

CHAPTER 15

CULTURAL RESOURCES

This chapter describes the cultural resources in the study area and potential changes that could occur due to implementation of the alternatives. Cultural resources are archaeological sites, districts, and objects (both prehistoric and historic); standing historic structures, buildings, districts, and objects; locations of important historic events; or sites of traditional/cultural importance (those important to living Native Americans for religious, spiritual, ancestral, or traditional reasons).

STUDY AREA

The study area is defined as the geographical area within which the large majority of potential impacts are expected. The study area for cultural resources is the area where ground disturbance or exposure of previously submerged cultural resources would occur. This area is located within the Sea Bed and along the shoreline.

REGULATORY REQUIREMENTS

The State Office of Historic Preservation (OHP) was established in response to the National Historic Preservation Act (NHPA) of 1966 to administer cultural resource programs established by federal and State law.

The State of California has formulated laws for the protection and preservation of historically significant resources. CEQA requires evaluation of impacts to historic resources, including properties “listed in, or determined eligible for listing in, the California Register of Historic Resources (CRHR) [or] included in a local register of historical resources.” The CRHR may also include properties listed in local registers of historic properties. A local register of historic resources is broadly defined in Public Resources Code (PRC) Section 5020.1 (k), as a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution. Local registers of historic properties come essentially in two forms: (1) surveys of historic resources conducted by a local agency in accordance with OHP procedures and standards, and (2) landmarks designated under local ordinances or resolutions (PRC Sections 5024.1, 21804.1, and 15064.5). By definition, the CRHR also includes all properties formally determined eligible for, or listed in, the National Register of Historic Places (NRHP), and certain specified State Historical Landmarks.

HISTORICAL PERSPECTIVE

Prehistoric Background

This discussion provides a generalized account of the last 12,000 years in Southern California; cultural chronologies within each specific region vary both in terms of human adaptation over time and nomenclature for different time periods.

The most reliable evidence of initial human occupation of California dates to about 12,000 years ago. The first inhabitants focused on hunting large Pleistocene mammals, the largest of which became extinct about 10,000 years ago. For Southern California, this period is represented by the San Dieguito complex and is associated mainly with hunter-gatherer flaked stone tools, such as scrapers, choppers, and large projectile points (Warren, 1987).

The Archaic period followed, dating from between about 7,500 to 3,000 years ago (Moratto, 1984), as the climate became both warmer and drier. This period contrasts with the San Dieguito complex because it

contains ample evidence of plant use, represented by the presence of manos and metates, which are associated with the grinding of seeds and other plant resources. Technological changes, such as the use of mortars and pestles for acorn processing, suggest that people reacted to the changing environment by making use of new foods. This period was followed by a short period with lower temperatures and increased rainfall that lasted until 2,000 years ago.

The Late Prehistoric period is associated with the migration of Great Basin Shoshonean speakers into the Salton Sea region sometime after 1,500 years ago. The bow and arrow first appeared in Southern California around this same time, along with an increasing population, larger and more permanent settlements, and expanding trade throughout Southern California. By about 1,000 to 1,500 years ago, continuation of these trends resulted in the development of groups that had a material culture essentially identical to the ethnographic groups first encountered by the Spanish in the 1500s.

Ethnographic Background

When the Spanish first arrived in the 1500s, California was occupied by a diverse population of Native Americans speaking around 90 languages and belonging to as many as 500 distinct tribelets (Moratto, 1984). The study area lies within or adjacent to areas traditionally used by the Cahuilla, Cupeño, Serrano, Diegueño (Ipai/Tipai/Kumeyaay [Kamia]), Southern Paiute (Chemehuevi), Mohave, Halchidhoma, Quechan, and Cocopa. There was often great fluidity between ethnographic territories over time, and defining exact boundary lines between neighboring groups is difficult. The approximate boundary lines shown in Figure 15-1 are based on three of the volumes included in the *Handbook of North American Indians* (Heizer, 1978; Ortiz, 1979; D'Azevedo, 1986).

Cahuilla

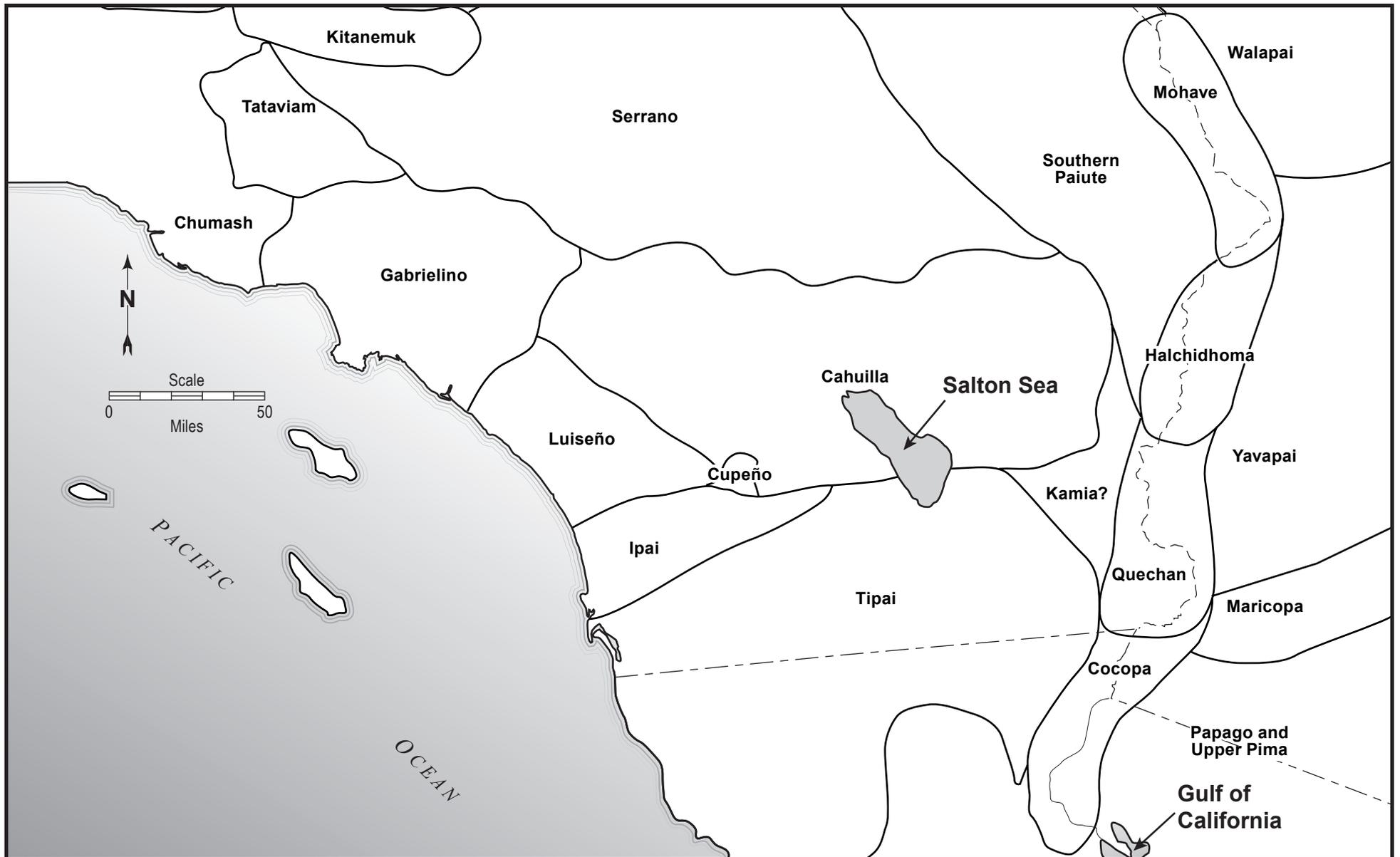
The Cahuilla territory was near the geographic center of Southern California. It was bounded to the north by the San Bernardino Mountains, to the south by Borrego Springs and the Chocolate Mountains, to the east by the Colorado Desert, and to the west by the San Jacinto Plain and the eastern slopes of the Palomar Mountains (Bean, 1978). The Cahuilla used a wide range of wild resources, such as acorns and piñon nuts, deer, desert bighorn sheep, rabbits, fish, and quail. The Cahuilla settlements were generally located at high elevations in well-watered canyons or on fans near streams and springs and at lower elevations near natural springs (Moratto, 1984). The Cahuilla had well-developed trade networks with neighboring Serrano, and Diegueño groups and cultivated corn, beans, squashes, and melons (Bean, 1978).

Cupeño

The Cupeño occupied a small mountainous area about 10 miles in diameter at the headway of San Luis Rey River (Bean and Smith, 1978a). The Cupeño used a wide range of wild resources, such as acorns and piñon nuts, deer, desert bighorn sheep, rabbits, fish, and quail.

Serrano

The Serrano territory encompassed the San Bernardino Mountains east of Cajon Pass and continued north to Victorville, east to Twentynine Palms, and south to Yucaipa Valley (Bean and Smith, 1978b). The Serrano used a wide range of wild resources, such as acorns and piñon nuts, deer, desert bighorn sheep, rabbits, fish, and quail. The Serrano settlement patterns were similar to those of the Cahuilla.



--- State and International Borders — Ethnographic Boundary Lines

**FIGURE 15-1
APPROXIMATE BOUNDARY LINES OF THE
ETHNOGRAPHIC GROUPS OF SOUTHERN
CALIFORNIA AT THE TIME OF EUROPEAN CONTACT**

Source: Heizer, 1978; Ortiz, 1979; D'Azevedo, 1986

Digueño (Ipai/Tipai/Kumeyaay [Kamia])

The Ipai, Tipai, and Kumeyaay (sometimes called Kamia or easternmost Digueño) are three groups subsumed under the name Digueño because they are linguistically and culturally similar to each other. The Digueño territory covers most of the extreme southern part of California, from the mouth of the San Luis Rey River in the north, to the Todos Santos Bay near Ensenada, Mexico, in the south, and to the Sand Hills bordering the Imperial Valley in the east (Luomala, 1978).

The Digueño used wild plants and supplemented their diet with small game, some large game, and fish (Luomala, 1978). Some groups of Kumeyaay also practiced agriculture in the Imperial Valley (IID and Reclamation, 2002a). During the early years of Spanish Missionization, the Digueño violently resisted Mission control and several attacks on the San Diego Mission ended with fatalities (Luomala, 1978). Despite strong resistance, the Mission had 1,405 registered Digueños living within the Mission system by 1779 (Luomala, 1978).

Southern Paiute (Chemehuevi)

The Chemehuevi are one of 16 identified Southern Paiute groups whose main territory was west of the Colorado River, extending from Blythe to just north of Needles and from the California border with Arizona westward halfway to Twentynine Palms. Although the Chemehuevi were neighbors of the Serrano and Cahuilla, they were more aligned culturally with the Great Basin groups (e.g., Western Shoshone, Ute, Kawaiisu). The Chemehuevi shared the Great Basin pattern of living in nonsedentary small bands that used a wide range of resources and traveled over great distances (Moratto, 1984). During historic times, the Chemehuevi displaced the Halchidhoma along the Colorado River (with the help of the Mohave) and practiced agriculture (Kroeber, 1925).

Mohave, Halchidhoma, Quechan, and Cocopa

The Mohave, Halchidhoma, Quechan (or Yuma), and Cocopa were lower Colorado River agriculturists (Moratto, 1984). The Mohave is the northernmost of the four groups, followed by the Halchidhoma, Quechan, and then Cocopa (see Figure 15-1). The Kamia from the neighboring Colorado Desert later joined them during historic times, and the Chemehuevi actually displaced the Halchidhoma during the early historic period (Moratto, 1984). Maize was the primary agricultural crop, which was supplemented by collecting wild plants, fishing, and hunting. A typical Colorado River settlement consisted of a scattering of houses up and down the riverbank (Moratto, 1984). The lower Colorado River groups were organized militarily and traveled great distances to fight, visit, or trade (Moratto, 1984). The Mohave and Quechan often united to fight the Halchidhoma or other western Arizona groups.

Historic Background

European contact with Native American groups in California began in the 1500s, when mariners such as Juan Cabrillo and Francis Drake explored the California coast. It was not until the late 1700s, however, that the Spanish established a continuous presence. Most Spanish colonial activity focused on missions established in the coastal zone (e.g., San Diego, San Gabriel, San Juan Capistrano, and San Luis Rey). Missions were the center of Spanish influence in the region and affected native patterns of settlement, culture, trade, industry, and agriculture. The operation of the missions also disintegrated Native American cultural patterns, depopulated the interior, and left much of the country open to Euro-American settlement (Castillo, 1978).

DATA SOURCES

The environmental setting is based primarily on summary information included in National Environmental Policy Act (NEPA) or CEQA documents that have been prepared for other projects and

general plan documents within the study area. No new archaeological site record searches, surveys, or other cultural resource investigations were conducted specifically for the Draft Programmatic Environmental Impact Report (PEIR). A record search of the entire study area and associated field investigations was not completed because environmental impacts related to the alternatives are evaluated at a programmatic level.

DATA LIMITATIONS

Available data are limited to areas where previous cultural resources records searches and surveys have been conducted. Therefore, it is not possible to identify the locations of all cultural resources present within the study area. A site-specific records search and intensive field studies of areas of potential impact would be required for future project-level analyses.

EXISTING CONDITIONS

Cultural Resources Near the Salton Sea

A Class I cultural resources inventory of the Salton Sea and its vicinity (Reclamation, 2002a) was conducted in conjunction with the Salton Sea Restoration Project Draft Environmental Impact Statement/Environmental Impact Report (Salton Sea Authority and Reclamation, 2000). The inventory focused on a study area measuring about 5 miles around the existing shoreline of the Salton Sea and some adjacent areas. Record searches were conducted through the California Historical Resources Information System to identify previous investigations in this area and determine the location of previously recorded cultural resources. The following description is based on the Class I survey report completed for that project.

The Class I inventory study area encompassed about 1,105 square miles, of which 364 square miles are inundated by the Salton Sea. According to the records search, only 5.1 percent of this area had been previously surveyed for cultural resources. Previous surveys were associated with improvements to State highways and the Coachella Canal and the realignment and closure of the U.S. Navy Salton Sea Test Base. Despite the relatively small amount of surveyed acreage, 1,251 cultural resources were identified. These included 1,064 prehistoric sites, 4 contact-era sites (early European contact with Native Americans), 72 historic sites, 30 multi-component sites (sites from multiple time periods), 9 sites of unknown age, and other purported resources (those that have been recorded based on archival research, but have not been identified in the field). Many of the purported sites were on land submerged beneath the Salton Sea.

Of the recorded cultural resources, 123 were considered potentially eligible or have been recommended as eligible for listing in the NRHP. The study area includes the Martinez Historical District which encompasses the Torres Martinez Tribal lands, and the Southwest Lake Cahuilla Recessional Shoreline Archaeological District which encompasses fish weirs and other prehistoric features related to Lake Cahuilla. In addition to the 1,251 cultural resources noted above, at least 24 World War II-era military aircraft had reportedly crashed or made forced landings in or near the Salton Sea, and submerged wreckage may contain the remains of lost crewmen.

The report indicates that prehistoric sites in the Salton Sea area are anticipated to be found along the shoreline of ancient Lake Cahuilla, near freshwater springs, near the mouths of rivers or canyons that empty into the Salton Sea, and along high points that may have once been islands or peninsulas. Other sensitive areas include locations that could provide important resources such as lithic materials, basketry materials, pottery clay, habitat for wild game and fish, or ceremonial necessities. Historic sites are likely to be found along transportation routes, such as historic roads or railroads, which usually followed paths of least topographic resistance between freshwater spots. The report indicates that many sites have probably

been damaged or destroyed by development, mining, agriculture, flooding, vandalism, recreational activity, cycles of infilling and desiccation of Lake Cahuilla, and the flooding of the Salton Sea.

Cultural Resources in Other Areas of Imperial and Coachella Valleys

The following information is derived from a Class I cultural resources inventory along the New and Alamo rivers (Reclamation, 2003) as well as numerous environmental documents prepared for projects within the Imperial and Coachella valleys (CVWD, 2002b; IID, 1986, 2002; CVWD and Reclamation, 2001; IID and Reclamation, 1994). The distribution of archaeological sites in these valleys is a consequence of several environmental and historical factors, such as the periodic flooding of Lake Cahuilla (Waters, 1983) and the presence of the New and Alamo rivers, which attracted prehistoric settlement (IID and Reclamation, 2002a). However, many sites in the valley bottoms have probably been damaged by past flooding and more than 100 years of agricultural practices.

The study area for the Class I inventory along the New and Alamo rivers encompassed 211 square miles from the United States-Mexico border to the Salton Sea shoreline between the New and Alamo rivers. The width of the study area extended for 1 mile from the centerline of each river (Reclamation, 2003). According to the record search, only 0.2 percent of this area has been previously surveyed for cultural resources. There were 116 cultural resources recorded: 52 prehistoric sites and isolates, 14 historic sites and isolates, and 50 purported resources. Of these, only one resource – the U.S. Inspection Station in Calexico – is listed on the NRHP. Portions of the All-American Canal, a potential candidate for listing on the NRHP, and the site of Fort Romualdo Pacheco on the New River, a State Historic Landmark, were included in the study area.

For other areas besides the New and Alamo rivers, prehistoric sites are likely to be present along the eastern and western ancient shorelines of Lake Cahuilla; within the hills, older alluvial fans, and desert pavements in the southern and eastern portion of the Imperial Valley; at or near oases on the Coachella Valley floor; and at the canyon mouth where the Coachella Valley floor meets the Santa Rosa and San Jacinto foothills (IID, 1986; CVWD, 2002b). Pilot Knob, near the Colorado River and the All-American Canal, contains numerous and diverse archaeological remains and was the focus of traditional ceremonies for the Quechan, Cocopa, Kamia, and possibly other Native American groups (Reclamation and IID, 1994). The U.S. Department of the Interior, Bureau of Land Management established the Pilot Knob Area of Critical Environmental Concern to protect archaeological and Native American cultural resources within this area.

Likely areas for historic sites include recorded Cahuilla village areas, old railroad stops, worker camps, historic trails, and other features related to early mining, transportation, and agriculture. The Coachella Valley fish traps and the Torres Martinez Indian Reservation are listed on the NRHP. The Old Plank Road, within the Imperial Valley, is a county designated landmark and California Registered Historical Landmark No. 845. In addition, both the All-American Canal and the Coachella Canal are potential candidates for listing on the NRHP (IID and Reclamation, 1994; CVWD and Reclamation, 2001).

Sacred Lands

The Native American Heritage Commission in Sacramento was contacted to obtain information on sacred sites and Native American individuals and organizations with information concerning sacred sites within the study area. Sacred sites include, but are not limited to, ritual worship sites, sacred power sites, burial and re-burial sites, rock shelters/caves, and rock art sites.

The record search of the Native American Heritage Commission Sacred Lands File indicates the presence of Native American cultural resources within the study area. The locations of the Sacred Lands File sites

are confidential. However, the resources are generally located within Section 21 of the Kane Springs quadrangle. The search revealed no additional sacred sites in other locations within the study area. In addition, all contacts provided by the Native American Heritage Commission as individuals with knowledge of potential sacred sites within the study area were contacted by letter and telephone and no additional specific sites were identified.

ENVIRONMENTAL IMPACTS

Analysis Methodology

The impact assessment methodology used to support the cultural resource analysis presented in this chapter is based upon the potential for damage or disturbance of cultural resources as a result of exposure as the Salton Sea recedes or as a result of ground-disturbing activities.

Significance Criteria

The following significance criteria were based on CEQA and air quality regulatory agency guidance and used to determine if changes as compared to Existing Conditions and the No Action Alternative would:

- Cause a substantial adverse change in the significance of a historical or unique archaeological resource. Changes would include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired. A cultural resource is significant if:
 - It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
 - It is associated with the lives of persons important in the past;
 - It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values; or
 - It has yielded, or may be likely to yield, information important in prehistory or history; and
- Disturb any human remains, including those interred outside of formal cemeteries.

These criteria are virtually identical to the federal criteria used for identifying resources eligible for inclusion in the NRHP and listed under 36 Code of Federal Register (CFR) 60.6. Some of the cultural resources discussed in the following section have been previously evaluated for significance using only the federal significance criteria. Resources previously found eligible for the NRHP are equally eligible for listing on the CRHP pursuant to PRC 5024.1(d)(1).

Application of Significance Criteria

Significance criteria have been applied to the alternatives considered in the PEIR. The following list summarizes the overall methodology in the application of the criteria to the alternatives:

- **Cause Substantial Adverse Change in the Significance of a Historical or Unique Archaeological Resource, or Disturb Human Remains** – The primary risks would occur due to direct damage during construction, exposure due to erosion of soil, or exposure as water recedes. Any increase in disturbance would be considered to be significant.

Summary of Assumptions

The assumptions related to the descriptions of the alternatives are described in Chapter 3. The specific assumptions related to the analysis of cultural resources are summarized in Table 15-1.

**Table 15-1
Summary of Assumptions for Cultural Resource**

| Assumptions Common to All Alternatives | |
|--|--------------------------------------|
| 1. Significant archaeological and historical resources could be present in all areas affected by construction activities anywhere in the Sea Bed or along the shoreline. | |
| Assumptions Specific to the Alternatives | |
| No Action Alternatives and Alternatives 1, 2, 3, 4, 5, 6, 7, and 8 | No additional assumptions were made. |

Summary of Impact Assessment

The impacts shown in Table 15-2 assume implementation of the Next Steps to reduce the adverse impacts.

No Action Alternative

As described in Chapter 3, this alternative would involve construction and operations and maintenance activities for the Sedimentation/Distribution Basins, Air Quality Management, Pupfish Channels, and Salton Sea. The construction activities would be identical under the No Action Alternative-CEQA Conditions and the No Action Alternative-Variability Conditions. Therefore, impacts related to disturbance would be the same for both conditions.

It is possible that unknown archaeological and historical materials, including human remains, exist adjacent to or beneath the current footprint of the Salton Sea in areas where the potential for archaeological and historical resources is high (i.e., near confluences of springs, rivers, and drains, and/or on high elevation landforms in the Sea Bed and along the shoreline that may have once been islands or peninsulas). Ground disturbing activities that would occur under the No Action Alternative could result in the damage and/or disturbance of potentially significant archaeological and historical resources, including human remains. Additionally, reduction in water surface elevation could potentially expose significant, currently inundated cultural resources, including human remains. Exposure of such resources could lead to unauthorized artifact collection during construction and operations and maintenance. Such resources also could be subject to wave-induced erosion.

Under the No Action Alternative, impacts to cultural resources that are directly attributable to the Imperial Irrigation District (IID) Water Conservation and Transfer Project would be subject to the following mitigation measures as required by the IID Water Conservation and Transfer Project EIR/EIS (IID and Reclamation, 2002a):

- Modify design, when feasible, to avoid impacts to cultural resources, unless a qualified archeologist conducts a field inspection and determines that the resource has no potential for significance because it is re-deposited, an isolated occurrence, modern, or otherwise lacks data potential;
- Develop and implement a Phase II Testing and Evaluation Plan for all unavoidable potentially significant archaeological sites that will be directly impacted to evaluate the significance of the resource in terms of applicable criteria;

**Table 15-2
Summary of Benefit and Impact Assessments to Cultural Resources**

| Alternative | Basis of Comparison | Changes by Phase | | | | Comments | Next Steps |
|--|-----------------------|------------------|----|-----|----|--|---|
| | | I | II | III | IV | | |
| Criterion: Cause substantial adverse change in the significance of a historical or unique archaeological resource or disturb human remains. | | | | | | | |
| No Action Alternative | Existing Conditions | S | S | S | S | Ground disturbing activities could result in the damage and/or disturbance of potentially significant archaeological resources. Water would recede exposing currently submerged resources. Exposure of such resources could lead to unauthorized artifact collection. Such resources also could be subject to wave-induced erosion during operations. | Implement mitigation measures required by implementation of the IID Water Conservation and Transfer Project from -235 to -248 feet msl. No mitigation measures would be included between the shoreline and -235 feet msl and between -248 feet msl and the Brine Sink. |
| | No Action Alternative | NA | NA | NA | NA | | |
| Alternatives 1 - 8 | Existing Conditions | S | S | S | S | Impacts would be similar to those described under the No Action Alternative. The extent of disturbance would be related to the amount of land disturbed and the volume of Sea Bed material excavated and dredged. | Implement same measures as described in the No Action Alternative, including periodic surveys of Exposed Playa. If disturbed lands are federal or tribal lands, complete analyses subject to federal oversight following Section 106 compliance pathways of the NHPA and implementing regulations under 36 CFR 800, as amended. Discovered sites should be properly recorded with the appropriate California Historic Resource Information System (CHRIS) office. |
| | No Action Alternative | S | S | S | S | | |

Legend for Types of Benefits or Impacts in Each Phase:
 S = Significant Impact
 O = No Impact
 L = Less Than Significant
 B = Beneficial Impact
 NA = Not Analyzed

- Develop and implement a Phase III Data Recovery Plan for all significant archaeological sites that will be directly impacted if the sites cannot be avoided through redesign;
- If impacts to significant resources cannot be reduced to less than significant levels through data recovery or other mitigation measures, then the facilities will be redesigned to avoid the impact;
- Develop a Cultural Resources Construction Monitoring Plan prior to construction if ground disturbance will occur within any areas of archaeological sensitivity, such as recorded sites and areas that may contain buried archaeological sites;
- In the event of an unanticipated cultural resource discovery during construction, all ground disturbances within 300 feet of the discovery will be halted, or re-directed to other areas until the discovery has been documented by a qualified archaeologist and its potential significance evaluated in terms of applicable criteria. Resources considered significant will be avoided or subject to a data recovery program as described above;
- Coordinate with OHP and local Native American groups, if required, in compliance with applicable State laws; and
- A series of archaeological surveys at regular intervals (once every 3 years) will be conducted to check freshly exposed lands for the presence/absence of archaeological sites.

The No Action Alternative would result in adverse impacts as compared to Existing Conditions that would be partially mitigated as a result of the IID Water Conservation and Transfer Project mitigation measures. The area between the shoreline and -235 feet mean sea level (msl) and below -248 feet msl that would be exposed under the No Action Alternative could result in significant and adverse impacts to cultural resources as compared to Existing Conditions.

Alternative 1 – Saline Habitat Complex I

As described in Chapter 3, this alternative would involve construction and operations and maintenance activities for the Sedimentation/Distribution Basins, Air Quality Management, Pupfish Channels, Saline Habitat Complex, and Brine Sink.

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 1, about 136,700 acres of land would be disturbed in the Sea Bed and along the shoreline, and about 77,140,000 cubic yards of Sea Bed material would be excavated or dredged.

In Phases I through IV, impacts associated with exposure would be similar to those described under the No Action Alternative. It is assumed that IID would implement the mitigation measures as described under the No Action Alternative between -235 to -248 feet msl. Portions of the Sea Bed that would have been exposed under the No Action Alternative would be covered by other components.

Alternative 2 – Saline Habitat Complex II

As described in Chapter 3, this alternative would involve construction and operations and maintenance activities for the Sedimentation/Distribution Basins, Air Quality Management, Saline Habitat Complex, Shoreline Waterway, Saltwater Conveyance, and Brine Sink.

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 2, about 206,400 acres of land would be disturbed in the Sea Bed and along the shoreline, and about 136,530,000 cubic yards of Sea Bed material would be excavated or dredged.

In Phases I through IV, impacts and mitigations associated with exposure would be similar to those described under Alternative 1.

Alternative 3 – Concentric Rings

As described in Chapter 3, this alternative would involve construction and operations and maintenance activities for the Sedimentation/Distribution Basins, Air Quality Management, First and Second rings, and Brine Sink.

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 3, about 155,450 of acres of land would be disturbed in the Sea Bed and along the shoreline, and about 18,810,000 cubic yards of Sea Bed material would be excavated or dredged.

In Phases I through IV, impacts and mitigations associated with exposure would be similar to those described under Alternative 1.

Alternative 4 – Concentric Lakes

As described in Chapter 3, this alternative would involve construction and operations and maintenance activities for the Sedimentation/Distribution Basins; First, Second, Third, and Fourth lakes; and Brine Sink.

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 4, about 96,950 of acres of land would be disturbed in the Sea Bed and along the shoreline, and about 154,215,000 cubic yards of Sea Bed material would be excavated or dredged.

In Phases I through IV, impacts and mitigations associated with exposure would be similar to those described under Alternative 1.

Alternative 5 – North Sea

As described in Chapter 3, this alternative would involve construction and operations and maintenance activities for the Sedimentation/Distribution Basins, Air Quality Management, Saline Habitat Complex, Shoreline Waterway, Saltwater Conveyance, Marine Sea, Marine Sea Recirculation Canal, and Brine Sink.

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 5, about 230,450 of acres of land would be disturbed in the Sea Bed and along the shoreline, and about 86,770,000 cubic yards of Sea Bed material would be excavated or dredged.

In Phases I through IV, impacts and mitigations associated with exposure would be similar to those described under Alternative 1.

Alternative 6 – North Sea Combined

As described in Chapter 3, this alternative would involve construction and operations and maintenance activities for the Sedimentation/Distribution Basin, Air Quality Management, Pupfish Channels, Saline Habitat Complex, Shoreline Waterway, Saltwater Conveyance, Marine Sea, Marine Sea Mixing Zone, Marine Sea Recirculation Canal, and Brine Sink.

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 6, about 224,250 of acres of land would be disturbed in the Sea Bed and

along the shoreline, and about 66,970,000 cubic yards of Sea Bed material would be excavated or dredged.

In Phases I through IV, impacts and mitigations associated with exposure would be similar to those described under Alternative 1.

Alternative 7 – Combined North and South Lakes

As described in Chapter 3, this alternative would involve construction and operations and maintenance activities for the Sedimentation/Distribution Basin, Air Quality Management using Protective Salt Flat on Exposed Playa below -255 feet msl, Exposed Playa without Air Quality Management above -255 feet msl, Saline Habitat Complex, Recreational Saltwater Lake, Recreational Estuary Lake, Marine Sea Recirculation Canal, IID Freshwater Reservoir, two Treatment Plants, and Brine Sink.

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 7, about 131,950 of acres of land would be disturbed in the Sea Bed and along the shoreline, and 33,522,000 cubic yards of Sea Bed material would be excavated or dredged.

In Phases I through IV, impacts and mitigations associated with exposure would be similar to those described under Alternative 1.

Alternative 8 – South Sea Combined

As described in Chapter 3, this alternative would involve construction and operations and maintenance activities for the Sedimentation/Distribution Basins, Air Quality Management, Saline Habitat Complex, Shoreline Waterway, Marine Sea, Marine Sea Recirculation Canal, and Brine Sink.

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 8, about 209,550 of acres of land would be disturbed in the Sea Bed and along the shoreline, and about 47,230,000 cubic yards of Sea Bed material would be excavated or dredged.

In Phases I through IV, impacts and mitigations associated with exposure would be similar to those described under Alternative 1.

Next Steps

During project-level analysis, the preferred alternative would be subject to additional CEQA analysis. Actions involving federal or Tribal lands would be subject to federal oversight following Section 106 of the NHPA and implementing regulations under 36 CFR 800, as amended. Mitigation measures such as the following would be considered during the project-level analysis:

- Prior to construction and at appropriate intervals as the Salton Sea recedes (e.g., every 3 years unless a qualified archaeologist determines that a different schedule is warranted), an intensive pedestrian survey of exposed lands should be conducted to identify any cultural resources present;
- A Testing and Evaluation Plan should be developed to evaluate all identified archaeological sites for listing on the NRHP. Even though the methods used to evaluate individual archaeological sites should be dependent on their type and size, standard methods include mechanically excavated backhoe trenches, hand excavated shovel test pits, or hand-excavated test units. If feasible, components should be modified to avoid cultural resources found eligible for listing on the NRHP. If avoidance is not feasible, a Data Recovery Plan should be developed;

- A Construction Monitoring and Treatment Plan should be developed and implemented to ensure that any new sub-surface discoveries are adequately recorded, evaluated, and, if significant, mitigated. The Plan minimally should describe:
 - Qualifications and organization of monitoring personnel;
 - Procedures for notifying involved and/or interested parties in case of a new discovery;
 - Procedures that should be used to record, evaluate, and mitigate new discoveries with a minimum of delay;
 - Procedures that should be followed in the case of discovery of disturbed as well as intact human burials and burial-associated artifacts; and
 - Specifications that, to the extent feasible, all ground disturbances in newly exposed areas that were previously beneath the Sea should be monitored by a qualified archaeologist and a Native American representative funded by the applicant.

Monitoring of construction by qualified archaeologists should take place as appropriate. The monitors should have the authority to temporarily halt or redirect construction in the vicinity of any potentially significant discovery to allow for adequate recordation, evaluation, consultation with OHP and Native American representatives, and mitigation. Evaluation and mitigation could require additional archaeological testing and data recovery. Data recovery excavations to mitigate for loss of archaeological data resulting from unavoidable impacts should be conducted as needed. If human remains would be encountered, consultation with the most likely Native American descendant and OHP would be necessary, in addition to the counties of Imperial or Riverside coroners. Discovered sites should be properly recorded with the appropriate California Historic Resource Information System office. In addition, construction workers should be trained to recognize and report any discoveries of cultural resources and prohibited activities, such as the unauthorized collection of artifacts.