

4.6 CULTURAL RESOURCES

4.6.1 INTRODUCTION

This section evaluates the potential for implementation of the proposed project to result in adverse impacts to cultural resources. Cultural resources include Native American tribal resources, unique paleontological or geological resources, archaeological resources, historic architectural resources, and human remains. Mitigation measures to reduce impacts to a less than significant level are identified, where appropriate. This section is based primarily on the Cultural Resources Report prepared for the project by CRM TECH (2015, 2016), and which is included in Appendix D.

4.6.2 ENVIRONMENTAL SETTING

4.6.2.1 Area of Potential Effect

The Area of Potential Effect (APE) refers to the geographic area or areas of direct and indirect disturbance to cultural resources that may result from implementation of the proposed project. The APE for the project consists of the project facility sites including temporary access and work areas, approximately nine linear miles of pipeline alignments, and construction staging areas. From the southern portion of the City of Desert Hot Springs to the areas in the City of La Quinta and near the unincorporated community of Thermal, the project APE is spread out more than 30 miles across the northwestern and central portions of the Coachella Valley, and across Townships 3-7 South, Ranges 4-8 East. Because the project consists of 29 well sites, three treatment facility sites, and linear infrastructure improvements, the APE consists of a series of discrete pieces of land. Figure 4.6-1 provides an overall project APE vicinity map. The APE has both a horizontal (areal) and vertical (depth) component. The horizontal component consists of the surface area (i.e., the width times the length) of the construction disturbance area for each facility. The vertical component consists of the depth of excavation required for each construction activity.

4.6.2.2 Paleontological and Geological Setting

Paleontological resources represent the remains of prehistoric life, exclusive of any human remains, and include the localities where fossils were collected as well as the sedimentary rock formations in which they were found. The defining character of fossils or fossil deposits is their geologic age, which is typically regarded as older than 10,000 years, the generally accepted temporal boundary marking the end of the last late Pleistocene glaciation and the beginning of the current Holocene epoch.

Common fossil remains include marine shells; the bones and teeth of fish, reptiles, and mammals; leaf assemblages; and petrified wood. Fossil traces, another type of paleontological resources, include internal and external molds (impressions) and casts created by these organisms. These items can serve as important guides to the age of the rocks and sediments in which they are contained, and may prove useful in determining the temporal relationships between rock deposits from one area and those from another as well as the timing of geologic events.

Fossil resources generally occur only in areas of sedimentary rock (e.g., sandstone, siltstone, mudstone, claystone, or shale). Because of the infrequency of fossil preservation, fossils, particularly vertebrate fossils, are considered to be nonrenewable paleontological resources. Occasionally fossils may be exposed at the surface through the process of natural erosion or as a result of human disturbances;

however, they generally lay buried beneath the surficial soils. Thus, the absence of surface fossils does not preclude the possibility of their being present within subsurface deposits, while the presence of fossils at the surface is often a good indication that more remains may be found in the subsurface.

The project sites are located on a variety of alluvial fan and aeolian (windblown) deposits and well removed from intact bedrock or sedimentary rock that most typically harbors paleontological resources. Most of the sites are in the low-lying Coachella Valley, which is within the northwestern portion of the Colorado Desert Geomorphic province of the Sonoran Desert. The valley is the northwest extension of the Salton Trough, a major geological feature in the region spanning from the Banning Pass south to the Gulf of California in Mexico, and contains deposits that may support paleontological resources. The Salton Trough was an extension of the Gulf of California during the late Miocene and early Pliocene eras.¹

During the Holocene² era the Salton Trough contained a large, freshwater lake, Lake Cahuilla, which had a shoreline of 42 feet above sea level. Remains of prehistoric life such as shells, bones and teeth of fish, invertebrate fossils, and other paleontological resources have been identified in Pliocene age alluvium. As such, it can be expected that Pliocene-aged alluvium within the Salton Trough has the potential to contain significant paleontological resources.

The other geological feature with associated paleontological importance is the San Andreas Fault system that occurs along the eastern margin of the Coachella Valley. The fault system is responsible for the Peninsular and Traverse Ranges, including the Santa Rosa and San Jacinto Mountains, which contains some of the highest mountain elevations in the region. Scattered vertebrate fossils have been discovered in fluvial-derived sediments associated with the canyons and alluvial fans of the surrounding mountain ranges. These are generally coarse materials comprised of weathered and eroded rocks, and are of limited suitability to preserve vertebrate remains.

It is difficult for paleontologists to know for certain the quantity or quality of fossils that may be present in any given geologic unit. While fossils may be exposed at the surface by natural erosion or man-made excavations, the absence of surface fossils does not necessarily preclude them from being present in subsurface deposits. However, the presence of fossils at the surface may serve as an indicator that others may be present subsurface.

Sedimentary Rocks

Over millions of years, the Salton Trough has been filled with sedimentary deposits up to 20,000 feet thick. Various sedimentary layers, or formations, are exposed throughout the Coachella Valley, particularly in the low-lying Indio and Mecca Hills, which occur along the length of the San Andreas Fault. The oldest sedimentary formation in the planning area is known as Coachella Fonglomerate and is composed of debris-flow and stream-laid deposits of gneiss, granite, and volcanic rock. The Mecca Hills Formation, which may correlate to the Coachella Fonglomerate, is exposed in Painted Canyon and is about 400 feet thick.

The Imperial Formation, which is probably of early Pleistocene age, was deposited when the Gulf of California extended into the northern reaches of the Coachella Valley and contains marine fossils in its

¹ The Miocene and Pliocene eras represent the periods 23 to 5.3, and 5.3 to 1.8 million years ago, respectively.

² Modern age: 12,000 years ago to present time.

sandstone layer. It is exposed in Whitewater Canyon, near the north end of Indio Hills, and at Thousand Palms Spring. The Palm Springs Formation is extensively exposed in the Indio and Mecca Hills and, to a lesser degree, in the vicinity of Whitewater Canyon. Its thickness ranges from about 2,000 feet in the northwestern Indio Hills, to about 4,800 feet in the Mecca Hills. The Ocotillo Formation is also extensively exposed in the Indio and Mecca Hills, and is largely composed of cobble, gravel and sand containing granite and metamorphic units.

The most recently laid sediments in the Coachella Valley are alluvial (stream-deposited) sediments. Alluvial sediments typically consist of gravel, sand, and clay. They are deposited by mountain streams and found within alluvial fans and the lower reaches of mountains canyons. In the vicinity of the Salton Sea, they consist of fine clay that is probably lacustrine (lake) in origin. Aeolian deposits are silty sand and fine and medium-grained sand fractions that are transported by strong, sustained winds. The alluvial and aeolian sediments on which most of the project sites occur are removed from the foothills and canyons where they originated, and have been subject to extensive erosion and sorting. Project sites on these lands are generally not identified as sensitive for paleontological resources.

Project sites in the La Quinta, Thermal and Mecca areas occur within the lakebed area of ancient Lake Cahuilla. These lakebed sediments are often called Quaternary Lake Cahuilla beds, and no Pleistocene-age fossils have been reported from these lakebed sediments or their equivalent in the Coachella Valley. Subsurface evaluations indicate that at least the upper 25 feet of these lower valley sediments are Holocene in age. These lakebeds sediments can yield the fossil remains of Holocene-era freshwater diatoms, land plants, sponges, ostracods, mollusks, fish and small terrestrial vertebrates. In their undisturbed state, these relatively recent resources can provide additional data on early ecological conditions and geomorphic development. All of the project sites that occur on lakebed deposits have been disturbed by a variety of activities, including extensive crop cultivation, residential, roadway and other urban development. These past disturbances reduced the potential that these sites will yield valuable paleontological resources.

Geological Features

As discussed above and in Section 4.7: Geology and Soils of this DEIR, the geological conditions at the various project sites occur in areas of fluvial and aeolian deposition and are dominated by alluvial sands and gravels. None occur in areas with rocky outcroppings, fault scarps or other unique geological features.

4.6.2.3 Prehistoric Setting

Based upon the current regional knowledge of artifacts and habitation sites dating back approximately 12,000 years, archaeologists have divided the pre-European epoch into five periods: Early Man Period, Paleo-Indian Period, Early Archaic Period, Late Archaic Period, and the Late Prehistoric Period.

The earliest periods were distinguished by the use of large stone points to hunt and process large late ice age mammals, and by the lack of milling stones and other food grinding implements. As climate conditions and available food changed, local inhabitants started using smaller projectile points on the smaller game; there was also substantial migration during this period. From about 4,000 years ago, seeds and grains and their processing became more important, and stone tools became more sophisticated; there was also a corresponding increase in cultural complexity and variation.

By about 1,500 years ago, at the end of the Archaic Period, burial practices had changed to cremations and a wider food base was exploited. Milling of foodstuffs also continued extensively. This new period, the Late Prehistoric, involved important cultural changes including the introduction of pottery and the bow and arrow. The Late Prehistoric pre-ceramic transitional phase from 1,200 to 1,500 years before the present (BP); ceramics were locally introduced at about 1,200 years BP. Pottery was an innovation of peoples of the Colorado River, and its presence in the Coachella Valley indicates that contact occurred between inhabitants of the Coachella Valley and Colorado River settlements. From about 800 years ago to just before contact with Europeans, there is evidence of extensive contact and trade with tribes of the Colorado River. This included the distribution of pottery across the upper Colorado and Mojave Deserts. It is from this period that ethnic or tribal affiliations are best known.

The project area encompasses a wide range of environments, which have been exploited by different indigenous groups over thousands of years. These included the low desert fresh water lakes of the various stands of Ancient Lake Cahuilla, the palm oases and mesquite vegetation associated with fault zones and other areas of high groundwater, alluvial fan areas, mountain canyons, and the mountains themselves. In the project area, the oldest cultural remains date back about 2,700 years BP and were discovered near the intersection of Jefferson Street and Fred Waring Drive along the ancient shore line of Lake Cahuilla (Love 1996). Numerous types of habitation and village sites developed throughout the project area. These included villages occupied for extended periods of time, milling sites used seasonally as particular foods became available, lithic workshops and quarries for making stone tools and weapons, and rock art sites that were used for artistic/religious expression.

4.6.2.4 The Cahuilla Indians

The most recently identifiable native culture to evolve in the Coachella Valley region is the Cahuilla. The Cahuilla were a Takic-speaking, hunting and gathering people from the Great Basin region of Nevada, Utah and eastern California whose migration into southern California occurred sometime between 1000 BC and AD 500. The Cahuilla are generally divided into three groups by anthropologists: the Pass Cahuilla of the Banning-Beaumont area, the Mountain Cahuilla from the Santa Rosa and San Jacinto Mountains, and the Desert Cahuilla from the western Coachella Valley east to the Salton Sea.

The Cahuilla did not have a single name that referred to an all-inclusive tribal affiliation; rather, membership was in terms of lineages or clans, and each belonged to one or two main divisions of the people, known as moieties. Members of clans in one moiety had to marry into clans from the other moiety. Individual clans had villages, or central places, and territories they called their own. Each clan, or lineage, had its own food harvesting areas, ceremonial house, and lineage chief. However, a number of lineages are known to have cooperated with one another for political, social and economic purposes.

Surveys performed by the U.S. Government Land Office in the mid-1850s noted a large number of Native American villages, or rancherias, in the Valley. All or most of these settlements are believed to have been settlements of the Desert or Pass Cahuilla people. Prominent settlements were located adjacent to major resource areas, including the shorelines of Lake Cahuilla, in mesquite and wildlife resources, and in the Indian Canyons areas of Palm Canyon. Settlements were also located along the “cove communities” areas along the southern margins of the Coachella Valley where the valley floor or alluvial plains are surrounded on the south, west, and east by higher elevations of the San Jacinto and Santa Rosa Mountains (in the present-day cities of Cathedral City, Palm Desert, and La Quinta), which were supported by shallow wells. Seasonal occupation sites were also associated with palm oases on the

east side of the valley, which were an important source of water, food and fiber. A number of other features believed to have been made by the Cahuilla included an extensive network of trails.

The first Cahuilla contact with Europeans occurred in the 1770s, when Spaniards crossed through Cahuilla territory in search of new land routes between Mexico and northern California. As time passed, relations between European settlers and the Cahuilla became strained due to conflicts over land ownership and exploitation, and religious and cultural practices. European disease, to which the Cahuilla had no immunity, furthered the gap between Indian and non-Indian relations. A smallpox epidemic in the early 1860s decimated the Cahuilla population, which declined from an estimated 6,000 to 10,000 people to only 2,500 individuals. By the time the Valley was re-surveyed by the federal government in the early twentieth century, most of the villages and rancherias noted from earlier surveys had vanished, and signs of Euroamerican influence, such as fences and irrigation ditches, were observed. The Cahuilla continue to inhabit parts of the Coachella Valley today, and are mostly affiliated with one or more of the Indian reservations in the Coachella Valley. Among these are the Torres Martinez, Augustine, Agua Caliente, Cabazon, and Morongo Reservations.

A large number of cultural resource surveys have been conducted in the project area and several hundred archaeological sites have been identified. Recorded archaeological resources are generally assigned a unique numerical identifier, referred to as a "tri-nomial" by the Eastern Information Center (EIC) at the Archaeological Research Unit at the University of California at Riverside. Site records on file at the EIC provide information about the type, contents, cultural affiliation, and period of occupation of archaeological resources.

Archaeological resources in the project area include numerous village sites associated with the shoreline of ancient Lake Cahuilla, which was created and maintained by inflows of the Colorado River. Approximately 500 years ago, the Colorado River changed course and once again found its way to the Sea of Cortez. As the lake level fell, the Cahuilla moved their villages into or near the mouth of mountain canyons where about 80% of the necessary food and other resources were to be found within a five-mile radius (Bean 1972). Occupation sites, beyond seasonal hunting and gathering camps, were rare above 5,000 feet.

Areas with dependable water supplies were essential, especially after the retreat of ancient Lake Cahuilla. Canyons of the San Jacinto Mountains had apparently been important habitation areas during Lake Cahuilla's last stand, including Palm, Andreas and Murray Canyons, which then as now had year-round streams. Many canyons of the Santa Rosa Mountains also had springs which supported palms and other sources of food and fiber. Whitewater Canyon was also an important wintering home (Bean, ca 1960) and is still an area of high sensitivity to modern Cahuilla. As stated by Bean, et al., "It can be assumed that spring sites were places known to the Cahuilla and used by them, and that there were villages or significant use sites near all major springs."

Archaeological resources associated with Native American occupation are less numerous in the eastern portion of the project area. This is generally due to drier conditions and less vegetation and wildlife in these areas. Areas supporting the highest density of Native American resources include the Whitewater Canyon in the San Gorgonio Pass, Mission Creek northwest of Desert Hot Springs, Big Morongo Canyon, the shoreline of Ancient Lake Cahuilla, and the numerous vegetation scarps with desert fan palms and mesquite associated with the diked groundwater along the San Andreas Fault Zone. Most sites

associated with these areas were typically small gathering and processing sites characterized by grinding stones, milling features and occasional large rock-lined roasting pits.

4.6.2.5 The Historic Period

Historically significant sites are generally more than forty-five to fifty years of age, but range from the period of the earliest European contacts, around the end of the 1700's, to about the end of World War II. Types of potentially significant sites range from permanent trails and highways to living areas and small-scale remains of single activities. The following discusses the historic period and also identifies significant historical resource areas.

Earliest European History

The Coachella Valley region was first explored by Spaniards making forays northward from Mexico along the coast and the Colorado River. The earliest documented period of Spanish influence began in 1769 when explorers moved into what was then referred to as Upper California to establish a military, political and religious foothold. The development of land routes to supply inland missions brought the Spanish into the region in the 1770's.

The Mexican and Post Mexican-American War Periods

In 1821, the region fell under the influence of Mexico, as it secured its independence from Spain under the Treaty of Cordova. The issuance of land grants and the establishment of agricultural enterprises, under the organization of rancheros, dominated the region for the next thirty years. The defeat of Mexico in the Mexican-American War and the signing of the Treaty of Guadalupe Hidalgo in 1848 ushered in a new era. With the region under American control and the discovery of gold in California, the stage was set for admittance of California into the Union in 1850, and led to the influx of peoples from many countries. The first U.S. Government Surveys were made in the Coachella Valley in 1855-56, by surveyors Henry Washington, John La Croze and James G. McDonald, who observed a number of trails and roads crossing the area.

Most of the valley remained unsettled and devoid of any evidence of land development until around the turn of the twentieth century. The only features recorded during that time were the Southern Pacific Railroad, Bradshaw Trail, and another trail along the base of the Little San Bernardino Mountains at the mouth of West Wide Canyon. Several railroad construction workers' camps were present by the early 1900s.

In 1926, the federal government established the National Highway System, which included the Ocean-to-Ocean Highway that ran through the valley along its central axis and with portions along the Southern Pacific Railroad. Exact dates of construction are unclear, with archival sources tracing it to the late 1930s. Right of way for this highway was granted by the federal government in November 1938, which was delineated as U.S. Route 60/70/99. A segment of Varner Road running through the center of the valley was part of the original Ocean-to-Ocean Highway.

During the 1910s, the County of Riverside improved the Bradshaw Trail into a county trail (the forerunner of today's Highway 111), which paved the way for further settlement and growth in the communities region of the Coachella Valley. By 1914, a railroad station named Edom, which contained a post office, was established in the valley. In 1939, the post office was moved to the community of

Thousand Palms and renamed after that community, which by that time had a population of about 20 permanent residents and 15 to 20 winter residents.

European Settlement

Non-Indian settlement in the Coachella Valley began in earnest in the 1870s, with the establishment of railroad stations along the Southern Pacific line. The rate of settlement increased significantly in the 1880s, after public lands were opened for claims under the Homestead Act, Desert Land Act, and other federal land laws. With the availability of underground water resources, farming became the dominant economic activity in the Coachella Valley.

The date palm was introduced to the area in 1904, and by the late 1910s the date industry was firmly established, extending from present-day Cathedral City south beyond Indio, which became the central agri-business district. The date palm became the area's main agricultural staple and the Coachella Valley became known as the "Arabia of America." However, as the easily accessible groundwater resource was tapped, its limitations were quickly realized and further growth of agriculture was limited until the completion of the Coachella Branch of the All-American Canal in 1949, which brought Colorado River water to the valley for irrigation and other uses.

The European settlement of the Coachella Valley was also given significant impetus by the early development efforts of John Guthrie McCallum and others in the Palm Springs area, starting about 1872. Surveys and land divisions began around 1884; the settlement was initially called "Palm City" and was changed to Palm Springs in 1887. Surface water from the Whitewater River and Snow Creek provided a dependable supply and supported rapid development. By 1890, the population had grown sufficiently to support the establishment of a U.S. Post Office. By the 1920s and 30s, Palm Springs became a favorite retreat for those in entertainment and show business, spawning a development trend that continues to this day.

By the 1920s, the resort industry had begun to spread throughout the Coachella Valley. The construction of the La Quinta Hotel in 1926 by Walter H. Morgan and his Desert Development Company provided the impetus for more "winter resort" development in the La Quinta area. In the early 1930s, E.S. "Harry" Keiner began subdividing the Cove area and marketing the sale of furnished weekend homes. Although the rest of the La Quinta area remained predominantly rural during this period, with scattered ranch-style houses, the planning area experienced rapid growth during the post-World War II era. The City of La Quinta was incorporated in May 1982 and, in recent years, has been recognized as the fastest growing city in California.

The construction of the Colorado River Aqueduct by the Metropolitan Water District (MWD), between 1933 and 1939, brought a number of permanent and temporary features to the northernmost portion of the valley. Among these were roads, power transmission lines, waterlines, and construction camps. The remains of one of eight construction camps, Camp Thousand Palms, have been discovered at the mouth of an unnamed canyon in the foothills of the Little San Bernardino Mountains.

By 1941, several rural settlements had been established in the area between the Southern Pacific Railroad (now Union Pacific) and the Indio Hills. Among these were Thousand Palms, Edom, Myoma, the Ferguson Ranch, the Thousand Palms Oasis, the Bar Bell Ranch, the Chuckwalla Ranch, and the Hunter Palms Ranch. The small community of Palm Village was established south of the railroad, on the north side of Highway 111 in present day Palm Desert. General George S. Patton selected Palm Village as the

site for his motor pool during World War II, as it was in close proximity to the Desert Training Center used for military training during the war.

4.6.2.6 Archaeological Methods, Survey and Results

Records Search and Literature Review

A records search and literature review was conducted by CRM TECH between August 27 and September 17, 2015 at the EIC at University of California, Riverside, which is the State of California's official cultural resource records repository for the County of Riverside. The records search included review of maps and records for previously identified cultural resources and existing cultural resources reports within a one-mile radius of the APE. Previously identified cultural resources include properties designated as California Historical Landmarks, Points of Historical Interest, or Riverside County Landmarks, as well as those listed in the National Register of Historic Places, the California Register of Historical Resources, or the California Historical Resources Inventory.

In addition, historical background research was conducted to identify the portions of the APE that may be sensitive for cultural resources from the historic period. Sources consulted during the research include primarily published literature in local history and historic maps of the Coachella Valley region. These maps are collected at the Science Library of the University of California, Riverside, and the California Desert District of the U.S. Bureau of Land Management, located in Moreno Valley.

Thirty previous cultural resources studies were identified that covered various portions of the project APE. The records search further indicated that two archaeological sites, 33-001769 (CA-RIV-1769) and 33-003440 (CA-RIV-3340H), had been recorded previously as lying partially within the APE.

Site 33-003440 was first recorded in 1990 as the remnants of the Edom station on the Southern Pacific Railroad, "consisting of the remains of wooden structures and a dense and diverse assemblage of historic debris" dating to the 1900-1945 era. The southwestern portion of the archaeological site encompassed a large portion, if not all, of SBA Well 4610-1. In 1999, however, it was reported that the southwestern portion of Site 33-003440 had been removed as a result of construction of the shopping center development within which SBA 4610-1 is currently located.

Site 33-001769, a large prehistoric habitation site, was first recorded in 1979, and encompasses the entire area of SBA Well 5718-1. Archaeological testing was conducted at the site in 1989-1990 and again in 2000, but no potentially significant buried cultural deposits were encountered at that time. The site has since been removed when the area was developed into residential tracts and a neighborhood shopping center.

Outside the APE but within a one-mile radius, EIC records showed that more than 400 additional historical/archaeological sites and nearly 150 isolates (localities with fewer than three artifacts) were previously recorded into the California Historical Resources Inventory. Among these, 260 sites and 144 isolates were predominantly of prehistoric origin, consisting mainly of habitation debris and scatters of ceramic and/or lithic artifacts, along with occasional human cremation remains. These prehistoric sites and isolates are heavily concentrated in the La Quinta-Indio-Indian Wells area, particularly along the shoreline of Holocene Lake Cahuilla in northern La Quinta and along the Indian Wells-Indio segment of the Whitewater River. Other than Sites 33-001769 and 33-003440, none of the recorded sites or isolates was found within or adjacent to the project APE.

In summary, the two project sites located in previously recorded archeological sites include SBA Well 4610-1 and SBA Well 5718-1. Although the integrity of the archaeological sites has been compromised by urban development, the potential for encountering archaeological resources at these sites is discussed in Section 4.6.4.3, Project Impacts.

Subsurface Sensitivity Assessment

There are three areas of relatively high archaeological sensitivity that have been roughly delineated in the project vicinity: the Seven Palms Ranch area, the Thousand Palms area, and the La Quinta-Indian Wells-Indio-Coachella-Thermal area (see Figure 4.6-2, Subsurface Archaeological Sensitivity Map). Only the La Quinta-Indian Wells-Indio-Coachella-Thermal area, the largest of the three, contains components of the project APE, specifically the La Quinta WBA Water Treatment Facility site, a one-mile segment of the raw water pipeline serving that facility, and 13 of the 29 well sites, for a total of 15 individual sites. The project sites located in the La Quinta-Indian Wells-Indio-Coachella-Thermal area are as follows:

La Quinta WBA Water Treatment Facility	SBA Well 5719-1	SBA Well 6726-1
La Quinta WBA Raw Water Pipeline	SBA Well 6701-1	SBA Well 6728-1
SBA Well 5711-2	WBA Well 6723-1	SBA Well 6734-1
SBA Well 5717-1	WBA Well 6724-1	SBA Well 6805-1
SBA Well 5718-1	WBA Well 6725-1	SBA Well 6808-1

Although the ground surface at all 15 locations has been disturbed to various degrees, there is still a possibility of encountering intact, potentially significant cultural remains below the surface and near-surface soils.

In comparison, the other components of the project APE are considered to be relatively low in sensitivity for prehistoric cultural remains. While the occurrence of some prehistoric archaeological features and artifacts is always possible, the likelihood of encountering potentially significant sites in portions of the APE not identified as being located in areas of relatively high archaeological sensitivity is considered low.

Native American Consultation

On August 28, 2015, CRM TECH submitted a written request to the State of California's Native American Heritage Commission (NAHC) for a records search in the Commission's sacred lands file. Following the NAHC's recommendations, CRM TECH contacted 18 tribal representatives [total of 9 tribes] in the region both in writing and by telephone between October 9 and 29, 2015 to solicit local Native American input regarding any potential cultural resource concerns over the proposed project. This consultation was conducted in conformance with Section 106 of the National Historic Preservation Act. The results are summarized in Table 4.6-1: Results of Native American Section 106 and AB 52 Consultations.

Pursuant to Assembly Bill 52 ([AB52], PRC Section 21080.3.1-21080.3.2)], CVWD solicited formal AB52 consultation in October 2015 via written correspondence with the following Native American tribes:

- Agua Caliente Band of Cahuilla Indians
- Augustine Band of Cahuilla Mission Indians
- Cabazon Band of Mission Indians
- Cahuilla Band of Indians
- Los Coyotes Band of Mission Indians

- Morongo Band of Mission Indians
- Ramona Band of Cahuilla Indians
- Santa Rosa Band of Cahuilla Indians
- Soboba Band of Luiseno Indians
- Torres Martinez Desert Cahuilla Indians

Responses were received from Agua Caliente, Augustine, Cabazon, Morongo, Soboba, as well as the Torres Martinez tribes indicating interest to pursue AB52 consultation regarding the project.

In December 2015, CVWD formally requested AB52 consultation with Agua Caliente, Augustine, Cabazon, Morongo, Soboba, and Torres Martinez tribes. The results of the formal request to consult are provided in Table 4.6-1 below.

As of April 2016, CVWD has met with tribal representatives from Agua Caliente, Augustine, and Torres Martinez tribes. As a result, the project is conditioned to provide Native American monitoring during construction-related earthwork activities at several project locations. CVWD will continue to coordinate with the regional tribes regarding monitoring sites. Table 4.6-1 summarizes the results of the Section 106 consultations and the AB52 tribal resources consultation. Copies of tribal consultation letters are included as an appendix to the DEIR.

TABLE 4.6-1: RESULTS OF NATIVE AMERICAN SECTION 106 AND AB 52 CONSULTATIONS	
Tribal Band	Response
Agua Caliente Band of Cahuilla Indians	<p>Section 106 Consultation: Katie Croft, archaeologist with the Tribal Historic Preservation Office of the Agua Caliente Band of Cahuilla Indians (ACBCI), states the APE to be a part of the tribe’s traditional use area. The tribe requests a systematic survey of the APE prior to the commencement of the proposed project, copies of the records search results with pertinent site records and reports, and a copy of the cultural resources report for tribal review. Additionally, the tribe requests that approved Native American Cultural Resource Monitor(s) be present during all ground-disturbing activities associated with the undertaking.</p> <p>AB52 Consultation: CVWD met with Patricia Garcia-Plotkin, Director of Tribal Historic Preservation and Katie Croft to formally initiate AB52 consultation (February 2016). A copy of the cultural resources report was provided to the ACBCI (February 2016). The project is conditioned to provide Native American monitoring during construction-related earthwork activities. CVWD continues to consult with the Agua Caliente Band of Cahuilla Indians regarding the project.</p>

TABLE 4.6-1: RESULTS OF NATIVE AMERICAN SECTION 106 AND AB 52 CONSULTATIONS	
Tribal Band	Response
Augustine Band of Cahuilla Indians	<p>Section 106 Consultation: Mary Ann Green, Chairperson of the Augustine Band of Cahuilla Indians (ABCI), indicates that the tribe is unaware of any specific cultural resources that may be affected by the undertaking and encourages further consultation with other tribes in the vicinity. In addition, she recommends full-time monitoring during the undertaking and requests to be notified immediately should any cultural resources be encountered. In a separate letter to the CVWD, Ms. Green states that “the Tribe has reason to believe that some forbears of the Tribe may be buried in Section 19 [of T6S R8E], and that funerary and other cultural artifacts of the Tribe or other Coachella Valley tribes may be within the APE.” In that letter, Ms. Green requests formal consultation with the CVWD regarding this undertaking.</p> <p>AB52 Consultation: CVWD met with David Limon Saldivar, Tribal Government Affair Manager, and Becky Ross, Environmental Coordinator, to formally initiate AB52 consultation (February 2016). A copy of the cultural resources report was provided to the ABCI (February 2016). The project is conditioned to adhere to the conditions listed in the ABCI letter. CVWD continues to consult with Augustine Band of Cahuilla Indians regarding the project.</p>
Cabazon Band of Mission Indians	<p>Section 106 Consultation: Judy Stapp of the Cabazon Band of Mission Indians identifies the APE as a part of the tribe’s traditional use area, but states that the tribe has no specific information regarding any sacred or religious sites or other properties of traditional cultural value in the APE. Nevertheless, Ms. Stapp recommends archaeological monitoring of all ground-disturbing activities during the undertaking.</p> <p>AB52 Consultation: No response was received to CVWD’s AB52 consultation request; and therefore consultation is concluded with the Cabazon Band of Mission Indians per the statutes in AB52.</p>
Moronggo Band of Mission Indians	<p>Section 106 Consultation: Raymond Huante of the Moronggo Band of Mission Indians indicates the project APE is outside the tribe’s traditional use area, and thus recommends contacting other tribes with cultural affiliation to the APE.</p> <p>AB52 Consultation: No response was received to CVWD’s AB52 consultation request; and therefore consultation is concluded with the tribe per the statutes in AB52.</p>
Soboba Band of Luiseño Indians	<p>Section 106 Consultation: Joseph Ontiveros of the Soboba Band states that his tribe has no specific concerns regarding the project and defers to the Torrez Martinez Desert Cahuilla Indians for further consultation.</p> <p>AB52 Consultation: The Soboba Band deferred AB52 consultation to Torrez Martinez and stated they did not have any specific concerns regarding known cultural resources in the specified areas that the project encompasses, but does request that the appropriate consultation continue to take place between concerned tribes. CVWD initiated consultation with Torrez Martinez, and continues to consult with the Torrez Martinez.</p>

Tribal Band	Response
Torrez Martinez Desert Cahuilla Indians	<p>Section 106 Consultation: Alesia Reed of the Torrez Martinez Desert Cahuilla Indians directed the inquiry to Michael Mirelez, Cultural Resources Coordinator.</p> <p>AB52 Consultation: CVWD met with Michael Mirelez to formally initiate AB52 consultation (March 2016). A copy of the cultural resources report was provided to the Torrez Martinez Desert Cahuilla Indians (March 2016). The project is conditioned to provide Native American monitoring during construction-related earthwork activities. CVWD continues to consult with Torrez Martinez Desert Cahuilla Indians regarding the project.</p>

Field Surveys

CRM TECH conducted field surveys of the project APE on September 11, 14, and 30, 2015, and January 28 and February 19, 2016. For properties where the ground surface had been previously disturbed, such as pipeline alignments along paved roads and the 29 existing well sites, surveys were conducted at a reconnaissance level from a motor vehicle or through a cursory visual inspection. The three treatment facility sites and three segments of potable water pipeline routes (to serve the CRRF) to be located on or adjacent to agricultural land were surveyed on foot at an intensive level by walking a series of parallel north-south or east-west transects at 10- to 15-meter (approximately 33- to 50-foot) intervals.

As noted above, the records search identified two previously recorded archaeological sites as lying partially within the APE (33-001769 and 33-003440); these sites include SBA Wells 4610-1 and 5718-1. During the field survey, it was confirmed that no archaeological features or artifacts associated with either site remained present in or near the APE. The ground surface at the remaining 27 well sites has been disturbed during construction of the existing facilities and no cultural resources were encountered during field surveys.

The proposed site of the La Quinta WBA Water Treatment Facility is currently undeveloped land located on the edge of the Greg Norman Golf Course. Surface soils at this location appear to have been disturbed due to adjacent development of the golf course, which lies on the same parcel. No cultural resources were encountered during field surveys at this site.

The site of the CRRF has historically been used for agricultural purposes. Except for a small agricultural pond at the site, the depth of past disturbance in that portion of the APE may be limited to two to three feet. A one-mile segment of the potable water pipeline alignment leading to the CRRF site traverses active agricultural land. The surface soils along this pipeline segment have been previously disturbed by agricultural activities. No cultural resources were encountered during field surveys at these sites.

It should also be noted that the CRRF site and the three water supply pipeline corridors that would be connected to it are also located on already disturbed lands having been in active agriculture for many years. This does not preclude the occurrence of cultural resources, however, at elevations around 170 feet below mean sea level, this portion of the project planning area was historically at the bottom of Holocene Lake Cahuilla, in an area where few prehistoric archaeological sites have been recorded in the past despite extensive survey coverage. The far southeastern portion of the planning area, therefore, is also considered to be of relatively low archaeological sensitivity. While the occurrence of some prehistoric archaeological features and artifacts is always possible, the likelihood of encountering potentially significant sites in this area, especially long-term habitation sites, appears to be low.

The site of the ID8 WBA Water Treatment Facility is largely undisturbed, with a dirt portion of 18th Avenue along the south boundary and two additional dirt roads traversing the southern and western portions of this site. The proposed future access road and pipeline alignment would occur on currently undisturbed lands extending north from the northeast corner of the proposed ID8 treatment site. Most of the raw and treated water pipeline alignments associated with this facility are located within paved public roads, where the roadbeds were typically excavated to the depths of four to six feet below the surface for the installation of utility lines. No cultural resources were encountered during field surveys at these sites.

In summary, field surveys conducted for the project did not encounter potential cultural or historical resources within or immediately adjacent to the project APE.

4.6.3 REGULATORY FRAMEWORK

4.6.3.1 Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) was established in 1966 by the Advisory Council on Historic Preservation (ACHP) with the goal to encourage federal agencies to factor historic preservation into federal project requirements. ACHP is an independent federal agency that promotes the preservation, enhancement, and productive use of the nation's historic resources, and advises government leaders on national historic preservation policy. The ACHP defines "historic properties" as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places."

Section 106 of the NHPA applies when two thresholds are met: 1) there is a federal or federally licensed action, including grants, licenses, and permits, and 2) that action has the potential to affect properties listed in or eligible for listing in the National Register of Historic Places. Section 106 requires each federal agency to identify and assess the effects of its actions on historic resources. If it is determined that a proposed action has the potential to affect historic properties, the federal agency must identify the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer (SHPO/THPO) to consult with during the process. The federal agency reviews background information, consults with the SHPO/THPO and others, seeks information from knowledgeable parties, and conducts additional studies as necessary. If the federal agency finds that no historic properties are present or affected, it provides documentation to the SHPO/THPO, who has 30 days to provide written comment or objection. If there is no objection, the agency proceeds with its undertaking. If the agency finds that historic properties are present, it proceeds to assess possible adverse effects.

National Register of Historic Places

Authorized under the NHPA, the National Register of Historic Places is the nation's official list of cultural resources that qualify for preservation. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. The following criteria are used to determine eligibility for inclusion in the National Register. These criteria have been developed by the National Park Service as provided for in the NHPA:

- a. Are associated with events that have made a significant contribution to the broad patterns of our history; or

- b. Are associated with the lives of persons significant in our past; or
- c. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d. That yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

In addition to the criteria for evaluation above, the National Register maintains a list of property types or circumstances that generally do not qualify for the National Register. These are: cemeteries, birthplaces or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; properties primarily commemorative in nature; and properties that have achieved significance within the past 50 years.

4.6.3.2 State

California Public Resources Code

The California Environmental Quality Act (CEQA) is the principal statute governing the environmental review of projects within the State. The State of California's Public Resources Code (PRC) establishes the definitions and criteria for "historical resources," which require similar protection to what the NHPA mandates for historic properties. According to PRC Section 5020.1(j), a "historical resource includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California."

If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083 regarding unique archaeological resources.

In addition, PRC Section 5097.98 states that if Native American human remains are identified within a project area, the landowner must notify and consult with the Native American Most Likely Descendant (MLD), as identified by the NAHC, to develop a plan for proper treatment and/or removal of the human remains and associated burial artifacts. These procedures are also addressed in Section 15046.5 of the CEQA Guidelines and within the California Health and Safety Code (see discussion below).

California Register of Historical Resources

For CEQA purposes, "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the Lead Agency (Title 14 CCR Section 15064.5(a)(1)-(3)). CEQA guidelines mandate that "generally a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR Section 15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

- a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

- b. Is associated with the lives of persons important in the State's past.
- c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- d. Has yielded, or may be likely to yield, information important in prehistory or history. (PRC Section 5024.1(c))

California Health and Safety Code

The California Health and Safety Code Section 7050.5 regulates the treatment of human remains. According to the Code, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to further investigation. If the coroner recognizes, or has reason to believe that the human remains are those of a Native American, he or she shall contact the NAHC to determine the Most Likely Descendant (MLD). Consultation with the designated MLD will determine the final disposition of the remains.

4.6.3.3 Local

Several jurisdictions within the project area have organized committees, municipal codes, and/or ordinances designed to protect historic properties and cultural resources within their boundaries. None of the proposed project sites are identified as being located within a local historic conservation district or considered a site of local historic importance to a particular jurisdiction. Summaries of existing local committees are as follows:

City of Indio: Historic Preservation Commission

The City of Indio's Historic Preservation Commission was established for the following reasons (Municipal Code Chapter 32.30):

- To create and recommend policy in conformity with the Indio General Plan for historic preservation.
- Develop a local historic register and recommend resources for placement on local, state and national historic registers.
- Evaluate and make recommendations to the City Council on projects which impact historic resources, and
- Recommend for adoption by the City Council historic preservation incentive programs and public information activities to promote these programs to the public.

City of La Quinta: Historic Preservation Commission

The City of La Quinta has an established Historic Preservation Commission made up of five members (Municipal Code Chapter 7). In general, the Commission's primary function is to serve as an advisory body to the City Council and Planning Commission in all matters relating to the identification, protection, restoration and retention of historic sites within the City.

City of Palm Desert: Cultural Resources Preservation Committee

As part of the Palm Desert Historic Preservation Ordinance (Municipal Code Chapter 29.30), the Cultural Resources Preservation Committee was established for the purpose of preserving areas and specific buildings within the City that reflect elements of its cultural, social, economic, political, architectural, and archaeological history.

City of Rancho Mirage: Historic Preservation Commission

The five member Historic Preservation Commission was established to provide a way to identify certain structures and sites which represent eras, events or persons important in the City's cultural, archaeological, social, economic, architectural and/or political history for the purpose of encouraging the preservation, improvement and promotion of City properties (Municipal Code Chapter 2.34).

City of Desert Hot Springs Community and Cultural Affairs Commission

Desert Hot Springs Community and Cultural Affairs Commission functions in an advisory role to the City Council (City Ordinance No. 2002-07 of the Municipal Code) to:

- Recommend a planned approach for the delivery of leisure, recreational and community services, especially for the youth and seniors of the community;
- Recommend and implement programs and activities as approved by Council which foster mutual understanding and respect among the City's racial, religious, ethnic and nationality groups;
- Assess the public art needs of the City and make recommendations on the development, maintenance, and preservation of public art; and
- Analyze community programs' effectiveness and needs.

Riverside County Historical Commission

The Riverside County Historical Commission is charged with the following duties:

- To advise the Board of Supervisors on historic matters within the County to discover and identify persons, events, and places of historical importance;
- To make recommendations relating to the preservation of historic sites and structures;
- To make recommendations pertaining to the County historical parks, sites, and museums and to encourage their development; and
- To cooperate with and obtain assistance from related agencies.

The unincorporated community of Thermal is located within the County of Riverside and is therefore subject to rules and regulations of the County's Historical Commission.

4.6.4 IMPACTS AND MITIGATION MEASURES

4.6.4.1 Significance Criteria

According to Appendix G of the CEQA Guidelines, a project would have a significant effect on cultural resources if it would:

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

4.6.4.2 Approach to Analysis

The Area of Potential Effect was developed for the proposed project to identify all areas where construction-related ground disturbance could occur in order to evaluate the project's potential impacts on cultural resources. Impacts were assessed using the significance criteria above. During construction of the project, ground disturbance and excavation could disturb known and previously unrecorded buried cultural resources, including archaeological and paleontological resources and human remains. Construction-related vibration levels also have the potential to affect nearby historic resources. Project operations would not cause additional ground disturbance or vibration, and thus would not result in impacts to cultural resources. Therefore, the analysis focuses on impacts from construction activities.

Areas of No Project Impact

The project would not result in impacts related to one of the significance criteria listed above. This criterion is not discussed further in the impact analysis for the following reasons:

- a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.

The Cultural Resources Report (CRM TECH 2015) indicates that there are no historic properties or historical resources known to be present within or adjacent to the APE. No other sites, features, artifact deposits, buildings, structures, or objects of historical or prehistoric origin were encountered or identified during the field investigations. Therefore, the proposed project would have no impact, including construction vibration impacts, to a historical resource as defined in Section 15064.5 of the CEQA Guidelines, and this impact is not discussed further.

4.6.4.3 Construction Impacts and Mitigation Measures

Impact CUL-1: Project construction may result in a substantial adverse change in the significance of an archaeological resource and to unknown archaeological resources during construction and/or encounter unknown human remains. (Less than Significant with Mitigation)

Background research results indicate that 15 project sites are located within the La Quinta-Indian Wells-Indio-Coachella-Thermal area of high sensitivity for subsurface prehistoric archaeological deposits. The project sites with potential to contain subsurface archaeological deposits include the following:

La Quinta WBA Treatment Facility	SBA Well 5719-1	SBA Well 6726-1
La Quinta Raw Water Pipeline	SBA Well 6701-1	SBA Well 6728-1
SBA Well 5711-2	WBA Well 6723-1	SBA Well 6734-1
SBA Well 5717-1	WBA Well 6724-1	SBA Well 6805-1
SBA Well 5718-1	WBA Well 6725-1	SBA Well 6808-1

Construction activity in these areas could result in disturbance to unearthed archaeological resources on these project sites.

Implementation of Mitigation Measure CUL-1 would reduce potential archeological impacts to a less than significant level.

Mitigation Measure CUL-1: The following measure shall be applied to project sites due to Native American nexus and physical relation to areas of high archaeological sensitivity.

1. Construction-related earth-moving operations reaching beyond the disturbed surface and near-surface soils shall be monitored by a qualified archaeologist and Native American monitor. If cultural materials more than 50 years of age are discovered, they will be field-recorded and evaluated. The monitors shall be prepared to recover artifacts quickly to avoid construction delays, but will have the power to temporarily halt or divert construction equipment to allow for controlled archaeological recovery if a substantial cultural deposit is encountered.
2. CVWD shall prepare a construction archaeological monitoring program, and the program shall be designed and implemented in coordination with local Native American groups, such as Agua Caliente Band of Cahuilla Indians, the Augustine Band of Cahuilla Indians, and the Cabazon Band of Mission Indians, who have requested and in some cases wish to participate in such monitoring.
3. Collected artifacts shall be processed, catalogued, analyzed, and prepared for permanent curation in a repository with permanent retrievable storage that would allow for additional research in the future.
4. Archaeological site records shall be prepared to document the cultural remains discovered during monitoring and submitted to the Eastern Information Center for incorporation into the California Historical Resources Inventory.
5. Should unknown archeological or tribal materials become unearthed, the qualified archeologist shall prepare a findings report summarizing the methods and results of the monitoring program, including an itemized inventory and a detailed analysis of recovered artifacts upon completion of the field and laboratory work. The report shall include an interpretation of the cultural activities represented by the artifacts and a discussion of the significance of all archaeological or tribal finds. The submittal of the report to the CVWD and the SWRCB, along with final curation of the recovered artifacts, will signify completion of the monitoring program and, barring unexpected findings of extraordinary significance, the mitigation of potential project impacts on cultural and tribal resources.

Impact CUL-2: Project construction may result in a substantial adverse change in the significance of a paleontological resource and to unknown paleontological resources during construction. (Less than Significant with Mitigation)

Background research results indicate that four project sites are located within the La Quinta-Indian Wells-Indio-Coachella-Thermal area of high sensitivity for subsurface paleontological deposits. The project sites with potential to contain subsurface paleontological deposits include SBA 6805-1 and 6808-1, as well as the CRRF site and its water supply pipeline alignment, all of which have been subject to extensive and in some cases on-going disturbance, including annual cultivation.

Mitigation Measure CUL-2: The following measure shall be applied to SBA 6805-1 and 6808-1, as well as the CRRF and its water supply pipeline alignment:

Construction-related earth-moving operations at these four sites reaching beyond the disturbed surface and near-surface soils shall be monitored by a qualified paleontologist. If sensitive paleontological materials are discovered, they will be field-recorded and evaluated. The monitor shall be prepared to recover artifacts quickly to avoid construction delays, including temporarily halting or diverting construction equipment, in the immediate area, to allow for controlled resource recovery if a substantial paleontological deposit is encountered.

4.6.4.4. Operation Impacts and Mitigation Measures

Project operation is not expected to result in adverse impacts to paleontological, archaeological, tribal, or historic resources.

4.6.5 SIGNIFICANCE AFTER MITIGATION

Impacts to cultural resources associated with construction of the project would be reduced to a less than significant level by adherence to the mitigation measures set forth above.

4.6.6 CUMULATIVE IMPACTS

The geographic scope of analysis of potential cumulative impacts on cultural, historical, tribal, and paleontological resources includes the Areas of Potential Effect (APE), the immediate vicinity around each of the project facility sites and the traditional use areas of the Cahuilla people in the Coachella Valley. The project would contribute considerably to cumulative impacts if it were to have a significant adverse effect on these cultural, historical or paleontological resources in the Coachella Valley. Impacts to paleontological resources could also be cumulatively substantial if the project impacted any unique geological features. This analysis was performed using the growth projection approach consistent with State CEQA Guidelines Section 15130(b)(1)(B).

This DEIR has assessed the potential impacts of the proposed project on cultural, historical, tribal, and unique paleontological geological resources and indicates that the project will not significantly impact these resources. In addition, mitigation measures have been set forth in this DEIR requiring that if such resources are encountered during project construction, impacts to these resources will be mitigated to levels that are less than significant. Therefore, the proposed project's incremental impacts to these resources, if any, will not be cumulatively considerable.

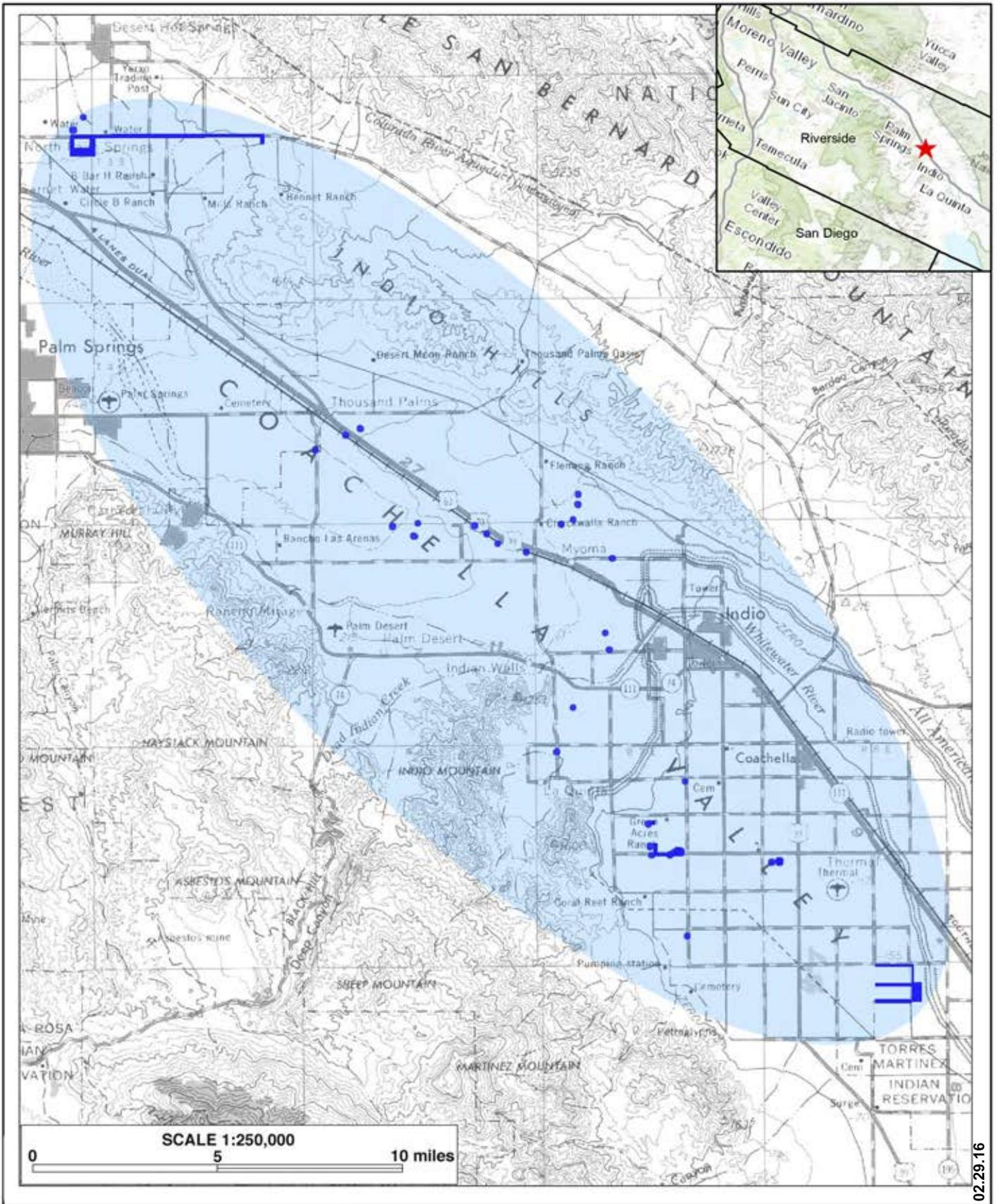
4.6.7 REFERENCES

Apple, Steven A. 1980. *An Archaeological Assessment of the Bermuda Dunes Property, Tentative Tract 13986, Indio, Riverside County, California*. On file, Eastern Information Center, University of California, Riverside.

Arkush, Brooke S. 1990. *California Historical Resources Inventory site record forms, 33-003340 (CA-RIV-3340H)*. On file, Eastern Information Center, University of California, Riverside.

- Ashkar, S., and Prendergast, E. 1999. *California Historical Resources Inventory site record forms, 33-003340 (CA-RIV-3340H; update)*. On file, Eastern Information Center, University of California, Riverside.
- Bean, Lowell John. 1978. 'Cahuilla' in *Handbook of North American Indians; Vol. 8: California*, edited by Robert F. Heizer; pp. 575-587. Smithsonian Institution, Washington, D.C.
- Bean, Lowell John, Sylvia Brakke Vane, and Jackson Young. October 1981. *The Cahuilla and the Santa Rosa Mountain Region: Places and Their Native American Association*, edited by Russell L. Kaldenberg. Cultural Systems Research, Inc. for the U.S. Bureau of Land Management.
- Brock, James, and Smith, Brenda. 2000. *Phase I and Phase II Archaeological Assessments for the Proposed Monticello Project, West Side of Jefferson Street between Fred Waring Drive and Miles Avenue, La Quinta, California*. On file, Eastern Information Center, University of California, Riverside.
- Brown, M. A. 1979. *Cultural Resource Assessment for the Desert Palace Project, Tentative Tract 13986, near Indio, Riverside County, California*. On file, Eastern Information Center, University of California, Riverside.
- Casebier, Dennis. 1989. *Guide to the East Mojave Heritage Trail—Rocky Ridge to Fenner*. Tales of the Mojave Road Publishing Company, Norco, California.
- California Environmental Quality Act (CEQA). 2015. *CEQA Statute and Guidelines, Appendix G: Environmental Checklist Form*.
- CRM TECH, Inc. 2015. *Identification and Evaluation of Historic Properties: Chromium-6 Water Treatment Facilities Project*. November 16, 2015.
- CRM TECH. 2010. *Paleontological Resources Technical Report*. City of La Quinta General Plan.
- CSRI (Cultural Systems Research, Inc.). 2002. *The Native Americans of Joshua Tree National Park: An Ethnographic Overview and Assessment Study*. Retrieved from http://www.cr.nps.gov/history/online_books/jotr/history6.htm.
- Dibblee Geology Center. 2004. *Geologic Map of the Palm Springs Quadrangle, Riverside County, California, Map #DF-123*. Santa Barbara, California.
- Dibblee Geology Center. 2008a. *Geologic Map of the Palm Desert and Coachella 15-Minute Quadrangles, Riverside County, California, Map #DF-373*. Santa Barbara, California.
- Dibblee Geology Center, 2008b. *Geologic Map of the Thousand Palms and Lost Horse Mountain 15-Minute Quadrangles, Riverside County, California, Map #DF-572*. Santa Barbara, California.
- Dibblee, Thomas W., Jr. 1967. *Geology of the Western Mojave Desert, California*. U.S. Geological Survey Professional Paper 522. Washington, D.C.

- Farshad, Majeed (Supervising Engineer, County of Riverside Transportation Department). 2013. Telephone interview. 23 July 2013.
- Gunther, Jane Davies. 1984. *Riverside County, California, Place Names: Their Origins and Their Stories*. J. D. Gunther, Riverside.
- Johnston, Francis J. 1987. *The Bradshaw Trail; revised edition*. Historical Commission Press, Riverside.
- Knecht, Arnold A. 1980. *Soil Survey of Riverside County, California: Coachella Valley Area*. Soil Conservation Service, U. S. Department of Agriculture, Washington D.C.
- Kroeber, Alfred L. 1925. *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Washington, D.C.
- Lafin, Patricia. 1998. *Coachella Valley California: A Pictorial History*. The Donning Company, Virginia Beach, Virginia.
- Robinson, W. W. 1948. *Land in California*. University of California Press, Berkeley.
- Rogers, Thomas H. 1965. *Geological Map of California, Santa Ana Sheet (1:250,000)*. California Division of Mines and Geology, Sacramento.
- Ross, Delmer G. 1992. *Gold Road to La Paz: An Interpretive Guide to the Bradshaw Trail*. Tales of the Mojave Road Publishing Company, Essex, California.
- Schaefer, Jerry. 1994. *The Challenge of Archaeological Research in the Colorado Desert: Recent Approaches and Discoveries*. Journal of California and Great Basin Anthropology 16(1):60-80.
- Scott, Eric and Kathleen Springs. 2003. *CEQA and Fossil Preservation in California*. Environmental Monitor, Fall 4 10, Association of Environmental Professionals.
- Shields Date Gardens. 1957 *Coachella Valley Desert Trails and the Romance and Sex Life of the Date*. Shields Date Gardens, Indio.
- Strong, William Duncan. 1929. *Aboriginal Society in Southern California*. University of California Publications in American Archaeology and Ethnology 26. Reprinted by Malki Museum Press, Banning, California, 1972.



Source: CRM Tech, 2016

Figure 4.6-1
Project APE Vicinity Map



