

## 4.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

### 4.5.1 Introduction

This section evaluates the potential of the La Entrada Specific Plan, focusing on the Phase 1 area to impact cultural and paleontological resources. Cultural resources are sites, buildings, structures, objects, and districts over 50 years old that may have traditional or cultural value for the historical significance they possess. Paleontological resources include fossil plants and animals and evidence of past life such as trace fossils and tracks. The information and analysis presented in this section are from the City of Coachella (City) General Plan Conservation Element (1996), the *Cultural Resource Survey of the Phase 1 Project Area* (LSA Associates, Inc. [LSA] June 2013) and the *Paleontological Resource Survey* (LSA May 2013). The City's General Plan Conservation Element is available for review at the City of Coachella. The cultural and paleontological resources reports are provided in Appendix F, Cultural Resources, in this Environmental Impact Report (EIR).

In addition to the project-specific reports for cultural and paleontological resources cited above, several existing reports prepared for other projects, listed in Table 4.5.A, were also used in determining the presence of resources on and in the vicinity of the Specific Plan site and the potential for the project to impact those resources.

The term "site" is used in two contexts in this section:

- "Specific Plan site" and the "project site" should be interpreted to mean the 2,200-acre (ac) site proposed for the land uses included in the Specific Plan.
- "Cultural resources site" and "paleontological resources site" should be interpreted to mean specific locations of documented cultural materials or artifacts.

### 4.5.2 Methodology

The methods to determine the presence of cultural and paleontological resources on and in the vicinity of the project site are described in the following sections.

**Methodology for Cultural Resources.** The methodology for cultural resources included a records search and review of available studies, a site survey, Native American consultation, and a search of the Sacred Lands File (SLF), as described in the following sections.

**Records Search.** A records search was conducted to identify previously recorded or otherwise known cultural resources, and cultural resource studies for areas on or in the vicinity of the project site. Specifically, on August 1, 2012, a records search was completed by an LSA historian at the San Bernardino Archaeological Information Center (SBAIC) of the California Historical Records Information System (CHRIS) located at the San Bernardino County Museum in

**Table 4.5.A: Summary of Previous Cultural Resources Studies**

<b>Type of Study</b>	<b>Geographic Area Covered</b>	<b>Title, Author, and Date</b>	<b>Availability of the Study/ Report</b>
Survey	La Entrada Specific Plan site	Archaeological Investigations at GPA No. 88-8/Specific Plan No. 88-3, Coachella, California (Keith D. Rhodes, The Keith Companies, 1988)	On file at the EIC at UCR
Survey	La Entrada Specific Plan site	A Cultural Resources Assessment of the 2,188-acre Lomas Del Sol Specific Plan Area located South of I-10 and East of the Coachella Canal, Coachella Valley, Riverside County (Robert S. White, and Laura S. and David M. Van Horn, 2006)	On file at the EIC at UCR
Survey	West part of the Phase 1 area on the La Entrada Specific Plan site near the Coachella Canal and the SCE power lines	Cultural Resources Investigations of the Proposed Indio to Salton Lightguide System Project, AT&T Fiber Optic Route, 46.2 Miles in Riverside and Imperial Counties, California (Kyle L. Napton and E.A. Greathouse, California State University, Stanislaus Institute for Archaeological Research, 1993)	On file at the EIC at UCR
Survey	West part of the Phase 1 area on the La Entrada Specific Plan site near the Coachella Canal and the SCE power lines	Phase 1 Archaeological Assessment of Approximately Two Miles for the Pierce Street Transmission Water Main near the City of Coachella, Unincorporated Riverside County, California (Elizabeth L. Denniston, Applied Earthworks, Inc., 2007)	On file at the EIC at UCR
Survey and Eligibility Assessment	West part of the Phase 1 area on the La Entrada Specific Plan site near the Coachella Canal and the SCE power lines	Archaeological Survey Report and National Register of Historic Places Eligibility Assessment – Imperial Irrigation District Coachella-Midway-East Mesa 230 kV Transmission Line Project, Riverside and Imperial Counties, California (Thomas T. Taylor, 1987)	On file at the EIC at UCR
Significance Evaluation	West part of the Phase 1 area on the La Entrada Specific Plan site near the Coachella Canal and the SCE power lines	A History and Evaluation of the Coachella Canal, Riverside and Imperial Counties, California (Jerry Schaefer and Sinéad Ní Ghabhláin, ASM Affiliates, Inc., 2003)	On file at ASM Affiliates, Inc., 543 Encinitas Boulevard, Suite 114, Encinitas, California
Survey	Adjacent to and south of the Phase 1 area	Historical/Archaeological Resources Survey Report: Valley Rock & Sand Mine Expansion near the City of Thermal, Riverside County, California (Bai Tang, Michael Hogan, Matthew Wetherbee, and Daniel Ballester, CRM Tech., 2005)	On file at the EIC at UCR

**Table 4.5.A: Summary of Previous Cultural Resources Studies**

<b>Type of Study</b>	<b>Geographic Area Covered</b>	<b>Title, Author, and Date</b>	<b>Availability of the Study/ Report</b>
Survey	Adjacent to and west of the Phase 1 area	Letter Report: Cultural Resource Inventory of Two Parcels of Public Land Proposed for Exchange with the Nature Conservancy (Mike Mitchells, Bureau of Land Management, Palm Springs – South Coast Resource Area, 1989)	On file at the EIC at UCR
Survey	Adjacent to and west of the Phase 1 area	Historical/Archaeological Resources Survey Report: Assessor’s Parcel Nos. 603-350-006, -008, and 603-370-001, in the City of Coachella, Riverside County, California (Bai Tang and Michael Hogan, CRM Tech, 2004)	On file at the EIC at UCR
Survey	Surveys for areas within 1 mile of the La Entrada Specific Plan site	Final: Phase 1 Cultural Resources Survey Report for the Jeffredo Property, APN 763-070-006, City of Coachella, Riverside County, California (Michael Dice, Michael Brandman Associates, 2005)	On file at the EIC at UCR
Survey	Surveys for areas within 1 mile of the La Entrada Specific Plan site	Phase 1 Cultural Resources Assessment, Jeffredo Property, Coachella, Riverside County, California (Michael Dice and Jennifer Sanka, Michael Brandman Associates, 2006)	On file at the EIC at UCR
Survey	Surveys for areas within 1 mile of the La Entrada Specific Plan site	Historical/Archaeological Resources Survey Report: The Brandenburg Butters Project, Tentative Tract Map No. 33589, City of Coachella, Riverside County, California (Bai Tang and Michael Hogan, CRM Tech, 2006)	On file at the EIC at UCR
Survey	Surveys for areas within 1 mile of the La Entrada Specific Plan site	Historical/Archaeological Resources Survey Report: Desert Lakes Specific Plan/EIR, City of Coachella, Riverside County, California (Bai Tang, Michael Hogan, Thomas Shackford, and Daniel Ballester, CRM Tech, 2006)	On file at the EIC at UCR
Survey	Surveys for areas within 1 mile of the La Entrada Specific Plan site	Cultural Resources Assessment of Four Potential Sites for a New State Prison, Riverside County, California (Jim Woodward and Kathleen Davis, Department of Parks and Recreation, 1984)	On file at the EIC at UCR

Source: Cultural Resource Survey Phase 1 Project Area of the La Entrada Specific Plan, Coachella Valley, Riverside County, California (LSA Associates, Inc., 2013).  
 EIC = Eastern Information Center  
 SCE = Southern California Edison  
 UCR = University of California, Riverside

Redlands. The records search included review of all previously recorded historic and prehistoric archaeological sites within 1 mile (mi) of the boundary of, and including, the Specific Plan project site. It also included review of known cultural resource survey and excavation reports. The California State Historic Resources Inventory was also examined to determine whether there are any federal or State listed historical resources on or in the vicinity of the project site.

The records search provided information related to the archaeology, ethnography, and history of the project site and the surrounding areas. As shown in Table 4.5.A, two previous surveys covered the entire La Entrada Specific Plan site and the remaining studies covered areas adjacent to the La Entrada Specific Plan site.

**Field Survey.** A pedestrian survey of the Phase 1 area on the Specific Plan site was conducted by LSA personnel Ivan Strudwick and Logan Freeberg on February 4 through 8, 2013. The Phase 1 area on the Specific Plan site is shown on Figure 3.12, Project Phasing, in Chapter 3.0, Project Description. The surface of the survey area was composed of ravines with unconsolidated silts and sands cut through gray cobble and pebble conglomerate. The Phase 1 area was systematically surveyed by walking parallel linear transects separated by approximately 24 to 39 feet (ft). Ridges on the Phase 1 area were surveyed lengthwise; canyons and washes were surveyed parallel to drainages and ridges. Steep slopes were not surveyed, but these were limited to the sides of ridges and were often less than the 24 to 39 ft wide survey transects. The La Entrada project site covers approximately 2,200 ac all of which were previously surveyed for cultural resources as shown in Table 4.5.A. As a result, for this program level EIR, the site survey focused on the approximately 500 ac in the Phase 1 area.

**Native American Consultation and SLF Search.** Native American consultation for the proposed project is being conducted per the requirements in Senate Bill 18 (SB 18). On July 20, 2012, the Native American Heritage Commission (NAHC) sent a letter to the City of Coachella in response to the Notice of Preparation (NOP) for the project EIR that listed Native American contacts. On July 31, 2012, the City sent a letter to all the individuals on the list.

A letter requesting a search of the SLF for the presence of Traditional Cultural Properties (TCPs) within and in the vicinity of the Specific Plan site was sent to the NAHC on August 22, 2012. TCPs are traditional Native American use areas or Native American cultural resources. The NAHC responded on August 23, 2012, stating that Native American cultural resources were not identified in the project area. However, in a telephone conversation on August 23, 2012, Dave Singleton, NAHC Program Analyst, clarified that the area in general is considered to be very sensitive for cultural resources, and that there are known resources in proximity to the Specific Plan site. The list of Native American contacts provided with the results of the August 22, 2012, SLF search contained the same individuals and Tribes as initially contacted with the July 31, 2012, letter. Therefore, no additional letters were sent.

The following Native Americans and Tribes were contacted:

- Cabazon Band of Mission Indians, David Roosevelt, Chairperson
- Santa Rosa Band of Mission Indians, Shane Chapperosa, Chairman

- Augustine Band of Cahuilla Mission Indians, Mary Ann Green, Chairperson
- Ramona Band of Cahuilla Mission Indians, Joseph Hamilton, Chairman
- Morongo Band of Mission Indians, Michael Contreras, Cultural Heritage Program
- Torres-Martinez Desert Cahuilla Indians, Mary Resvaloso, Chairperson
- Torres-Martinez Desert Cahuilla Indians, Diana L. Chihuahua, Vice Chairperson, Cultural Resources
- Agua Caliente Band of Cahuilla Indians, Tribal Historic Preservation Officer (THPO), Patricia Tuck
- Augustine Band of Cahuilla Mission Indians, Karen Kupcha
- Cahuilla Band of Indians, Chairperson

No initial responses from Native Americans were received as a result of the July 31, 2012, letter requesting any information regarding cultural resources that could be impacted by the proposed project. Between August 23 and 31, 2012, two rounds of follow-up communication were attempted in the form of phone calls and/or emails. As a result, responses were received from six Tribes, as described below.

- **Cabazon Band of Mission Indians:** Judy Stapp, Director of Cultural Affairs, stated that she sent a letter dated July 3, 2012, to the City regarding the NOP for the proposed project. In the letter she said that the Tribe did not know of specific resources that could be affected by the proposed project and did not request government-to-government consultation at that time. However, she recommended archaeological monitoring during project ground-disturbing activities due to the overall sensitivity of the area.
- **Santa Rosa Band of Mission Indians:** Steven Estrada, Cultural Resources, stated that he had not received the letter and requested that it be sent again by email. He stated he would respond if he had concerns. The second letter was emailed on August 31, 2012. As of September 7, 2012, no response had been received.
- **Los Coyotes Band of Mission Indians:** An administrator stated that she would forward the message and that the Tribe would comment if there were concerns. As of September 7, 2012, no comments had been received.
- **Augustine Band of Cahuilla Mission Indians:** David Saldoval, Cultural Resources, stated that he had reviewed the letter, and a response from the Tribe was forthcoming. A response letter dated September 14, 2012, was received from Mary Ann Green, Chairperson. The letter stated that the Band was unaware of specific cultural resources that might be affected by the project. The Band recommends that tribes in the immediate vicinity be contacted, that a qualified Native American monitor be present on site during the preconstruction and construction phase of the proposed project, and that the Band be notified immediately of any cultural resources discoveries.
- **Torres-Martinez Desert Cahuilla Indians:** Roland Ferrer, Planning Director, responded by email on September 7, 2012. He requested government-to-government consultation per SB 18 and directed consultation to Matt Krystall, Tribal Resources Manager, as the main point of

contact. The City has continued SB 18 consultation efforts with Mr. Krystall as part of the Phase 1 project.

- **Agua Caliente Band of Cahuilla Indians Tribal Historic Preservation Officer:** Patricia Garcia-Tuck sent a letter addressed to the City via email. The letter stated that the Tribe knew of several resources within the Specific Plan site, including Indian trails, and that a known ethnographic resource, Palaiyi, is potentially located near or within the boundary of the project site. Because of the sensitivity of the area, the Tribe had outlined numerous requests in the letter, including monitoring by a Tribal approved monitor; thorough background research of Cahuilla traditions; consultation with local tribes to discuss the development and potential mitigation and treatment of resources; copies of associated reports; and government-to-government consultation per SB 18. On January 24, 2013, the City responded by letter stating that it welcomed the opportunity to consult with the Agua Caliente Band of Cahuilla Indians.

No responses were received from the Ramona Band of Cahuilla Mission Indians, the Morongo Band of Mission Indians, or the Cahuilla Band of Indians. Details regarding the Native American SB 18 consultation, including written correspondence, are provided in the *Cultural Resources Survey* report (Appendix F).

**Methodology for Paleontological Resources.** The methodology for paleontological resources included a locality search and a field survey of the Phase 1 area as described in the following sections. The probability for discovery of paleontological resources within the boundary of the Phase 1 area was determined through background research and a field survey completed in conjunction with the cultural resource survey. Background research was conducted to: (1) identify previously recorded or otherwise known fossil localities in or adjacent to the Phase 1 area; and (2) obtain information about the geological setting of the Phase 1 area and the potential for geological formations underlying the Phase 1 area for containing fossils.

As noted, the focus of the locality search and the field survey was the Phase 1 area. However, geologic resources including potentially fossiliferous formations tend to extend over large areas. As a result, information regarding the geology of the Phase 1 area can be extrapolated to identify the potential for formations under the rest of the Specific Plan site to contain paleontological resources.

**Locality Search.** Background research consisted of a fossil locality search at the Department of Geological Science at the San Bernardino County Museum (SBCM) in the City of Redlands. That locality search was completed, using the Regional Paleontologic Locality Inventory (RPLI) and examination of geologic maps, by the Division of Geological Sciences of the SBCM curator Eric Scott on April 24, 2013. In addition, LSA personnel conducted a search of geologic maps and paleontological records maintained at LSA and online for additional information with regard to the geology of the Phase 1 area.

The locality search completed using RPLI indicated that there are no localities within the Phase 1 area. The locality search did indicate that two localities (SBCM 5.9.22 and SBCM 5.9.23) are located 0.5 mi north of the Phase 1 area. These localities yielded tusks of extinct mammoth from the Palm

Springs Group, which although not exposed on the surface of the Phase 1 area, may be present at depth and could be exposed during excavation associated with development of the property.

**Field Survey.** As described earlier, a pedestrian survey of the Phase 1 area on the Specific Plan site was conducted by LSA personnel Ivan Strudwick and Logan Freeberg on February 4 through 8, 2013. No fossils were observed in the Phase 1 area during that field survey. The surveyors observed sediments within the Phase 1 area that are also consistent with the geology as it has been mapped.

### **4.5.3 Cultural Resources Existing Environmental Setting**

This section describes the baseline conditions and cultural setting for the project site, as determined and developed by the records search at the SBAIC, consultation with potentially interested parties, and the field survey described above.

**Records Search Results.** The records search conducted on August 1, 2012, indicated that 14 cultural resource evaluations, described in Table 4.5.A, have been conducted within 1 mi of the proposed Phase 1 area. The entire Specific Plan site has been surveyed twice, as part of the Rancho Coachella Development project, and later as part of the 2,188 ac Lomas del Sol Specific Plan, now known as the La Entrada Specific Plan. Four additional cultural resource projects were conducted along the western portion of the Phase 1 area near the Coachella Branch of the All-American Canal (Coachella Canal) and the Southern California Edison lines. Of these four projects, two were surveys, one was a combination survey/eligibility assessment, and one was a significance evaluation. In addition, three surveys have been conducted directly adjacent to the Phase 1 area: one to the south and two to the west. Another five survey reports are available within 1 mi of the Phase 1 area. As indicated by previous cultural resource work, a total of 27 cultural resources exist within the Phase 1 area and a 1 mi radius around the Phase 1 area. The 27 sites include 21 historic resource sites and 6 prehistoric sites. Four of these resources are within the Phase 1 area. These sites are CA-RIV-4844 (prehistoric trail), CA-RIV-4852 (broken quartz prospect locales and scattered rock cairns described as human-made piles of stones), CA-RIV-4894 (prehistoric trail), and P-33-005905 (historic Coachella Canal). These four resources are described further below.

**Field Survey Findings.** The field survey conducted in 2013 on the Phase 1 part of the Specific Plan site resulted in the recording of no new cultural resources. Evidence of bulldozer activity, motor dirt-bike racing, geotechnical work, and scattered isolated modern aluminum beer cans and other trash was found through the Phase 1 area. Dirt roads exist throughout most of the Phase 1 area, with most major ones paralleling the Coachella Canal. Bulldozer activity has occurred sporadically throughout the parcel, and much of it is associated with geotechnical work, which also included excavation of trenches. Motorcycle dirt bike racing activities have left tracks in the northern portion of the Phase 1 area, and as the tracks often lead down the low ridges in this area, they can be easily confused with potential prehistoric trails.

The four previously recorded cultural resources, which were found to be unchanged since they were last updated, are:

- CA-RIV-4844 is a prehistoric ridgetop trail, alongside of which is site CA-RIV-4852. The trail measures approximately 9.8–13.8 inches wide. It is ill-defined in places, and is currently used by coyotes and jackrabbits. The trail may have once been used by humans; however, in its existing condition it retains none of its original integrity.
- CA-RIV-4852 consists of disturbed historic rock cairns (man-made piles of stones) and milky quartz shatter, which resembles a broken cobble. The cairns are now scattered piles of fist-sized rock, and the shattered milky quartz rock was probably the result of casual historic prospecting for mineral specimens or precious metals.
- CA-RIV-4894 is another ridgetop trail located along a narrow ridge overlooking a major wash. Just approximately 11.8–15.7 inches wide in most places, the trail is now approximately 940 ft long. In many areas the trail is ill-defined and segmented, and it is difficult to identify it specifically as a human trail. Furthermore, parts of the trail have been obliterated by geotechnical trenching. The ridge along which the trail runs is narrow in places, and one would expect any animal traversing the area to use this area for passage. Therefore, although the trail may have once been utilized by humans, it is currently used by animals such as coyotes.
- P-33-005905, the Coachella Canal, forms the western boundary of the project site. The Coachella Canal, originally concrete-lined in this area, is essentially unchanged from the time construction was completed in 1948. In the Phase 1 area, the width of the Coachella Canal's earthen berms, from the low edge-of-berm on one side to the other, measures 280–200 ft. This measurement varies somewhat along the length of the Coachella Canal near the Phase 1 area. Within these earthen berms, the width of the Coachella Canal channel (the distance from the high point on one side of the Coachella Canal to the high point on the other side) is approximately 60 ft. Thus, the maximum water-carrying width of the Coachella Canal is 60 ft. Within this width, an area 47 ft wide is concrete-sided. The width of the body of water within the concrete portion of the Coachella Canal is 40 ft.

Research indicates a trail once ran east-west along the Coachella Valley floor parallel with what is now Avenue 53. This trail may have led to the village of *pál áyil* (*Palai yil*), which is thought to have been located 0.5 mi south of the Phase 1 area and the Specific Plan site. This trail no longer exists. Also, because this trail is south of the Phase 1 area and the Specific Plan site, it is not associated with the trails within the Phase 1 area.

## Prehistory.

**Early Holocene.** Approximately 12,000–7,000 years Before the Present (BP), during what is now referred to as the Early Holocene, the area between San Bernardino and San Gorgonio Pass was occupied by Native American people. Native cultures from this early period of time were predominantly hunting cultures based on hunting of new extinct mega fauna, including bison and mammoth.

The Specific Plan site is north of the Salton Sea, a modern lake that exists within the Salton Sink. The western edge of the Specific Plan site is near the northeastern extent of ancient Lake Cahuilla, an enormous catchment basin 115 mi long by 34 mi wide. Today, the Salton Sea, 34 mi long by 16 mi wide, is a modern remnant in the lowest areas of ancient Lake Cahuilla. Ancient Lake Mojave, nearly 60 mi north of the Specific Plan site, is on the north side of the San



Bernardino Mountains. Prehistoric sites and material are associated with both ancient lake areas. The Lake Mojave Period culture is an Early Holocene Period culture thought to be ancestral to later cultures such as those from the Prehistoric Period.

**Middle Holocene.** During this period, 7,000–3,500 years BP, Pinto Period culture succeeds Lake Mojave Period culture. Throughout most of the Mojave Desert, Pinto Basin sites tend to be small and limited to surface deposits.

**Late Holocene.** Late Holocene cultures in the Mojave Desert existed from 3500 years BP to historic contact and are divided by time period into the Gypsum Period (ca. 3500–1500 years BP), Saratoga Springs Period (1500–800 years BP), and Shoshonean Period (ca. 800 years BP to historic contact). Ceramic pottery and small arrowheads are associated with the most recent sites.

**Prehistoric Lake Cahuilla.** Prehistorically, in what is now the Salton Sink, a large lake existed sporadically throughout history. This lake, known as Lake Cahuilla, was created for a period after the Colorado River would switch course, diverting water into the Salton Sink, rather than carrying the water to the Gulf of California. When the river flowed into the Salton Sink, it would create a temporary lake that sometimes existed for hundreds of years until the river switched back to its original course, at which time the lake would then slowly evaporate and disappear. At its most recent high stand, ca. AD 900–1500, Lake Cahuilla was much larger than the existing Salton Sea. Evidence that the waters of Lake Cahuilla reached an elevation of approximately 42 ft above mean sea level (amsl) exists in the form of freshwater shells, which litter the surface of the Coachella Valley even today. This is similar to the elevation of the Coachella Canal in the Phase 1 area.

At its greatest extent, prehistoric Lake Cahuilla was enormous, measuring an estimated 315 ft deep, 34 mi wide, and extending from a point approximately 20 mi south of the United States–Mexico border to just northwest of the town of Indio, a distance of 115 mi. Once the infilling of Lake Cahuilla stopped after the Colorado River naturally diverted back to its original drainage path into the Gulf of California, it is estimated that it evaporated at a rate of about 6 ft per year and was completely dried out in 55–60 years. The transition of the lake area back to desert conditions required only about one century until the area was once again completely desert, by AD 1540.

**Ethnohistory.** The area including the Specific Plan site was occupied by the Takic (Shoshonean) language family. The Specific Plan site is located in the Coachella Valley region in the heart of the Desert Cahuilla territory and several miles south of the southern boundary of Serrano Territory. The Coachella Valley is north of the Salton Sea, within the area that once held prehistoric Lake Cahuilla. Freshwater shells litter the surface of much of the Coachella Valley. The name “Coachella” may have been derived from the Spanish word “conchilla” meaning little shell.

## Historic Setting.

**The Cahuilla.** Cahuilla territory is located near the center of Southern California within the inland basin between the San Bernardino Mountains and the range extending southward from Mt. San Jacinto, along with some portions of western coastal drainage areas.

When the Spanish arrived in 1769, the area was occupied by natives of the Takic (Shoshonean) language family. Although the name Cahuilla is of uncertain origin, it may have been derived from their own word *káwiya*, meaning master or boss. A more recent description of the name Cahuilla is that it was borrowed from local Spanish and means nonmissionized Indian. In the 1820s and 1830s, the name was spelled Caguilla. First use of the current spelling occurred in 1845.

There are three natural topographical divisions of the Cahuilla: the Desert, Mountain, and Pass Cahuilla. The Pass, or Western, Cahuilla inhabited the San Gorgonio Pass area between the peaks of Mounts San Bernardino, San Gorgonio, and San Jacinto, each of which reached an elevation of more than 10,000 ft amsl. Pass Cahuilla territory existed at elevations of 1,500–2,500 ft amsl and included areas from San Timoteo Canyon, Cabazon, and Palm Springs Canyon, extending to a location just east of White Water. To the south, partially below sea level, the Desert Cahuilla occupied an area extending from White Water south to the Salton Sea, where fresh water was obtained in shallow wells. The Mountain Cahuilla inhabited the mountainous region south of Mt. San Jacinto at elevations of 3,000–4,000 ft amsl. The term Western Cahuilla is preferred over Pass Cahuilla because this group was not confined to the vicinity of the San Gorgonio Pass. This tripartite Cahuilla division is believed to be primarily geographic, although linguistic and cultural differences are thought to have existed in varying degrees. The Specific Plan site is located within the Desert Cahuilla territory, where 20 villages were located in the Coachella Valley between the Indo-Coachella-Thermal area and the northwestern tip of the Salton Sea.

Cahuilla villages were usually located in canyons or on alluvial fans near dependable water and food sources and in areas protected from fierce winds. Villages consisted of groups of related individuals from a single lineage, and the territory around the village was owned in common by the lineage occupying the village. Nearby land was owned by clans, families, and individuals.

Based on georeferenced map data, there are several Desert Cahuilla villages near the project site. The two closest villages are the *pál áyil* and *pál sétamal*. The village of *pál áyil* (*Palai yil*), meaning “water turtle,” is located approximately 0.5 mi south of the Phase 1 area and the Specific Plan site. Native American Tribal respondent Patricia Garcia-Tuck, representing the Agua Caliente Band of Cahuilla Indians, also states that the ethnographic resource of “Palaiyi” is located somewhere in the vicinity of the Specific Plan site. Another village, *pál sétamal* (*Palsetamul*), meaning “salt water agave,” is about 2.0 mi west–northwest of the Specific Plan site. The village of *pál sétamal* is located on the present-day Cabezon Indian Reservation, which was established in 1876.

Other nearby Desert Cahuilla villages include Thermal, Coachella, *pál sétaxat*, and *áwal páčava*, all located fewer than 2.5 mi south or west of the Specific Plan site. Many other Desert Cahuilla villages are also identified in the Coachella-Thermal area, which tend to be located at lower elevations within the Coachella Valley.

The Specific Plan site is located within the Mecca Hills, which was the location of the village of *Kawish-wa-wat-acha*, meaning “rock water hold,” although the exact location of this village is unknown. Mecca Hills, called *Quawish-Ulish*, which means “Red Hills,” were a basalt material collection area and an area of ritual significance to the Cahuilla. Other geographic place names include *Akawene*, which is likely the Cahuilla name for the Indio Hills, located north of the Specific Plan site, and *Aiakaic*, the Cahuilla name for San Jacinto Peak, a dominant and important feature of the Cahuilla landscape that, although 40 mi distant, is clearly visible to the northwest of the Specific Plan site.

The closest indigenous neighbors to the Desert Cahuilla were the Serrano, meaning “mountaineer” or “highlander.” The Serrano inhabited the region of the San Bernardino Mountains and low-lying areas north of Cahuilla territory from Cajon Pass east to a point south of Barstow and Daggett. The most frequent name for the Serrano among neighboring groups is some derivation of *Mara* or *Morongo*. The Serrano called themselves *Maringayam*, a name derived from the Serrano Group Maringayam, or “Morongo” formerly of Maringa, Big Morongo Creek. The name Morongo is currently the designation of the Indian reservation near Banning on which Serrano are settled among Cahuilla. Serrano territory is located 10 mi or more north of the Specific Plan site.

Artifacts common to the Cahuilla include coiled pottery that was often incised and painted, baskets, manos and mutates (stone tools), mortars (stone or wooden bowl), pestles (cylindrical stone use to pulverize food and other products in a mortar), steatite arrow-shaft straighteners, mesquite or willow bows and arrows, wooden throwing sticks, charmstones, bull-roarers (a musical instrument), and small bifacially worked stone points. Marine shell, including the *Olivella* bead, is often associated with cremations.

Cahuilla subsistence was based primarily on acorns, mesquite and screw beans, piñon nuts, and cactus fruit, supplemented by a variety of wild fruits and berries, tubers, roots, and greens. Agricultural use of corn, beans, squash, and melons has also been attributed to the Cahuilla. Hunting of deer, rabbits, antelopes, bighorn sheep, reptiles, small rodents, quail, doves, and ducks using bow and arrows, throwing sticks, traps, and communal drives is also documented. As the lake rose and fell, the Cahuilla moved their villages and changed their subsistence patterns to meet the changing circumstances.

Cahuilla dwellings were thatched and situated to take advantage of water sources and also to ensure privacy. The chief’s dwelling was the largest, and many activities occurred there. Perhaps one of the most characteristic features of the Cahuilla were the cavernous walk-in wells excavated by the Desert Cahuilla in order to obtain water; they were as deep as 50 ft. Cahuilla villages were established near these enormous walk-in wells. It is from these wells that the name of the town of “Indian Wells” is derived.

**Initial European Contact.** The first clearly documented European contact with natives of the Coachella Valley occurred in 1823–1824 with the Estudillo-Romero expedition into the Colorado Desert. Due to the distance of the Cahuilla from the Spanish Missions, the Cahuilla had little direct contact with Europeans until 1819, when several mission outposts or *asistencias* were established near Cahuilla territory.

**Coachella Branch of the All-American Canal.** As described further in Section 4.17, Water Supply, the Coachella Canal was constructed in 1930, with construction completed in 1948 and the first water delivery in 1949. The 123 mi long Coachella Canal (Site P-33-005905) runs north from its junction with the Coachella Canal near the United States–Mexico border. From this point, the Coachella Canal runs north through Imperial County and into Riverside County, skirting the eastern side of the Salton Sea. North of the Salton Sea, the Coachella Canal turns northwest, traveling around the town of Indio, curves west, and then south to its terminus at present-day Lake Cahuilla at the west end of Avenue 58, approximately 2 mi southeast of La Quinta and approximately the same distance northwest of the Torres Martinez Indian Reservation. The Coachella Canal has been recorded as a historic site in both Riverside and Imperial Counties.

**Place Names.** The towns of Coachella, Indio, Thermal, and Mecca all exist due to the railroad, which first reached the Coachella Valley in 1876. Indio, named after the Spanish word for “Indian,” was originally the Southern Pacific Railroad location of “Indian Wells,” named in 1876 after the deep native walk-in wells. Prior to 1888, the name “Thermal” was applied to the railroad station because of the extreme heat. The name “Mecca” was applied on September 26, 1903, to the settlement that had been known since 1896 as “Walters.” The name “Mecca” was chosen because the many date palms gave the locale the appearance of an Arabian city.

#### 4.5.4 Cultural Landscapes

The purpose of this discussion on cultural landscapes is to consider cultural resources in the Specific Plan site within a larger framework. As defined by the National Park Service, a cultural landscape is a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein) associated with a historic event, activity, or person, or exhibiting other cultural or aesthetic values. Within this definition there are four categories of cultural landscapes to consider: (1) historic designed landscape, (2) historic vernacular landscape, (3) historic sites, and (4) ethnographic landscape. The fourth category, ethnographic landscape, is the category applicable to the proposed Specific Plan project. Ethnographic landscapes contain a variety of natural and cultural resources defined as heritage resources by people associated with cultural landscapes. Such resources can include massive geological formations, small plant communities, subsistence areas, and ceremonial areas.

Previous descriptions of Cahuilla territory in the Indio–Coachella–Thermal portion of the Coachella Valley show that there were a number of ethnographically recorded villages. A georeferenced map of recorded Cahuilla villages in the area depicts most of them along the Whitewater River, although one village, *pál áyil* (or *Palai yil*, meaning “water turtle”), may have been located approximately 0.5 mi south of the Phase 1 area and the Specific Plan site. “*Palaiyi*” was identified by Native American Tribal respondent Patricia Garcia-Tuck (Agua Caliente Band of Cahuilla Indians THPO) as an ethnographic resource located somewhere in the vicinity of the Specific Plan site. Records search information from this project also shows that despite a number of cultural resource surveys near the Specific Plan site, few archaeological sites were recorded, the most common being trails.

Although no TCPs have been identified within the Specific Plan site, the Mecca Hills, of which the Specific Plan site is a part, are considered by the Cahuilla as a traditional cultural landscape. The

ridge top and valley-bottom trails leading to and from villages would have served to tie the local area together as a cultural landscape. However, as previously described, the nearest known Cahuilla village is thought to have been located 0.5 mi south of the Phase 1 area, and recorded trails in and near the Specific Plan site run along existing ridges that trend in a southwest–northeast direction and do not lead from the Specific Plan site to the nearby village. The trail that crossed the valley floor in an east–west direction just north of Avenue 53 may have led to the village of *pál ávil*. Some north–south trails must have also existed, but these were probably located along the Whitewater River, which drains north to south. So whereas the Specific Plan site might be considered a small portion of a much larger cultural landscape, it contains no known Cahuilla place names; does not contain a TCP; and contains only two short, faint, narrow, and disrupted/disjointed ridgetop trails.

These two trails, CA-RIV-4844 and CA-RIV-4894, do not lead to any known sites within the greater Cahuilla cultural landscape. These two sites are unchanged since being recorded in 2006. They have been recorded, photographed, and their locations plotted. As such, they have been adequately documented. Since they are not historical resources per the *California Environmental Quality Act (CEQA) Guidelines*, no additional cultural resource work is recommended at these two sites.

Casual historic prospecting site CA-RIV-4852 is also unchanged since being recorded in 2006. The site is not a significant resource under CEQA because little additional research potential exists and the site has already been recorded. As such, no additional cultural research work is recommended at this site.

The Coachella Canal, site P-33-005905, was previously evaluated and recommended as eligible for listing on the National Register of Historic Places (National Register) under Criterion A (the key role it played in the development of intensive agricultural economy based on irrigation in the Coachella Valley, as well as being an integral element of the Boulder Dam Project) and Criterion C (a good example of an irrigation canal constructed during the 1930s and 1940s, with distinctive characteristics of canal construction during the period) of 36 Code of Federal Regulations (CFR) 800. As such, the Coachella Canal is also significant under Criteria A and C of CEQA, and the resource is eligible for listing in the California Register of Historical Resources (California Register).

#### **4.5.5 Paleontological Resources Existing Environmental Setting**

This section describes the baseline conditions and paleontological setting for the Specific Plan project area, as determined and developed by a fossil locality search at the Division of Geological Sciences of the SBCM, a literature review, and a field survey.

**Geologic Setting.** The Specific Plan site is located in the Salton Trough that extends north from the Sea of Cortez. The Specific Plan project area’s geomorphology is predominantly within the Mojave Desert Geomorphic Province but also includes a small portion of the Colorado Desert Geomorphic Province and crosses the San Andreas Fault. The Colorado Desert Geomorphic Province extends from the Whitewater River toward the Salton Sea and lies to the west of the San Andreas Fault. To the north of the Specific Plan site are the Little San Bernardino Mountains and to the south-southeast are the Mecca Hills that mark the edge of both the San Andreas Fault and the Mojave Desert Geomorphic Province.

The Mojave Desert Geomorphic Province is a triangular area characterized by a flat desert plain punctuated by isolated mountains, many of which are volcanic. It is bounded by the San Andreas Fault to the southwest and the east–west trending Garlock Fault and Tehachapi Mountains to the north. Its eastern boundary is irregular. Many of the rocks within the Mojave Desert Geomorphic Province date to the Precambrian Period. More recent formations are also present, along with unconsolidated recent sands.

The Colorado Desert Geomorphic Province is characterized by a low-lying desert basin that ranges in elevation from 245 ft below mean sea level (bmsl) to 2,200 ft amsl. It is dominated by the Salton Sea and the Salton Trough. This province is essentially a depressed block between the active branches of the alluvium-covered San Andreas Fault. It is characterized by the beach lines of Ancient Lake Cahuilla, as well as alluvial fans and alluvial valleys that ring the Salton Sea. Ancient Lake Cahuilla was fed by the Colorado River via the Salton Trough.

Geologic formations that are present, or may be present within the Phase 1 area, are described in more detail below.

**The Palm Spring Group.** The Palm Spring Group includes the Arroyo Diablo Formation, Olla Formation, Canebrake Conglomerate, Tapiado Claystone, and Hueso Formation. These sediments date to the Pliocene through the Pleistocene and were deposited when the climate was much wetter than it is today. These sediments consist of mixtures of silts, sands, and gravels. Although it is not currently exposed on the surface of the Phase 1 area, the Palm Spring Group is exposed to the north and to the south of the Phase 1 area, underlays the Ocotillo Formation in the Phase 1 area, and could be encountered if excavation within the Phase 1 area reaches sufficient depth.

**The Ocotillo Formation.** The Ocotillo Formation is divided into a lower member, a fanglomerate member, and an upper member. Within the Phase 1 area only the upper member is present. This Formation is a vertically stratified sedimentary formation that dates to the Pliocene. It overlies the Borrego Formation. It consists of stratified layers of sand and silts, mostly deposited in an alluvial fan type environment. The lower member is primarily a pebble-to-cobble conglomerate; the fanglomerate member is a grey conglomerate with interbeds of sandstone silts and tuff, while the upper member is primarily a boulder conglomerate

**Lake Cahuilla Sediments.** These sediments underlie a small portion of the Phase 1 area on the floor of the Coachella Valley in the western portion of the Phase 1 area. These sediments represent deposition in a lake-type environment fed by the Colorado River filling in the Salton Trough. The maximum highstand for Ancient Lake Cahuilla is approximately 40–48 ft amsl. Sediments are mixtures of sands and silts and sands, deposited during the numerous times the lake was filled.

**Recent Alluvium.** Recent alluvium within the majority of the Phase 1 area consists of mixtures of sand, silt, and clay deposited in ravine or valley areas and cuts through the pebble and cobble deposits of the Ocotillo Formation.

**Paleontology Setting.** The Phase 1 area is located on the following rock types, described by their paleontological sensitivity.

**The Palm Spring Group – High Sensitivity:** The Palm Spring Group includes the Arroyo Diablo Formation, Olla Formation, Canebrake Conglomerate, Tapiado Claystone, and Hueso Formation. These sediments date to the Pliocene. All units in this group are fossiliferous, although the Tapiado Claystone and the Hueso Formation have produced substantial quantities of vertebrate fossils in the region, according to the Division of Geological Sciences, SBCM. Therefore, the entire Palm Spring Group is considered to have a High sensitivity rating. Although it is not currently exposed on the surface of the Phase 1 area, the Palm Spring Group underlays the Ocotillo Formation in the Phase 1 area and could be encountered if excavation within the Phase 1 area reaches sufficient depth.

**Ocotillo Formation – Upper Member – Low Sensitivity to High Sensitivity:** The Ocotillo Formation – Upper Member (or Ocotillo Conglomerate, as it is also known) is in the Phase 1 area. No fossil localities are recorded within the Phase 1 area. Much of this unit is probably too coarse-grained to preserve or contain any fossil remains, and for this reason is assigned a paleontological sensitivity rating of Low in the City of Coachella General Plan. However, it is possible that finer-grained strata within the Ocotillo Formation – Upper Member exist within the Phase 1 area. Fossils are known from the finer-grained members of the Ocotillo Formation, primarily the Ocotillo Formation – Fanglomerate Member, and similar fossils may be present in all finer-grained horizons of this Formation. The Division of Geological Sciences Division, SBCM has assigned a paleontological rating of High for this formation in areas with finer-grained interbeds and a low rating for the coarser-grained portions. As such, this unit is assigned a paleontological sensitivity rating of Low and High, depending on the type of sediment present.

The formation, primarily the finer-grained beds within each member, is known to have a significant number of fossils. The Upper members were deposited in a higher energy environment and therefore contain a low chance of fossils, with the possibility of high probability in areas that were deposited in lower-energy situations, as indicated by increased quantities of silt and smaller rock size.

**Lake Cahuilla Sediments – High and Low Sensitivity:** Silts and sands of Pleistocene and early Holocene Lake Cahuilla can contain fossil birds, pond turtles, large and small fish, and bivalves and snails. These sediments are sometimes found beneath a thin layer of Recent (Holocene) Alluvium. The sediments in the upper 10 ft or so of these sediments are likely less than 10,000 years old, likely have not been fossilized, and will be contemporaneous with modern species; however, these species are important to scientists during paleo-environmental reconstructions of the Salton Trough and Ancient Lake Cahuilla. As such, Lake Cahuilla sediments are assigned a High Paleontological Sensitivity wherever they are encountered. High potential is assigned to the area expressed at or below the high stand of the Lake Cahuilla shoreline. Underdetermined potential is assigned to areas that are underlain by Lake Cahuilla

sediments, but which are overlain by recent sediments from the Whitewater Delta and have been disturbed by agriculture.

**Recent (Holocene) Alluvium-Low Paleontological Sensitivity:** Although Recent (Holocene) alluvium can contain remains of plants and animals, generally, not enough time has passed for the remains to become fossilized; in addition, the remains are contemporaneous with modern species, and these remains are usually not considered to be significant. As such, these sediments are assigned a Low Paleontological Sensitivity

#### 4.5.6 Regulatory Setting

This section describes the cultural resource requirements of CEQA, California Health and Safety Code (HSC), Public Resources Code (PRC), and the Historic Resources Element and Natural Resources Element of the City's General Plan.

**Federal.** There are no federal regulations that are applicable to cultural or paleontological resources relevant to the proposed project.

#### State of California.

**CEQA Requirements.** CEQA defines a "historical resource" as a resource that meets one or more of the following criteria: (1) listed in, or determined eligible for listing in, the California Register; (2) listed in a local register of historical resources as defined in PRC Section 5020.1(k); (3) identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (4) determined to be a historical resource by a project's Lead Agency (PRC Section 21084.1 and *CEQA Guidelines* Section 15064.5(a)). A historical resource consists of:

"Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.... 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" *CEQA Guidelines* Section 15064.5(a)(3).

In accordance with *CEQA Guidelines* Section 15064.5(b), a substantial adverse change in the significance of a historical resource is a significant effect on the environment.

CEQA requires a Lead Agency to determine whether an archaeological cultural resource meets the definition of a historical resource, a unique archaeological resource, or neither (*CEQA Guidelines* Section 15064.5(c)). Prior to considering potential impacts, the Lead Agency must determine whether an archaeological cultural resource meets the definition of a historical resource in *CEQA Guidelines* Section 15064.5(c)(1). If the archaeological cultural resource meets the definition of a historical resource, it is treated like any other type of historical resource



in accordance with *CEQA Guidelines* Section 15126.4. If the archaeological cultural resource does not meet the definition of a historical resource, then the Lead Agency determines whether it meets the definition of a unique archaeological resource as defined in *CEQA Guidelines* Section 21083.2(g). In practice, however, most archaeological sites that meet the definition of a unique archaeological resource will also meet the definition of a historical resource. Should the archaeological cultural resource meet the definition of a unique archaeological resource, it must be treated in accordance with *CEQA Guidelines* Section 21083.2. If the archaeological cultural resource does not meet the definition of a historical resource or an archaeological resource, the effects to the resource are not considered significant effects on the environment (*CEQA Guidelines* Section 15064.5(c)(4)).

CEQA also requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (*CEQA Guidelines* Appendix G(v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (California Code of Regulations [CCR] Title 14(3) Section 15126.4 (a)(1)). California PRC Section 5097.5 also applies to paleontological resources (see below).

**California Health and Safety Code Section 7050.5.** California HSC Section 7050.5 states that 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 remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the Coroner must notify the NAHC within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

**PRC Section 5097.5.** PRC Section 5097.5 provides for the protection of cultural and paleontological resources and prohibits the removal, destruction, injury, or defacement of archaeological and paleontological features on any lands under the jurisdiction of State or local authorities.

**Senate Bill 18 Tribal Consultation.** California Government Code Section 65352.3 (adopted pursuant to the requirements of SB 18) requires local governments to contact, refer plans to, and consult with tribal organizations prior to making a decision to adopt or amend a General or Specific Plan. The tribal organizations eligible to consult have traditional lands in a local government's jurisdiction and are identified, upon request, by the NAHC. As noted in the California Office of Planning and Research's *Tribal Consultation Guidelines* (2005), "The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places."

**California Register of Historical Resources (PRC Section 5020 et seq.).** State law also protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources in CEQA documents. A cultural resource is an important historical resource if it meets any of the criteria found in Section 15064.5(a) of the *CEQA Guidelines*. These criteria are nearly identical to those for the National Register.

The State Historic Preservation Officer (SHPO) maintains the California Register. Properties listed, or formally designated eligible for listing, on the National Register are nominated to the California Register and then selected to be listed on the California Register, as are State Landmarks and Points of Interest.

**City of Coachella General Plan.** The City's General Plan Conservation Element (1996) addresses the protection and sustainability of the City's historic and cultural resources. Goals and policies presented within the Conservation Element are intended to encourage the conservation, development, and utilization of natural resources. Goals, objectives, and policies related to cultural resources presented in the Conservation Element include:

**Goal:** The City shall require the identification, evaluation and mitigation of adverse effects to historic, archaeological and culturally significant sites.

**Objective:** The City shall take all action necessary to protect historic building, archaeological resources or any other objects of historic significance from the effects of proposed development projects.

**Policy:** The City shall require an identification of resources through a record search and survey followed by a field survey by a qualified archaeologist or historian. Cultural resources at this point are identified, described, and recorded.

**Policy:** Sites that have been identified and recorded shall be evaluated for significance under criteria established for both CEQA and Federal Section 106 Guidelines.

**Policy:** The City shall require that sites which are determined to be significant shall have adverse effects mitigated. Mitigation may include extraction and preservation of artifacts, protection and preservation of artifacts on-site, on-site monitoring during grading and construction, or posting of identification on-site.

**Policy:** All projects covered under CEQA will be required to request a transmittal level archaeological records search from the Eastern Information Center at the Eastern Information Center [EIC] at the University of California, Riverside. At the discretion of the City, a records search may be required for projects not subject to CEQA provisions. The results of the records search and recommendations from EIC will determine whether further studies are warranted.

**City of Coachella Municipal Code.** Chapter 15.48, Historic Districts and Sites, establishes regulations for the conservation of historic resources. Section 15.48.200 of this chapter requires a permit for any construction or alteration of designated historic structures. Alteration to these structures includes actions that would impact the historic and architectural value and significance and the general compatibility with the surrounding area.

#### 4.5.7 Project Design Feature

As summarized in Chapter 3.0, Project Description, the proposed Specific Plan includes components that are referred to as Project Design Features. The Project Design Feature related to cultural and paleontological resources is:

- The La Entrada Specific Plan has been designed to preserve the northeastern and southeastern portions of the Specific Plan site in permanent open space, thereby reducing the potential for disturbance of previously unidentified paleontological and archaeological resources in those areas.

#### 4.5.8 Thresholds of Significance

The following thresholds of significance criteria are based on Appendix G of the *CEQA Guidelines*. Based on these thresholds, implementation of the proposed project would have a significant adverse impact related to cultural resources if it would:

- Threshold 4.5.1:** Cause a substantial adverse change in the significance of a historical resource as defined in *CEQA Guidelines* Section 15064.5? “Historical resources” are defined as buildings, structures, districts, sites, or objects that are eligible for the California Register (*CEQA Guidelines* Section 15064.5[a][3]);
- Threshold 4.5.2:** Cause a substantial adverse change in the significance of an archaeological resource pursuant to *CEQA Guidelines* Section 15064.5;
- Threshold 4.5.3:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Threshold 4.5.4:** Disturb any human remains, including those interred outside of formal cemeteries.

#### 4.5.9 Project Impacts

**Threshold 4.5.1:** Cause a substantial adverse change in the significance of a historical resource as defined in *CEQA Guidelines* Section 15064.5? “Historical resources” are defined as buildings, structures, districts, sites, or objects that are eligible for the California Register (State *CEQA Guidelines* Section 15064.5[a][3])

**Less than Significant Impact with Mitigation Incorporated.** As previously stated, the Coachella Canal, located in the area of Avenues 50 and 52 west of the project site, was previously recorded and evaluated for significance and eligibility on the National Register. As a result, the Coachella Canal was deemed eligible for the National Register because (1) of the key role it played in the development of intensive agricultural economy based on irrigation in the Coachella Valley region, (2) it is considered an integral element of the Boulder Dam Project, which is considered a monumental public reclamation project in the western United States; and (3) it is an example of an irrigation canal constructed in the 1930s and 1940s, with distinctive characteristics of canal construction during these periods. In addition, the Coachella Canal is designated as Site 33-005705 in the California Historical Resources Inventory.

Per *CEQA Guidelines* Section 15064.5(b)(1), a project may result in substantial adverse change in the significance of a historical resource if the project results in a physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resources would be impaired.

**Impacts of Phase 1 of the Specific Plan on Historic Resources.** Crossings over the Coachella Canal are required as part of Phase 1 of the Specific Plan to extend Avenues 50 and 52 to provide access to the project site. At these crossings, one or more reinforced concrete box culverts would be constructed. A series of concrete arch culverts are proposed for the drainage facility behind the levee. The drainage culverts behind the levee would utilize precast concrete arch sections that would provide longer spans than traditional rectangular reinforced concrete box culverts. Although the drainage culverts would involve changes to the Coachella Canal, these changes would not impact the historical significance of the Coachella Canal. The Coachella Canal was determined to be eligible for the National Register because of the key role the Coachella Canal played in developing an intensive agricultural economy and the physical features that define its historic design and construction methods typical of Coachella Canal construction in the 1930s and 1940s. The Coachella Canal would still embody these characteristics with construction of the proposed crossings. Therefore, Phase 1 of the La Entrada Specific Plan would not adversely impact the Coachella Canal.

**Impacts of the Remainder of the Specific Plan on Historic Resources.** The previous cultural resources surveys did not identify any historic resources on the remainder of the Specific Plan site. As a result, Phases 2 through 5 of the project are not expected to adversely impact historic resources. However, as noted earlier, a site-specific field survey of the parts of the Specific Plan site outside the Phase 1 area was not conducted as part of the current cultural resources evaluation, which covered only the Phase 1 area on the Specific Plan site. Mitigation Measure 4.5.5, prescribed in Section 4.5.11, requires the project applicant to conduct site surveys and

records searches, and prepare Cultural Resources Survey Reports for areas on the Specific Plan site outside the Phase 1 area prior to the submittal of Tentative Tract Maps for those areas. Those reports will include the results of updated records searches and site surveys. They will describe whether there are any historic resources on the portions of the Specific Plan site outside the Phase 1 area and, if so, if the proposed development in a Tentative Tract Map would affect those resources and the measures required to address those effects. As a result, it is expected that the impacts of the Specific Plan related to historic resources would be less than significant after mitigation.

**Threshold 4.5.2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5**

**Less than Significant Impact with Mitigation Incorporated.**

**Impacts of Phase 1 of the Specific Plan on Archaeological Resources.** Archival research indicated that three archaeological resource sites are located within the Phase 1 area: two historic trail segments (CA-RIV-4844 and CA-RIV-4894) and one historic prospecting locale with quartz shatter and areas of scattered cairn rocks (CA-RIV-4852). Consistent with previous recommendations regarding the trails,<sup>1</sup> they were not recommended as significant archaeological resources under CEQA because they are highly fragmented, noncontiguous, disjointed foot paths. The prospecting site was not recommended as a significant resource under CEQA because little additional research potential exists and the site has already been recorded.

Precautionary mitigation is provided later in this section to protect archaeological resources in the Phase 1 area in the event of discovery of previously unknown cultural resources during ground-disturbing construction activities on the project site. Specifically, Mitigation Measure 4.5.1 requires the City to retain an archaeological monitor and a Native American monitor to be present at the project site during all ground-disturbing activities to minimize potential impacts to unknown resources. Mitigation Measure 4.5.2 requires the City to prepare a Monitoring Plan prior to commencement of any grading activities. In the event that historical, archaeological, or human remains are found during excavation or grading, Mitigation Measures 4.5.2 and 4.5.4 require immediate implementation of those procedures developed as part of the Monitoring Plan including, but not limited to, the cessation of all work in the immediate vicinity of the resources until such time as the resources can be evaluated by an archaeologist or other appropriate individual. Implementation of Mitigation Measures 4.5.1, 4.5.2, and 4.5.4 would reduce project impacts to below a level of significance, and no additional mitigation is required.

**Impacts of the Remainder of the Specific Plan on Archaeological Resources.** As noted above, the Cultural Resources Study for the Phase 1 part of the Specific Plan did not identify individual archaeological resources on the parts of the Specific Plan site outside the Phase 1 area. However, as noted by the NAHC, the general area has been identified as sensitive for cultural resources, and the Specific Plan site has previously been surveyed twice (Rhodes 1988 and White et al. 2006).

<sup>1</sup> White, Laura S., 2006, White, Robert S., Laura S., and David M. Van Horn, 2006.

The 2006 survey of the 2,188 ac Lomas del Sol Specific Plan site (the La Entrada Specific Plan site) documented 21 cultural resources within that specific plan site. Because the site has previously been surveyed, the potential for additional cultural resources to be found in the parts of the Specific Plan site outside the Phase 1 area would be limited. However, wind and water erosion and other soil disturbances since 2006 could expose previously buried cultural resources on the part of the Specific Plan site outside the Phase 1 area.

As a result, it is expected that previously documented and potentially previously unknown cultural resources on the part of the Specific Plan site outside the Phase 1 area could be affected by the proposed project. Mitigation Measure 4.5.5, prescribed in Section 4.5.11, requires the project applicant to conduct site surveys and records searches, and prepare Cultural Resources Survey Reports for areas on the Specific Plan site outside the Phase 1 area prior to the submittal of a Tentative Tract Map for each area. Each report will include the results of updated records searches and site surveys. The report will describe whether there are any archaeological resources or the potential for such resources on the part of the Specific Plan site outside the Phase 1 area and, if the project affects those resources, the measures are required to address those impacts. Those measures would be Measures 4.5.1, 4.5.2, and/or 4.5.4 depending on the archaeological resources documented in the report on each part of the Specific Plan site outside the Phase 1 area and the project impacts on those resources. As a result, it is expected that the impacts of the Specific Plan, similar to the impacts of the project in the Phase 1 area, related to archaeological resources, would be less than significant after mitigation.

**Threshold 4.5.3: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature**

**Less than Significant Impact with Mitigation Incorporated.**

**Impacts of Phase 1 of the Specific Plan on Paleontological Resources.** Portions of the project site are located on sediments mapped as having a paleontological sensitivity rating of High. There are no known localities on the project site but, based on the locality search and the field survey, sensitive sediments that may contain fossil remains do exist where Phase 1 improvements are proposed and, as a result, within the Specific Plan site, and there is the potential to encounter paleontological resources during all ground-disturbing activities for the proposed project. Mitigation is required to reduce potential adverse impacts to unknown (buried) paleontological resources.

Mitigation Measure 4.5.3 requires a qualified paleontologist to prepare a standard Paleontological Resources Impact Mitigation Program (PRIMP) prior to the beginning of ground-disturbing activities. This program would include excavation monitoring and specimen recovery, including screen washing, preparation, identification, and curation of collected specimens into a museum repository. Based on the significance of any recovered specimens, the qualified paleontologist may set up conditions that would allow for monitoring to be scaled back to part-time or increased to full-time as the project progresses. However, if significant fossils begin to be recovered after monitoring has been scaled back, conditions should also be specified that would require increased monitoring as necessary. A final report would provide details of monitoring and curation methods, fossil identification, and discussion, cataloging, and repository arrangements.

Implementation of mitigation measures would reduce potential impacts to unknown paleontological resources to less than significant, and no additional mitigation is required.

**Impacts of the Remainder of the Specific Plan on Paleontological Resources.** Because the Phase 1 area is in an area having a paleontological sensitivity rating of High, it is very likely that the rest of the Specific Plan site would also have the same High paleontological sensitivity rating. As a result, construction on the remainder of the Specific Plan site could result in impacts on paleontological resources similar to the impacts of Phase 1 on paleontological resources. Mitigation Measure 4.5.5, prescribed in Section 4.5.11, requires the project applicant to prepare Paleontological Resources Survey Reports for areas on the Specific Plan site that are outside the Phase 1 area prior to the submittal of Tentative Tract Maps for those areas. These reports will include the results of locality searches and site surveys specific to the area covered by each Tentative Tract Map. The reports will describe whether there are any paleontological resources or the potential for such resources on the parts of the Specific Plan site outside the Phase 1 area. If there are resources or if there is potential for resources and they would be impacted by the project, the reports will describe those impacts and document that Measure 4.5.3 is required to address those effects. As a result, it is expected that the impacts of the Specific Plan related to paleontological archaeological resources would be less than significant after mitigation.

**Threshold 4.5.4: Would the project disturb any human remains, including those interred outside of formal cemeteries**

**Less than Significant Impact with Mitigation Incorporated.** Although no human remains are known to be on site or are anticipated to be discovered, precautionary mitigation is required. Mitigation Measure 4.5.4 requires compliance with HSC 7050.5 in the unlikely event that human remains are encountered during project grading. Upon discovery of the remains, the County Coroner would be notified immediately, and no further disturbance would occur until the County Coroner makes a determination of origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be Native American, the County Coroner would notify the NAHC, which will determine and notify the MLD. With permission from the City, the MLD would complete inspection within 48 hours of notification by the NAHC. Implementation of Mitigation Measure 4.5.4 reduces potential impacts related to the discovery of human remains on the proposed project site to a less than significant level, and no additional mitigation is required.

#### **4.5.10 Cumulative Impacts**

The cumulative study area for cultural and paleontological resources is the geographical area of the City of Coachella, which is the geographical area covered by the City General Plan, including all goals and policies included therein. Future development in the City could include excavation and grading that could potentially impact archaeological and paleontological resources and human remains. The cumulative effect of the proposed project is the continued loss of these resources. The proposed project, in conjunction with other development in the City, has the potential to cumulatively impact archaeological and paleontological resources; however, it should be noted that each development proposal received by the City undergoes environmental review pursuant to CEQA. If there is a potential for significant impacts to archaeological or paleontological resources, an investigation would be required to determine the nature and extent of the resources and identify

appropriate mitigation measures. If subsurface cultural resources are assessed and/or protected as they are discovered, impacts to these resources would be less than significant. In addition, the City's General Plan policies would be implemented as appropriate to reduce the effects of additional development within the City.

Mitigation Measures 4.5.1 through 4.5.4 would be implemented during construction of Phase 1 of the La Entrada Specific Plan project to reduce potential project impacts by ensuring avoidance, evaluation, and, as applicable, scientific recovery and study of any resources encountered. Mitigation Measure 4.5.5 would be implemented, in addition to Measures 4.5.1 through 4.5.4, for all project construction after Phase 1 on the rest of the Specific Plan site. Therefore, with implementation of Mitigation Measures 4.5.1 through 4.5.5, the contribution of the Specific Plan to the cumulative loss of known and unknown cultural resources throughout the City would be reduced to below a level of significance.

#### **4.5.11 Mitigation Measures**

Mitigation Measures 4.5.1 through 4.5.4 in this section would apply to all project construction activities on the Specific Plan site, including the Phase 1 area and the remaining areas (Phases 2 through 4) on the site. Measure 4.5.5 in this section would apply to all construction activities on the Specific Plan site outside the Phase 1 area (specifically, the Phase 2 through 5 areas).

**Mitigation Measure 4.5.1**      **Archaeological and Native American Monitors.** Prior to commencement of any grading activity on the project site and consistent with the findings and recommendations of the cultural resources surveys and reports regarding the sensitivity of each area on the project site for cultural resources, the City of Coachella (City) Director of Development Services, or designee, shall retain an archaeological monitor and a Native American monitor to be selected by the City after consultation with interested Tribal and Native American representatives. Both monitors shall be present at the pregrade conference in order to explain the cultural mitigation measures associated with the project. Both monitors shall be present on site during all ground-disturbing activities (to implement the project Monitoring Plan) until marine terrace deposits are encountered. Once marine terrace deposits are encountered, archaeological and Native American monitoring is no longer necessary, as the marine deposits are several hundred thousand years old, significantly predating human settlement in this area.

**Mitigation Measure 4.5.2**      **Archaeological Monitoring Plan and Accidental Discovery.** Prior to commencement of any grading activity on the project site and consistent with the findings of the cultural resources surveys and reports regarding the sensitivity of each area on the project site for cultural resources, the City shall prepare a Monitoring Plan. The Monitoring Plan shall be prepared by a qualified archaeologist and shall be reviewed by the City of Coachella Director of Development Services. The Monitoring Plan will include at a minimum: (1) a list



of personnel involved in the monitoring activities; (2) a description of how the monitoring shall occur; (3) a description of frequency of monitoring (e.g., full-time, part-time, spot checking); (4) a description of what resources may be encountered; (5) a description of circumstances that would result in the halting of work at the project site (e.g., what is considered a “significant” archaeological site); (6) a description of procedures for halting work on site and notification procedures; and (7) a description of monitoring reporting procedures. If any significant historical resources, archaeological resources, or human remains are found during monitoring, work should stop within the immediate vicinity (precise area to be determined by the archaeologist in the field) of the resource until such time as the resource can be evaluated by an archaeologist and any other appropriate individuals. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. To the extent feasible, project activities shall avoid such resources.

Where avoidance is not feasible, the resources shall be evaluated for their eligibility for listing in the California Register of Historical Resources. If a resource is not eligible, avoidance is not necessary. If a resource is eligible, adverse effects to the resource must be avoided, or such effects must be mitigated. Mitigation can include, but is not necessarily limited to: excavation of the deposit in accordance with a cultural resource mitigation or data recovery plan that makes provisions for adequately recovering the scientifically consequential information from and about the resource (see California Code of Regulations Title 4(3) Section 15126.4(b)(3)(C)). The data recovery plan shall be prepared and adopted prior to any excavation and should make provisions for sharing of information with Tribes that have requested Senate Bill 18 (SB 18) consultation. The data recovery plan shall employ standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; production of a report detailing the methods, findings, and significance of the archaeological site and associated materials; curation of archaeological materials at an appropriate facility for future research and/or display; an interpretive display of recovered archaeological materials at a local school, museum, or library; and public lectures at local schools and/or historical societies on the findings and significance of the site and recovered archaeological materials. Results of the study shall be deposited with the regional California Historical Resources Information Center (CHRIS) repository.

It shall be the responsibility of the City Department of Public Works to verify that the Monitoring Plan is implemented during project grading and construction. Upon completion of all monitoring/

mitigation activities, the consulting archaeologist shall submit a monitoring report to the City of Coachella Director of Development Services and to the San Bernardino Archaeological Information Center summarizing all monitoring/mitigation activities and confirming that all recommended mitigation measures have been met. The monitoring report shall be prepared consistent with the guidelines of the Office of Historic Preservation's *Archaeological Resources Management Reports (ARMR): Recommended Contents and Format*. The City of Coachella Director of Development Services or designee shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of findings and recommendations.

### Mitigation Measure 4.5.3

**Paleontological Resources Impact Mitigation Program.** Prior to commencement of any grading activity on the project site and consistent with the findings of the paleontological resources surveys and reports regarding the sensitivity of each area on the project site for paleontological resources, the City's Director of Development Services, or designee, shall verify that a qualified paleontologist has been retained and will be on site during all rough grading and other significant ground-disturbing activities in paleontologically sensitive sediments. The paleontologically sensitive sediments that could potentially occur within the Specific Plan site include the fine-grained interbeds of the Ocotillo Formation, the Palm Spring Group, and Lake Cahuilla Sediments. A paleontologist will not be required on site if excavation is only occurring in boulder- and cobble-rich portions of the Ocotillo Formation, Holocene alluvium, or Artificial Fill.

Prior to any ground-disturbing activities, the paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed project. The PRIMP should be consistent with the guidelines of the Society of Vertebrate Paleontologists (SVP) (1995 and 2010) and should include but not be limited to the following:

- Attendance at the pregrade conference in order to explain the mitigation measures associated with the project.
- During construction excavation, a qualified vertebrate paleontological monitor shall initially be present on a full-time basis whenever excavation will occur within the sediments that have a High Paleontological Sensitivity rating and on a spot-check basis in sediments that have a Low Sensitivity rating. Based on the significance of any recovered specimens, the qualified paleontologist may set up conditions that will allow for monitoring to be scaled back to part-time as the project progresses. However, if significant fossils begin to be recovered

after monitoring has been scaled back, conditions shall also be specified that would allow increased monitoring as necessary. The monitor shall be equipped to salvage fossils and/or matrix samples as they are unearthed in order to avoid construction delays. The monitor shall be empowered to temporarily halt or divert equipment in the area of the find in order to allow removal of abundant or large specimens.

- The underlying sediments may contain abundant fossil remains that can only be recovered by a screening and picking matrix; therefore, these sediments shall occasionally be spot-screened through one-eighth to one-twentieth-inch mesh screens to determine whether microfossils exist. If microfossils are encountered, additional sediment samples (up to 6,000 pounds) shall be collected and processed through one-twentieth-inch mesh screens to recover additional fossils. Processing of large bulk samples is best accomplished at a designated location within the project disturbance limits that will be accessible throughout the project duration but will also be away from any proposed cut or fill areas. Processing is usually completed concurrently with construction, with the intent to have all processing completed before, or just after, project completion. A small corner of a staging or equipment parking area is an ideal location. If water is not available, the location should be accessible for a water truck to occasionally fill containers with water.
- Preparation of recovered specimens to a point of identification and permanent preservation. This includes the washing and picking of mass samples to recover small invertebrate and vertebrate fossils and the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and the storage cost for the developer.
- Identification and curation of specimens into a museum repository with permanent, retrievable storage, such as the San Bernardino County Museum (SBCM).
- Preparation of a report of findings with an appended, itemized inventory of specimens. When submitted to the City of Coachella Director of Development Services or designee, the report and inventory would signify completion of the program to mitigate impacts to paleontological resources.

#### **Mitigation Measure 4.5.4**

**Human Remains.** Consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e), if human remains are encountered during site disturbance, grading, or other construction activities on the project site, work within 25 feet of the discovery shall be redirected and the County Coroner notified immediately. State Health and Safety Code Section 7050.5 states that

no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). With the permission of the City of Coachella, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City of Coachella shall consult with the MLD as identified by the NAHC to develop an agreement for the treatment and disposition of the remains.

Upon completion of the assessment, the consulting archaeologist shall prepare a report documenting the methods and results and provide recommendations regarding the treatment of the human remains and any associated cultural materials, as appropriate, and in coordination with the recommendations of the MLD. The report should be submitted to the City of Coachella Director of Development Services and the San Bernardino Archaeological Information Center. The City of Coachella Director of Development Services, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of findings and recommendations.

#### **Mitigation Measure 4.5.5**

**Site Surveys, Record Searches, and Reports for All Phases except Phase 1.** Prior to the submittal for a Tentative Tract Map and prior to any site disturbance, grading, or other construction activities in any areas on the project site other than the Phase 1 area, the project applicant will be required to:

1. Prepare a Cultural Resources Survey Report for the area covered by the Tentative Tract Map, which will include the results of a records search, site survey, Native American consultation, and a Sacred Lands File search. The Cultural Resources Survey Report will assess whether implementation of Measures 4.5.1 (Archaeological and Native American Monitors), 4.5.2 (Archaeological Monitoring Plan and Accidental Discovery), and 4.5.4 (Human Remains) would either avoid impacts to cultural resources or substantially reduce the impacts of the land uses proposed in the Tentative Tract Map on cultural resources to below a level of significance based on the California Environmental Quality Act (CEQA) thresholds of significance for historic and archaeological resources. If these Measures

cannot either avoid the impacts to cultural resources or reduce those impacts to below a level of significance, the land uses in the Tentative Tract Map must be redesigned to avoid the affected resource or resources prior to the City's consideration of the proposed Tentative Tract Map. The applicant will submit the Report to the City of Coachella Director of Development Services for review and approval prior to submittal of the Tentative Tract Map.

2. Prepare a Paleontological Resources Survey Report for the area covered by the Tentative Tract Map that will include the results of a locality search and a site survey. The Paleontological Resources Survey Report will assess whether implementation of Measure 4.5.3 (Paleontological Resources Impact Mitigation Program) would either avoid impacts to paleontological resources or substantially reduce the impacts of the land uses proposed in the Tentative Tract Map on paleontological resources to below a level of significance based on the CEQA threshold of significance for paleontological resources. If that Measure cannot either avoid the impacts to paleontological resources or reduce those impacts to below a level of significance, the land uses in the Tentative Tract Map must be redesigned to avoid the affected resource or resources prior to the City's consideration of the proposed Tentative Tract Map. The applicant will submit the Report to the City of Coachella Director of Development Services for review and approval prior to submittal of the Tentative Tract Map.

#### **4.5.12 Level of Significance after Mitigation**

Mitigation Measures 4.5.1 through 4.5.5 would reduce potential impacts to archaeological resources, paleontological resources, and human remains to a less than significant level. No significant unavoidable project or cumulative impacts to cultural or paleontological resources are anticipated with implementation of these measures.

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