The Tertiary Age deposits occur in various locations throughout the study area, including along Palomar Airport Road and locations further north within the City of Carlsbad. *Figure 4.4-2* shows the potentially significant fossil areas in the City of Carlsbad.

4.4.2 Significance Criteria

The following significance criteria included in Appendix G of the CEQA guidelines will determine the significance of a cultural or historic resource impact. Impacts to cultural or historic resources would be significant if the proposed project:

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

The City of Carlsbad has also adopted a set of Cultural Resource Guidelines. According to the City's Guidelines, a cultural resource is considered significant when it:

- Exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering, or architectural history;
- Is identified with person or events significant in local, state, or national history;
- Embodies distinctive characteristics of a style, type, period, or method of construction, is a valuable example of the use of indigenous materials or craftsmanship, or is representative of a notable work of an acclaimed builder, designer, or architect;
- Is an archaeological, paleontological, botanical, geological, topographical, ecological, or geographical site which has the potential of yielding information of scientific value; or

- Is a geographically definable area possessing concentration of site, buildings, structures, improvements, or objects linked historically through location, design, setting, materials, workmanship, feeling, and/or association, in which the collective value of the improvements may be greater than the value of each individual improvement.

4.4.3 Impacts

This section assesses potential cultural resource and paleontological resource impacts resulting from implementation of the proposed project including the offsite project elements.

Cultural Resources

Table 4.4-1 summarizes cultural resource impacts for each of the 30 sites, including each site's cultural significance, identification of the project element that would potentially affect each site, the CEQA significance determination, and mitigation as applicable. The full impact analysis is addressed below, and the mitigation discussion is provided in *Section 4.4.4*.

Desalination Plant Site

As shown in the *Table 4.4-1*, two cultural resources sites are located within the Encina Power Station (EPS) boundary: sites CA-SDI-6751 and CA-SDI-16885. Site CA-SDI-16885 is located at the proposed site for the desalination plant's product water pump station and pretreatment area. The site is comprised of a small shell scatter with associated debitage. Because of the extensive development surrounding the site area, the exposed portion of site CA-SDI-16885 likely represents a disturbed remnant. The portion of the site tested was identified as not significant and no further work was recommended, however, the remaining easterly site area has not been tested and site status is unknown for that portion of the site (Guerrero et al. 2004).

Site CA-SDI-6751 is a shell scatter, and is located along the existing AT&SF Railroad, south of Agua Hedionda Lagoon. Site status for CA-SDI-6751 is unknown.

The potential for impacts on sites CA-SDI-16885 and CA-SDI-6751 to occur is considered low; however, field conditions for construction activities may reveal that such impacts could occur. Therefore, mitigation in the form of monitoring during demolition and excavation, is required to ensure impacts remain below a level of significance. Should monitoring reveal that archaeological sites are present, testing to determine site significance would be required. If, after the site testing process is conducted, the site(s) are determined to be significant, then additional mitigation would be recommended through avoidance, or through the completion of a cultural resources data recovery program. Refer to *Section 4.4.4* below for further information.

Offsite Project Elements

The following discussion is broken out by each of the three primary water delivery pipeline routes to more clearly identify the location of potential cultural resource impacts. Each discussion is then further categorized by the level of impact significance for each alignment.

Faraday/Melrose Route (Blue Alignment)

Of the 29 cultural resource sites identified in the Gallegos & Associates report (2004), 22 sites would be potentially affected by implementation of the proposed Faraday/Melrose Route, including the sub-routes as analyzed in *Table 4.4-1*. The level of environmental impact for each site is explained below.

Significant Impacts

Significant Cultural Resource Sites

Based on the findings of the record search, literature review, and review of previous CEQA documents discussed in *Section 4.4.1*, five significant cultural resource sites (including 2 partially significant sites) have the potential to be impacted by the Faraday/Melrose Route. That is, the proposed project has the potential to cause a substantial adverse change in the significance of these cultural resources. Mitigation, including monitoring and/or avoidance, data recovery, or capping, is recommended as identified for each site. Detailed mitigation requirements are described in *Section 4.4.4*.

CA-SDI-6133. The Faraday/Melrose Route alignment would be located outside of Cannon Road and could impact this site. While the site's significance is unknown, potentially significant impacts could occur if monitoring is not conducted during construction. Impacts are therefore considered significant and mitigation in the form of monitoring would provide for impact avoidance or resource recovery that would reduce impacts to less than significant levels.

CA-SDI-6134. Testing has been completed during previous efforts for the southern portion of this site, which would be impacted by the Faraday/Melrose Route. The Faraday/Melrose Route in this vicinity would be located slightly outside of the developed portion of Cannon Road. Also, the proposed trenchless construction area would have the potential to affect CA-SDI-6134, and potentially significant impacts could occur to the central and northern portion of the site. Data recovery and monitoring during construction are recommended to reduce potential impacts to less than significant levels.

CA-SDI-8303. This site is currently undergoing excavation and data recovery as part of the City's Municipal Golf Course project. Mitigation for the site included capping. While data recovery and capping are anticipated to be complete prior to the construction of the Faraday/Melrose Route pipeline, potentially significant impacts could still occur given the significance of the site, its size (approximately 10 acres), and its adjacency to the project route. Monitoring is recommended to ensure impacts remain below a level of significance.

CA-SDI-10671. The southern portion of this significant site, consisting of an artifact scatter with lithic tools and shell, was previously mitigated with no further work recommended. For the northern portion of this site with unknown level of significance, impacts are considered potentially significant since the alignment would be located outside of Cannon Road. Data recovery and monitoring during construction are recommended to reduce impacts to less than significant levels.

CA-SDI-13008. This site was determined to be significant and data recovery or avoidance was previously recommended. The project would be located slightly north of the Cannon Road right of way and therefore has the potential to significantly impact the northern portion of this significant site. A data recovery program and monitoring during construction are recommended to reduce impacts to less than significant.

Sites with Unknown Cultural Significance

The following list describes those cultural resource sites that would be affected by the project and whose cultural significance is unknown. Since these sites have not been tested to determine their potential for significance, they may contain important cultural resource information and could be found to have significant cultural resources. In these cases, impacts are considered to be potentially significant and construction monitoring is recommended to reduce impacts to less than significant levels.

CA-SDI-5783 The project alignment in the vicinity of this site would be located within existing Melrose Drive at the future intersection with the Faraday Avenue extension. Impacts to this historical site are considered to be potentially significant as the site's significance is unknown. Construction monitoring is recommended to reduce impacts to below a level of significance.

CA-SDI-7229 Impacts to this shell scatter site would be potentially significant since the site's significance is unknown, even though the project alignment would be located within existing Faraday Avenue. Mitigation in the form of monitoring would reduce impacts to less than significant levels.

Less than Significant Impacts

The following sites were found not to be culturally significant and therefore the proposed project would not cause a substantial adverse change in the significance of these archaeological resources.

CA-SDI-5117 This site contained bedrock milling features and an associated lithic tool but has been previously destroyed and therefore the project does not have the potential to cause a substantial adverse change in the significance of this resource. Impacts would be less than significant.

CA-SDI-5231 This site was identified in the Carlsbad Oaks North Specific Plan Program EIR as significant, and data recovery was recommended to be conducted (Berryman and Cheever 1999). The Faraday Extension has not yet been constructed, therefore, no mitigation program has yet been conducted at CA-SDI-5231. The proposed Faraday/Melrose pipeline would be constructed concurrently or after construction of the Faraday Extension project, which has been conditioned to mitigate for impacts to CA-SDI-5231. Impacts are therefore considered to be less than significant for the proposed project and no mitigation would be required.

CA-SDI-5788 This site was originally recorded as the homeplace of the Brearley family, however, no surface artifacts or structures are present at the site. This site has been destroyed by urban development, and therefore project-related impacts would be less than significant.

CA-SDI-5792 The project alignment is within a large existing developed area and therefore impacts are not considered to be significant.

CA-SDI-5793 **S**imilar to CA-SDI-5792, the project alignment is within a large existing developed area and impacts are not considered to be significant.

CA-SDI-6092 This site was originally recorded as a bedrock milling site, consisting of multiple slicks and single basin. In 2001, site CA-SDI-6092 was tested by Gallegos & Associates for the Vista-Oceanside Project (Gallegos et al. 2001). Testing at CA-SDI-6092 included collection of surface artifacts, documentation of milling features, and excavation of 29 pits. In all, testing produced 1 biface, 2 unifacial rejuvenation flakes, 69 debitage, 1 ceramic fragment, and 0.1 grams of bone. Disturbance from both construction and agricultural activities was noted. Site CA-SDI-6092 was identified as not

significant and no further work was recommended. Therefore, project impacts would be less than significant.

CA-SDI-7169 While the significance of this shell scatter is considered unknown, the project alignment is within an existing developed subdivision. Given the highly disturbed nature of the project area, impacts are not considered significant.

CA-SDI-9041 This site was previously tested as part of a testing program for four archaeological sites on the Wimpey Gentry Property (RECON 1989). The report concludes that no significant subsurface deposits remain on CA-SDI-9041 and no further work or monitoring was determined to be necessary. Impacts would therefore be less than significant.

CA-SDI-15588 This site consisted of mano and metate fragments and one lithic tool, but has been destroyed as a result of development, and no further work is recommended. The project does not have the potential to cause a substantial adverse change in the significance of this resource, and therefore, impacts would be less than significant.

CA-SDI-16048 Similar to CA-SDI-5231, this site was identified in the Faraday Extension Report as significant, and avoidance or data recovery was recommended to be conducted (Berryman and Cheever 1999). The Faraday Extension has not yet been constructed, therefore, no mitigation program has yet been conducted at CA-SDI-16048. The proposed Faraday/Melrose pipeline would be constructed concurrently or after construction of the Faraday Extension project, which has been conditioned to mitigate for impacts to CA-SDI-16048. Impacts are therefore considered to be less than significant and no additional mitigation would be required.

CA-SDI-16049 Similar to CA-SDI-5231, this site was identified in the Faraday Extension Report as significant, and avoidance or data recovery was recommended to be conducted (Berryman and Cheever 1999). The Faraday Extension has not yet been constructed, therefore, no mitigation program has yet been conducted at CA-SDI-16049. The proposed Faraday/Melrose pipeline would be constructed concurrently or after construction of the Faraday Extension project, which has been conditioned to mitigate for impacts to CA-SDI-16049. Impacts are therefore considered to be less than significant for the proposed project and no additional mitigation would be required.

Avenida Encinas Route (Yellow Alignment)

Three cultural resource sites would be potentially affected by implementation of this route. It is noted that all three of these sites would also be affected by the proposed Faraday/Melrose Route, and one site (CA-SDI-13008) would also be affected by the proposed Palomar Airport Route.

Impacts to CA-SDI-10671 and CA-SDI-13008 would be significant since the alignment would be constructed off-road, within the existing agricultural areas adjacent to Legoland Drive. Mitigation measures proposed in *Section 4.4.4* would reduce impacts to a level below significance. For both sites, mitigation in the form of monitoring would be implemented to ensure impacts remain below a level of significance. Refer to *Section 4.4.4* for more information.

Impacts to CA-SDI-6751 are also considered to be significant. The proposed pipeline would be located within the existing developed Cannon Road right of way, and monitoring would be required to ensure impacts would be less than significant.

Palomar Airport Road Route (Green Alignment)

Ten sites would be potentially affected by development of this route, including the proposed sub-routes. Of these, one site (CA-SDI-13008) would also be potentially affected by both the blue and yellow alignments.

Significant Impacts

Significant Cultural Resource Sites

Portions of site CA-SDI-8797 were tested as part of the City's Municipal Golf Course and Carlsbad Ranch project. This site is currently undergoing excavation and data recovery, and capping of the site is part of the mitigation requirements for the golf course project. While data recovery and capping are anticipated to be complete prior to the construction of the Palomar Airport Route pipeline, potentially significant impacts could still occur given the significance of the site and its adjacency to the project route. Monitoring is recommended to ensure impacts remain below a level of significance.

Similar to the discussion for the Faraday/Melrose Route for impacts to site CA-SDI-13008, impacts to site CA-SDI-13008 resulting from implementation of the Palomar Airport Route alignment are considered significant given that data recovery has been conducted for the southern portion of this site. Monitoring is recommended to reduce impacts to less than significant.

Sites with Unknown Cultural Significance

CA-SDI-9615 This site was originally recorded as an artifact scatter consisting of shell and debitage. In 1999, the site was relocated, however the site was not tested at that time. Site status for CA-SDI-9615 is unknown. Monitoring during construction would be required to ensure impacts remain below a level of significance.

CA-SDI-15069 This site was originally recorded as a milling site consisting of two bedrock milling features. A small scatter of debitage, shell, historic glass, ironstone ceramic, and cement were noted adjacent to the milling features. Site CA-SDI-15069 has not been tested to determine site status, and therefore monitoring during construction would be required to ensure impacts remain below a level of significance.

Less than Significant Impacts

Sites CA-SDI-6135, CA-SDI-6834, CA-SDI-8089, CA-SDI-9653, CA-SDI-6833, and CA-SDI-9095 have been tested as part of previous projects and were not found to be significant. CA-SDI-6833 and CA-SDI-9095 were tested as part of the Carlsbad Municipal Golf Course project and no further work was recommended. Because these sites are not culturally significant, impacts resulting from implementation of the project would be less than significant.

CA-SDI-6135 This site is a habitation site consisting of shell midden, debitage, lithic tools, manos, and fire-affected rock. Site CA-SDI-6135 was tested for an environmental review of the Kelly Ranch property and was identified as not significant, and no further work was recommended (Ultrasystems 1983). Therefore, project impacts would be less than significant.

CA-SDI-6834 This site was originally recorded as an artifact scatter consisting of shell and lithic artifacts. In 1982, site CA-SDI-6834 was tested for the Palomar Business project (SRSI 1982a). Site CA-SDI-6834 was identified as destroyed and no further work was recommended 9SRSI 1982b). Impacts would therefore be less than significant.

CA-SDI-8089 Site CA-SDI-8089 was originally recorded as a small lithic scatter. This site has been destroyed by urban development. Accordingly, no significant impacts would be anticipated as a result of project implementation.

CA-SDI-9653 Site CA-SDI-9653 was first recorded as a sparse lithic scatter consisting of several manos, battered implements, flaked lithic tools, and a small amount of associated shell. Site CA-SDI-9653 was tested for an environmental review for the Kelly Ranch property and was identified as not significant; no further work was recommended (Ultrasystems 1983). Therefore, project impacts would be less than significant.

Paleontological Resources

Quaternary Age alluvial deposits (Loma Linda Terrace deposits) have the potential to contain fossiliferous rock from Pleistocene terrace deposits. However, grading at the desalination plant site is not expected to impact these deposits since project grading will not involve extensive excavation into the Loma Linda Terrace deposits. However, during grading, monitoring for paleontological resources at the desalination plant site is recommended (refer to *Section 4.4.4* below) to ensure that no significant impacts would occur.

For the offsite project elements, grading and earthwork impacts to Cretaceous and Tertiary Age deposits could disturb potentially occurring fossils and the information in the fossils could be lost. Impacts would be significant, and mitigation in the form of construction monitoring is recommended to reduce impacts to less than significant-refer to *Section 4.4.4* for details.

4.4.4 Mitigation Measures

Cultural Resources

The following mitigation measures would reduce identified impacts to cultural resources to less than significant.

4.4-1 Where project construction will impact cultural resources that have been determined to be significant, mitigation shall include either avoidance, or if avoidance is not feasible, then a data recovery program shall be completed to recover a large enough sample of cultural material so that information of importance in addressing regional research questions will not be irretrievably lost. The data recovery program shall be developed by a qualified archaeologist and approved by the City of Carlsbad.

4.4-2 In cases where the precise alignment of the pipeline is not available, and therefore the potential to affect cultural resources cannot be specifically determined, the applicant shall be required to retain a qualified archaeological monitor during construction so that buried cultural resources can be identified in the field. The archaeological monitor shall meet the minimum qualifications as required by the City of Carlsbad. If

significant resources are identified within the areas that could be affected by construction, the resources shall be tested (pursuant to the mitigation measure 4.4-1) to determine significance with appropriate mitigation measures employed as necessary.

Monitoring Program Requirements

The evaluation and monitoring program will be used for cultural resources within the project study area that are located within developed areas where surface evaluation is precluded and specific mitigation cannot be determined at this time. For these sites, a monitoring program is required if construction is to occur within or adjacent to the cultural resource site. Components of such a monitoring program would include, but not be limited to the following:

Prior to Preconstruction (Precon) Meeting

1. ***Planning Department (PD) Plan Check***: Prior to the first Precon Meeting, the Planning Director of the appropriate jurisdiction or ~~his~~ his/her designee / shall verify that the requirements for Archaeological Monitoring and Native American monitoring, if applicable, have been noted on the appropriate construction documents.

2. ***Submit Letter of Qualification to ~~ERM~~Planning Director:*** Prior to the first Precon Meeting, the applicant shall provide a letter of verification to the Planning Director or ~~his~~ his/her designee stating that a qualified Archaeologist has been retained to implement the monitoring program.

3. ***Records Search Prior to Precon Meeting:*** At least thirty days prior to the Precon Meeting the qualified Archaeologist shall verify that a records search has been completed and updated as necessary and be prepared to introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities. Verification includes, but is not limited to, a copy of a confirmation letter from South Coast Information Center or, if the search was in-house, a letter of verification from the Archaeologist stating that the search was completed.

Precon Meeting

1. ***Monitor Shall Attend Precon Meetings:*** Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the Archaeologist, Construction Manager and/or Grading Contractor and Planning Director or his/her designee. The qualified Archaeologist shall attend any grading related Precon

Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.

2. ***Identify Areas to be Monitored:*** At the Precon Meeting, the Archaeologist shall submit to the Planning Director or ~~his~~ his/her designee a copy of the site/grading plan (reduced to 11x17) that identifies areas to be monitored as well as areas that may require delineation of grading limits.

During Construction

1. ***Monitor Shall be Present During Grading/Excavation:*** The qualified Archaeologist shall be present full-time during grading/excavation of native soils within or adjacent to a cultural site and shall document activity via the Consultant Monitor Record. This record shall be sent to the Planning Director or ~~his~~ his/her designee, as appropriate, each month.

2. ***Monitoring of Trenches Will Include Mainline, Laterals, and all Appurtenances:*** Monitoring of trenches is required for the mainline, laterals, services and all other appurtenances that impact native soils within or adjacent to a cultural site one foot deeper than existing as detailed on the plans or in the contract documents identified by drawing number or plan file number. It is the Construction Manager's responsibility to keep the monitor(s) up-to-date with current plans.

3. ***Discoveries:*** In the event of a discovery, and when requested by the Archaeologist, or the Principal Investigator (PI) if the Monitor is not qualified as a PI, the Construction Manager (CM), as appropriate, shall be contacted and shall divert, direct or temporarily halt ground disturbing activities in the area of discovery to allow for preliminary evaluation of potentially significant archaeological resources. The PI shall also immediately notify the Planning Director or ~~his~~ his/her designee of such findings at the time of discovery.

   Determination of Significance: The significance of the discovered resources shall be determined by the PI. For significant archaeological resources, a Research Design and Data Recovery Program shall be prepared, approved by the ~~agency~~ City and carried out to mitigate impacts before ground-disturbing activities in the area of discovery will be allowed to resume.

   Minor Discovery Process for Pipeline Projects: For all projects: The following is a summary of the criteria and procedures related to the evaluation of **small cultural resource deposits** during excavation for pipelines.

4. ***Coordination and Notification:*** Archaeological Monitor shall notify PI, CM and the Planning Director or ~~his~~ his/her designee, as appropriate.

5. ***Criteria Used to Determine if it is a Small Cultural Resource Deposit***
   a. The deposit is limited in size both in length and depth; and,
   b. The information value is limited and is not associated with any other resources; and,
   c. There are no unique features/artifacts associated with the deposit.
   d. A preliminary description and photographs, if available, shall be transmitted to the Planning Director or ~~his~~ his/her designee.

   The information will be forwarded to the Planning Department for consultation and verification that it is a small historic deposit.

6. ***Procedures for documentation, curation and reporting:*** The following constitutes adequate mitigation of a small historic deposit to reduce impacts due to excavation activities to below a level of significance.

   a. 100% of the artifacts within the trench alignment and width shall be documented in-situ, to include photographic records, plan view of the trench and profiles of sidewalls, recovered, photographed after cleaning and analyzed and curated.
   b. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact.
   c. The Final Results Report shall include a requirement for monitoring of any future work in the vicinity.

7. ***Human Remains:*** If human remains are discovered, work shall halt in that area and procedures set forth in the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) as follows:
   a. Notification
      (1) Archaeological Monitor shall notify the PI, CM and the Planning Director or ~~his~~ his/her designee.
      (2) The PI shall notify the County Coroner after consultation.
   b. Stop work and isolate discovery site
      (1) CM/ the Planning Director or ~~his~~ his/her designee, as appropriate, shall stop work immediately and overlay adjacent human remains until a determination can be made by the County Coroner in consultation with the PI concerning the origin of the remains and the cause of death.

(2) The County Coroner, in consultation with the PI, shall determine the need for a field investigation to examine the remains and establish a cause of death.

(3) If a field investigation is not warranted, the PI, in consultation with the County Coroner, shall determine if the remains are of Native American origin.

c. If Human Remains are Native American

(1) The Coroner shall notify the Native American Historic Commission (NAHC). (By law, **ONLY** the Coroner can make this call.)

(2) NAHC will identify the person or persons it believes to be the Most Likely Descendent (MLD).

(3) The MLD may make recommendations to the landowner or PI responsible for the excavation work to determine the treatment, with appropriate dignity, of the human remains and any associated grave goods (PRC 5097.98).

d. If Human Remains are not Native American

(1) The PI shall contact the NAHC and notify them of the historical context of the burial.

(2) NAHC will identify the person or persons it believes to be the MLD.

(3) The MLD may make recommendations to the landowner or PI responsible for the excavation work to determine the treatment of the human remains (PRC 5097.98).

(4) If the remains are of historic origin, they shall be appropriately removed and conveyed to the Museum of Man for analysis. The decision for reinterment of the human remains shall be made in consultation with the Planning Director or ~~his~~ his/her designee, the landowner, the NAHC and the Museum of Man.

e. Disposition of Human Remains

The landowner, or ~~his~~ his/her authorized representative, shall reinter the Native American human remains and any associated grave goods, with appropriate dignity, on the property in a location not subject to further subsurface disturbance, IF:

(1) The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 24 hours after being notified by the ~~Commission~~NAHC; OR;

(2) The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with

PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner.

8. ***Notification of Completion:*** The Archaeologist shall notify the Planning Director or ~~his~~ his/her designee, in writing of the end date of monitoring.

Post Construction

1. Handling and Curation of Artifacts and Letter of Acceptance

a. The Archaeologist shall be responsible for ensuring that all cultural remains collected are cleaned, catalogued, and permanently curated with an appropriate institution; that a letter of acceptance from the curation institution has been submitted to the Planning Development; that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.

b. Curation of artifacts associated with the survey, testing and/or data recovery for this project shall be completed in consultation with the Planning Director or ~~his~~ his/her designee and the Native American representative, as applicable.

2. ***Final Results Reports (Monitoring and Research Design and Data Recovery Program)***

a. Within three months following the completion of monitoring, two copies of the Final Results Report (even if negative) and/or evaluation report, if applicable, which describes the results, analysis, and conclusions of the Archaeological Monitoring Program (with appropriate graphics) shall be submitted to the Planning Director or ~~his~~ his/her designee for approval.

b. For significant archaeological resources encountered during monitoring, the Research Design and Data Recovery Program shall be included as part of the Final Results Report.

3. ***Recording Sites with State of California Department of Park and Recreation.*** The Archaeologist shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Results Report.

Paleontological Resources

4.4-3 A qualified paleontological monitor shall be present at a pre-grading meeting with the construction contractor and environmental review coordinator. The purpose of the meeting would be to consult and coordinate the role of the paleontologist during construction. The paleontological monitor shall have adequate knowledge and experience with fossilized remains likely to be present to identify them in the field. The paleontological monitor shall be adequately experienced to remove paleontological resources for further study.

4.4-4 The paleontological monitor shall be present during the applicable stages of grading and construction (including trenching) as determined at the pre-grading meeting. The paleontological monitor shall have the authority to temporarily direct, divert, or halt grading in the area of an exposed fossil to facilitate evaluation and, if necessary, salvage. At the discretion of the monitor, recovery may include washing and picking of soil samples for microvertebrate bone and teeth. The contractor shall be aware of the random nature of fossil occurrences and the possibility of a discovery of such scientific and/or educational importance which might warrant a long-term salvage operation or preservation. All fossils collected shall be donated to a museum with a systematic paleontological collection, such as the San Diego Natural History Museum. The City of Carlsbad Engineering Division shall ensure the grading contractor is aware of this provision. Conflicts regarding the role and authority of the monitor shall be resolved by the Planning Director or ~~his~~ his/her designee.

4.4-5 A paleontological monitoring report shall be submitted to the City of Carlsbad. The report shall describe the materials recovered by the monitoring program.

4.4.5 Residual Impacts/Level of Significance After Mitigation

With the incorporation of the mitigation measures recommended in *Section 4.4.4* above, all impacts related to cultural and paleontological resources would be reduced to a less than significant level.