4.10 CULTURAL RESOURCES

This section describes the effects on cultural resources of the Proponent’s Proposed Project and its alternatives during construction and operations for the project site, maintenance areas and immediate surroundings. Additional information provided in this Final EIR/EIS clarifies and amplifies the information included in the Public Draft EIR/EIS. The cultural resources analysis describes short- and long-term effects that would result from construction, demolition, or operation of the Dam, reservoir, and associated infrastructure.

Cultural resources include historic properties that are archaeological sites or historic structures. Archaeological sites date from approximately 12,000 BC through the historic period, which can be as recent as AD 1950. In accordance with the California Office of Historic Preservation’s (OHP) California Register of Historical Resources (CRHR) standard, under CEQA, historic structures must be at least 45 years old. These two types of historic properties are addressed separately in this section because the resources are affected differently by project construction and operations. Under Section 106 of the National Historic Preservation Act (NHPA), federal agencies must consider effects on historic properties. “Historic properties” are defined as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the National Register of Historic Places” (NRHP) (36 CFR 800.16). The term includes artifacts, records, and remains that are related to and located in such properties. It also includes “traditional cultural properties” (TCPs) that are eligible for inclusion on the NRHP.

The California State Parks Office of Historic Preservation administers the State’s NRHP program under the direction of the State Historic Preservation Officer (SHPO). The following NRHP criteria serve as the basis for evaluating a historic property’s eligibility for listing (36 CFR 60):

- **Quality of significance in American history, architecture, archeology, and culture for districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association.**

- **Association with events that have made a significant contribution to the broad patterns of our history or embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, and/or represent a significant and distinguishable entity whose components may lack individual distinction.**

- **Whether the property has yielded or may be likely to yield information important in prehistory or history.**

- **Resources less than 50 years old do not meet the NRHP criteria unless they are of exceptional importance.**
Consideration of effects must include the Area of Potential Effect (APE). The APE includes the “geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist.” The intent of the federal Executive Order (EO) 11593, Protection and Enhancement of the Cultural Environment has been integrated into Section 110 through 1980 amendments to the Act. Under NEPA, Federal agencies must take into account impacts to historical resources, or those resources that are eligible for the NRHP, before a project is approved. The Section 106 process has been integrated with the NEPA process for this project.

Recent amendments to Section 106 of the NHPA specify that properties of traditional religious and cultural importance to a Native American Tribe, also known as TCPs, may be determined to be eligible for inclusion on the NRHP. In carrying out its responsibilities under Section 106, the USACE is required to consult with any Native American tribe that may attach religious or cultural significance to any such properties.

**Criteria for Evaluation of Historic Properties**

**Federal**

The NRHP is the federal list of historic, archaeological, and cultural resources worthy of preservation. Resources listed in the NHRP include districts, sites, buildings, structures, and objects that are significant in American history, prehistory, architecture, archaeology, engineering, and culture. The quality of significance in American history, architecture, archaeology, and culture is possible in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association, and meet one of the following criteria:

**Criterion A:** Are associated with events that have made a significant contribution to the broad patterns of our history; or

**Criterion B:** Are associated with the lives of persons significant in our past; or

**Criterion C:** Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

**Criterion D:** Has yielded, or may be likely to yield, information important in prehistory or history (36 CFR Part 60).

Archaeological sites are primarily assessed under Criterion D. Buildings less than 50 years old do not meet the NRHP criteria unless they are of exceptional importance, as described in the National Park Service (NPS) Bulletin No. 22, “How to Evaluate andNominate Potential National Register Properties That Have Achieved Significance within the Last 50 Years.”
State
Regulatory compliance in relation to cultural resources is governed by CEQA. CEQA guidelines define a significant cultural resource as “a resource listed in or eligible for listing on the CRHR”. A historical resource may be eligible for inclusion in the CRHR if it is 45 years of age and:

- **Criterion 1**: Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- **Criterion 2**: Is associated with the lives of persons important in our past;
- **Criterion 3**: 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
- **Criterion 4**: Yields, or may be likely to yield, information important to prehistory or history.

4.10.1 ENVIRONMENTAL SETTING
Archaeological Sites
No previously unrecorded cultural resources were located during the survey. Two archaeological sites are located within 500 feet of the APE. CA-MNT-942 is a bedrock mortar and CA-MNT-1252H is the remains of a wood cabin. Because the resources are outside the APE, no attempt was made to relocate them. Table 4.10-1 includes a list of the archaeological resources that were inventoried in the APE for the Proponent’s Proposed Project.

**Table 4.10-1: Inventoried Archaeological Resources for Proponent’s Proposed Project (APE)**

<table>
<thead>
<tr>
<th>Field Site Numbers</th>
<th>Resource Name (Previously Assigned Site number)</th>
<th>Historical Significance</th>
<th>Relevant inventoried NRHP/CRHR* Criteria or Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR-1</td>
<td>Occupation Site CA-MNT-33A and CA-MNT-33B</td>
<td>Eligible</td>
<td>NRHP Criterion D CRHP Criterion 4</td>
</tr>
<tr>
<td>AR-2</td>
<td>Bedrock Mortar Feature CA-MNT-586</td>
<td>Ineligible</td>
<td>Site removed or destroyed</td>
</tr>
<tr>
<td>AR-3</td>
<td>Cabin &amp; Outhouse CA-MNT-814H</td>
<td>Ineligible</td>
<td>Cabin demolished</td>
</tr>
<tr>
<td>AR-4</td>
<td>Two Bedrock Mortar Features CA-MNT-1253</td>
<td>Unknown</td>
<td>Testing Required</td>
</tr>
</tbody>
</table>

* NRHP = National Register of Historic Places; CRHR = California Register of Historic Resources
CA-MNT-33A AND CA-MNT-33B (AR-1)

Initially discovered as early as 1948, this site is situated along the bank of the Carmel River near the current CVFP. The site consists of two large midden areas separated by a small, possibly sterile, area. Constituents of the site include shell and faunal bone fragments, some of which appear to be burned, lithic tools, mortar fragments, pestles, metates, and other possibly ground stone milling tools. At least five bedrock mortar features have been located along the riverbank.

Previous investigations at the site have included a 1972 excavation of five test pits by the Monterey County Archaeological Society, reported by Howard (1974). The reporting, however, was very limited and no further data were available until Gerrit Fenenga (1988) studied a small sample of shell artifacts from the site. Fenenga employed Bennyhoff and Hughes’ (1987) typology for his analysis. Fenenga found a large assortment of *Olivella biplicata* shell beads, ranging from spire-lopped to saucer shaped specimens. Fenenga’s investigation found temporally diagnostic shell artifacts are present at CA-MNT-33A, which date to the early and middle portions of the Middle Period (2100 to 1500 BP). A radiocarbon sample obtained from one excavation unit, approximately 133cm below surface returned a date of 2285 ± 100 BP (WSU-2388). Therefore, it can be assumed that CA-MNT-33A was undoubtedly occupied during the early Middle Period and possibly before.

A dirt and gravel access road is located across a portion of the site. This road appears to have been in place since the original recordation of the site. Previous site records also report other disturbances to the surface including gardens and fencing. Currently, a dirt road crosses the recorded boundaries of the site, but no other structures are evident. No disturbance of subsurface deposits seems likely with the exception of the settling ponds and the previous excavation.

Based on ethnographic maps, CA-MNT-33 may be the site of the village *Socorronda*, reported by Spanish missionaries to be located within the upper Carmel River drainage.

This large village site has the potential to contain important information on the prehistoric inhabitants of the area. Therefore, the site is recommended eligible for listing on the NRHP and CRHP under Criteria, D and 4, respectively.

CA-MNT-586 (AR-2)

This site is a possible bedrock mortar feature near a historic homestead CA-MNT-814H adjacent to Tularcitos Creek. The site was initially recorded in 1974 (Farley et al. 1974) and has since been removed or destroyed. This site is not eligible for the NRHP or CRHR.

CA-MNT-814H (AR-3)

Originally the site of a cabin and ancillary buildings, the site was reported as deteriorating in 1974 (Farley et al. 1974). The cabin was located on a sloping flat above
the west bank of Tularcitos Creek near a bridge crossing. A 1983 site record update reports that the cabin was bulldozed to make way for a new home built on Lismore Lane in 1979 (Jacques 1983). No evidence remained of the cabin or other structures. This site is not eligible for the NRHP or the CRHR.

Directly east of this site is the old location of the Tularcitos Guard Station, once used by the California Department of Forestry. The guard station was constructed after WWII. It was abandoned and buildings were removed during the 1980s (pers. comm. between Don Lingenfelter, CAW, and Brett Rushing, ENTRIX July 2005). A mortared river rock wall remains at this location and was not inventoried.

CA-MNT-1253 (AR-4)
Located on the peninsula at the confluence of San Clemente Creek and the Carmel River, the site consists of two bedrock mortar (BRM) features near the shoreline of the San Clemente reservoir (Westec 1983). Originally recorded as a single BRM, a subsequent survey found another BRM feature in the vicinity, which was added to the original site (Hampson 1987). The BRM features remain intact.

Although no artifacts have been located in association with the two features, the site area has never undergone a controlled archaeological testing program. Therefore, if the site could not be avoided, it would need to be tested to determine the nature and extent of any subsurface cultural deposit and to establish eligibility for the NRHP and CRHR.

**Historic Structures**
The inventory resulted in the identification of eight individual historic resources and one historic district. The individual resources included two dams and associated fish ladders, a filtration plant, two chemical treatment buildings, two dam keeper houses, and a Stone Cabin. Their association with the Monterey Division waterworks thematically links all identified resources except for the Stone Cabin. A district record form was subsequently created for the SCD Historic District.

A primary record form was also prepared for each individual building or structure within the historic district. A separate inventory form was prepared for the Stone Cabin (HR-8) because that resource is contextually linked with recreational resources. The historic district form notes the presence of historical pipelines connecting the reservoir to the CVFP and the historical access road, San Clemente Drive. Table 4.10-2 includes a list of the inventoried historic structures associated with the project and the alternatives within the APE.
# Table 4.10-2: Inventoried Historical Structures

<table>
<thead>
<tr>
<th>Field Site Number</th>
<th>Resource Name (Previously identified site number)</th>
<th>Historical Significance</th>
<th>Relevant NRHP/CRHR Criteria or Reason for Omission</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR-1</td>
<td>Chemical Building near Filtration Plant</td>
<td>HD* Contributing Resource</td>
<td>NRHP Criterion A CRHR Criterion 1</td>
</tr>
<tr>
<td>HR-2</td>
<td>Dam Keeper’s House 2</td>
<td>HD Contributing Resource</td>
<td>NRHP Criterion A CRHR Criterion 1</td>
</tr>
<tr>
<td>HR-3</td>
<td>Filtration Plant</td>
<td>Non-Contributing</td>
<td></td>
</tr>
<tr>
<td>HR-4</td>
<td>Old Carmel River Dam &amp; Fish Ladder CA-MNT-1249H</td>
<td>HD Contributing Resource &amp; Individually Eligible</td>
<td>NRHP Criteria A and C CRHR Criteria 1 and 3</td>
</tr>
<tr>
<td>HR-5</td>
<td>Dam Keeper’s House 1 CA-MNT-1248H</td>
<td>Contributing Resource HD</td>
<td>NRHP Criterion A CRHR Criterion 1</td>
</tr>
<tr>
<td>HR-6</td>
<td>Chemical Building near reservoir</td>
<td>HD Contributing Resource</td>
<td>NRHP Criterion A CRHR Criterion 1</td>
</tr>
<tr>
<td>HR-7</td>
<td>SCD &amp; Fish Ladder CA-MNT-1248H</td>
<td>HD Contributing Resource &amp; Individually Eligible</td>
<td>NRHP Criteria A and C CRHR Criteria 1 and 3</td>
</tr>
<tr>
<td>HR-8</td>
<td>Stone Cabin CA-MNT-812</td>
<td>Individually Eligible Resource</td>
<td>NRHP Criterion C CRHR Criterion 3</td>
</tr>
<tr>
<td>HR-9</td>
<td>SCD Historic District</td>
<td>Eligible</td>
<td>NRHP Criterion A CRHR Criterion 1</td>
</tr>
</tbody>
</table>

**Note:** Historic resources are located within the Proponent’s Proposed Project and alternatives.

**CHEMICAL BUILDING FOR FILTRATION PLANT (HR-1)**

This building is located directly west of San Clemente Drive just north of the Dam Keeper’s Cottage 2. The building includes a small concrete block structure and storage tank enclosed by chain-link fences. The fenced area where the tanks are located has a concrete slab foundation and fencing along its perimeter. Another fenced area without a foundation is located to the east. A pipeline is located adjacent to the west side of the building (pers. comm. between David Norris, CAW Consulting Engineer and Marcia Montgomery (ENTRIX 2005b).

The CVFP was constructed by CAW’s predecessor in 1947 in response to customer’s complaints about water quality. This building was constructed during this same period for use as a chemical storage building.

The Chemical Building near the CVFP is eligible for the NRHP Criterion A and CRHR under Criterion 1 as a contributing resource to the SCD Historic District and dates to the secondary period of significance.

**DAM KEEPER’S COTTAGE 2 (HR-2)**

The SCD became the property of the California Water and Telephone Company by 1935 during a period when the region’s population began to grow rapidly. From 1930 to 1950, the number of active water connections in the Monterey area more than doubled. In 1940, the California Water and Telephone Company built this house for a full-time caretaker at the San Clemente Reservoir to insure the protection of the supply
(Monterey Peninsula Herald 1940). By 1947 the CVFP was added in close proximity to the house and adjacent to the San Clemente Access Road.

This one-story wood-frame house has a low-pitched intersecting gable roof. An inset porch is located on the center of the front south elevation and is supported by a square wooden post. The house is clad with horizontal wood siding and board and batten siding in the gable ends. The composite shingle roof has slightly overhanging rafter ends. The west and east elevations are void of windows. The west elevation includes a brick chimney. Windows are wood-frame and double-hung. A white picket fence encloses the yard. A wood-frame detached two-car garage with a shed roof and board-and-batten siding is located to the east of the house. The house is still in use.

The Dam Keeper’s Cottage 2 is eligible for the NRHP under Criterion A and for the CRHR under Criterion 1 as a contributing resource within the SCD Historic District and is from the secondary period of significance.

CARMEL VALLEY FILTER PLANT (CVFP) (HR-3)

The CVFP was constructed in 1947 to filter solids from the water. This was partially in response to customer complaints during heavy run-off periods. The plant was built on the Carmel River one mile below the SCD. Water from the reservoir was diverted through a 30-inch transmission main to two large steel tanks, where the water was filtered by forcing it through layers of sand and gravel. After leaving the filters it was chlorinated (a second time for the system) and fed into the water system (Management Team 1954). In 1954 the plant had 12 filter units, however in the following years, 14 and then 16 filter units were used.

Filtration processes and equipment have changed since the plant was constructed, requiring many changes to the facility. The CVFP currently includes a rectangular side gable building with eight horizontally oriented tanks lying above ground on the northeast side of the structure. The building has seven square windows spaced evenly under the eaves of the standing seam roof. Another metal roof and side gable building, slightly lower in height, extends further to the west. This addition has metal slider windows and a door set in a cement wall. Southeast of the building and tanks on the grass is a small wooden shed roof building with a door and larger front gable concrete building with a standing seam roof. Two vertically oriented tanks stand east of these two buildings. A chain link fence surrounds the entire complex. A cement path leads from the road and a gate to the concrete building and tanks. The 30-inch main enters the fenced area in the southeast corner. A 1947 photograph of the CVFP shows a 1.5 story steel frame shed open at the front and sides next to horizontal tanks.

This building is ineligible for the NRHP or CRHR and classified as a non-contributing resource within the historic district because it has been extensively modified and expanded in order to keep up with existing water treatment methods.
OLD CARMEL RIVER DAM (OCRD) AND ASSOCIATED FISH LADDER (HR-4)

The OCRD is a low embankment dam that is rock fill faced with coursed rubble masonry. It is eight feet thick at the base and four feet thick at the crest. Embankment dams were first used in California by gold miners in remote areas in the 1850s. They used explosives to create rockfill out of granite and the fill was held in place by logs. These dams were called rockfill, log-crib dams. Later rockfill dams were faced with masonry, concrete, asphalt and steel. Few have been built since the early 1900s (Jones & Stokes 1998). A cement fish ladder is located on the north end of the Dam. The gate and gate controls are located at the south end of the Dam (Archaeological Consulting 1987b).

A vehicular bridge supported by two large concrete columns was added after the original construction of the bridge. The bridge deck is wooden and the railing on the edge of the bridge is wooden. An abandoned road stretches from the OCRD along the east side of the river to the SCD.

The OCRD is eligible for the NRHP as a contributing resource to the SCD Historic District, dating to the primary period of significance. It is also individually eligible for the NRHP under Criteria A and C. It is eligible under Criterion C as a good example of gravity load masonry dam constructed during the period when dams were transitioning to concrete arch dams. It is associated with the events that have made a significant contribution to the economic development of the Monterey Division thereby making it eligible for the NRHP under Criterion A. It is also eligible for the CRHR under Criteria 1 and 3.

DAM KEEPER’S COTTAGE 1 (HR-5)

The Dam Keeper's Cottage 1 was previously inventoried as part of the SCD Guest Ranch Complex in 1983 (Jacques 1983). Historical records indicate that numerous buildings were erected at the west end of the Dam during the original construction of the Dam beginning in 1919. According to the previous inventory record these additional buildings became part of the Del Monte Properties San Clemente Guest Ranch, which operated from 1930 to 1965. In 1981 most of the buildings were demolished.

The Dam Keeper’s Cottage 1 was constructed circa 1920. The small wood-frame house has a low-pitched gable roof and horizontal wood siding. The front entrance is centered on the south elevation. Wooden stairs lead to a small porch centered on the front of the house and sheltered by a shed roof. A large picture window is located to the west of the porch and there are two more windows on either side of the front door. The windows throughout the house are wood and metal frame. At the northwest corner of the house, the north and west elevations have two side-by-side four-over-four double-hung sash windows on the north and west elevations. A small shed-roof addition is located at the east end of the north elevation. A detached garage is located to the east of the house. To the north and west of the house is a mortared cobblestone wall and fire pit dating from the historic period.
The Dam Keeper’s Cottage 1 is eligible for the NRHP under Criterion A and CRHR under Criterion 1 as a contributing resource within the SCD Historic District and is from the primary period of significance.

CHEMICAL BUILDING NEAR RESERVOIR (HR-6)
The Chemical Building near the reservoir was added west of the SCD in 1946-47 at the same time as the CVFP, for use as a storage facility for chemicals used to treat the reservoir water. Today, the building is used for general storage and houses equipment used in tracking seismic activity (pers. comm. between David Norris, consultant to CAW and Marcia Montgomery (ENTRIX 2005b). The Chemical Building is a Quonset hut and has a rectangular plan, corrugated metal siding, and a concrete foundation/basement level. Unlike a typical Quonset hut roof the arched form of the roof ends at the top of the wall on the east elevation, which is flat. The front or north elevation has wooden stairs leading to a three panel industrial wooden door on the west end of the building. A four-light awning window is located at the east end of the elevation. West of the window is a gasoline storage rack mounted to the building and to the east of the window is an electrical panel. The east elevation is corrugated metal and wooden siding with a door at the south end of the elevation. Concrete stairs and a small landing lead to the door. Because the building is sited on a hill the basement area below the landing is exposed and includes a door to access the basement level. The south elevation has corrugated metal siding on the upper level and concrete on the daylight basement level. Two four-light metal frame awning windows. The lower level also has two windows and a door.

The Chemical Building is eligible for the NRHP under Criterion A and CRHR under Criterion 1, as a contributing resource to the SCD Historic District and dates to the secondary period of significance.

SAN CLEMENTE DAM AND ASSOCIATED FISH LADDER (HR-7)
Lars Jorgensen, a leader in constant angle arch dam designing, and engineer J.A. Wilcox designed the SCD in 1919 to bridge the Carmel River. It was the first constant angle arch dam in California. Arch dams transmit water loads to the sides, rather than to the bottom, unlike gravity dams. (Jones & Stokes 1998). They are well adapted to narrow gorges and produce substantial savings in costs compared to the gravity dam. The basic arch dam shapes are the constant radius, the constant angle, and the double curvature arch. The constant angle arch is a variable radius arch; the arch radius increases from base to angle. The design is based on a constant central opening angle. Jorgensen demonstrated that the Dam contained minimum material for an optimum opening angle of 133.6 degrees (James 2000).

The Dam was designed to allow the floodwater to overflow the crest of the Dam, to increase its height ten feet, and to allow ten feet of water to overflow the entire top at its ultimate height (Wilcox 1918). Chadwick and Sykes completed the Dam measuring 106 feet high and 300 feet long at the crest in two years (Jones & Stokes 1998).
The top of the Dam was 85 feet above the streambed. The contractor’s estimate included excavation, the reinforced concrete dam, a valve house, a water tower and control house, and a fish ladder on the downstream side of the Dam to assist steelhead traveling to upper waters (Chadwick and Sykes 1920). The fish ladder consists of twenty-four spillway gates and 23 pools that ascended 100 feet from the river at the base of the Dam to an opening in the west abutment of the Dam. The gates were timber, 13’6” x 6’4”, specified to be cut from Puget Sound or Oregon forests (Chadwick and Sykes 1920).

The SCD is eligible for the NRHP and CRHR as a contributing resource to the SCD Historic District dating to the primary period of significance. It is also eligible for the NRHP under Criterion C and for the CRHR under Criterion 3 as the first example of a constant angle concrete arch dam in California. The Dam was constructed during the period when dams were transitioning to concrete arch dams.

STONE CABIN (HR-8)

The rectangular side-gable cabin faces due west towards the Carmel River. Its low slope roof with wooden shingles was replaced during its restoration. It has exposed rafter tails and two skylights. The cabin is constructed of uncoursed dressed stone. Original recordation notes adobe mortar flush with the stones, and previous reconstruction of the top half of the north and south walls. Cement mortar was used in its reconstruction. On the south end of the façade is a door constructed of vertical planks. The window north of the door is shuttered with three vertical planks. A (rebuilt) stone chimney runs up the south wall. Reconstructed flooring and benches are found in the interior.

Several 1920s Pebble Beach Company survey maps indicate “Murphy’s Stone Cabin.” Murphy is believed to be an earlier homesteader in the area. Murphy's Flat is named after Mike J. Murphy. A 1908 survey map places a corral directly north of the cabin. (Jacques 1983). Employees of Del Monte Properties used the cabin in the summer months in the 1920s but not as a year round residence. This building is eligible for the NRHP Criterion C and CRHR Criterion 3.

SAN CLEMENTE DAM (SCD) HISTORIC DISTRICT (HR-9)
The SCD Historic District includes resources within the Carmel River Valley south of the river’s confluence with the Tularcito’s Creek approximately 2.5 miles to the SCD. Contributing resources within the historic district fall into either the primary (1882 to
1935) or secondary (1935 to 1955) period of significance. The primary period of significance represents the early period of historical use during which the coastal communities that used the water from the Carmel River were growing due to the improved railroad transportation that spurred the agricultural, ranching, and tourism industries. The secondary period represents a later era of more widespread growth and a time in which new innovations such as water filtration and treatment were introduced, requiring the addition of new facilities in association with the waterworks. Contributing resources within the district are eligible for the NRHP (under Criterion A) and CRHR (under Criterion 1) for their historical association with the development of the Monterey Division waterworks, which contributed to the growth, development and economic expansion of the Monterey Peninsula. The contributing resources to the SCD Historic District collectively have historical significance for their association with the Pacific Improvement Company's development of a water system that directly affected the growth, development and economics of the Monterey Peninsula. The OCRD and SCD also have engineering significance.

**2030 Baseline Conditions**

The resources would continue to age through 2030, resulting in normal wear and tear on the resources. Regular maintenance of historic resources and replacement of in-kind historic materials, when necessary, would greatly lessen deterioration of the resources. Failure to maintain the resources in any form would result in more rapid degradation or deterioration of the resources. Archaeological resources, if undisturbed, would remain intact. Construction activities adjacent to or in the same area of the archaeological resources could damage or destroy the resources.

**4.10.2 ENVIRONMENTAL RESOURCE IMPACT STANDARDS AND METHODS**

**Standards of Significance**

In accordance with CEQA, SHPO, and professional standards, a project impact would normally be significant if the project would:

- Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as a part of a scientific study;

- Cause a substantial, adverse change in the significance of a historical resource as defined in § 15064.5 of the CEQA Guidelines;

- Cause a substantial adverse change in the significance of an archeological resource pursuant to § 15064.5 of the CEQA Guidelines;

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
• Disturb any human remains, including those interred outside of formal cemeteries.

**Impact Assessment Methodology**

This assessment evaluates and identifies impacts over a range of temporal scales. The three temporal impact categories are:

• Temporary impacts that occur within the construction period, but do last throughout the period;

• Short-term impacts that occur within the construction period (concurrent with the number of construction seasons, which vary from one alternative to another);

• Long-term impacts that persist beyond the construction period.

**Determination of Area of Potential Effect (APE)**

Following federal criteria, the eligibility of resources that are at least 50 years of age and are located within the APE or the “geographic area within which (the) undertaking may cause changes in the character of or use of historic properties” were evaluated (36 CFR 8002(c)). Per the California OHP, the threshold for historic resources, buildings and structures that were at least 45 years of age were also recorded. The APE accommodates short and long-term effects to historic resources as well as all potential ground-disturbing impacts to any archaeological resources. Below is a discussion of the APE for archaeological and historic resources, divided into three geographic areas within the project area. Figure 4.10-1 shows the APE in relation to the Project Area.

**CACHAGUA/SITE 4R**

The historic resource inventory includes an area of 100 feet in both directions from the edges of Cachagua Road, the Jeep Trail, and the conveyor route to the extent feasible depending on topography. In addition, the Site 4R was surveyed for 100 feet beyond the proposed boundaries.

The APE for archaeological inventory was limited to 100 feet from the centerline of the Jeep Trail and the conveyor route. Due to the steep topography and dense brush only the accessible portions of the conveyor route were surveyed. The boundaries of Site 4R constituted the archaeological APE in this area.
SLEEPY HOLLOW AND SAN CLEMENTE DAM
The historic resource inventory included an area 100 feet in both directions from the edges of San Clemente Drive, including the loop and dam access roads to the extent feasible depending on topography. In addition, the SCD and associated facilities, the OCRD, and a water pipeline that parallels San Clemente Drive all are included within the APE. The shoreline of the original reservoir was surveyed.

The archaeological survey addressed three areas of the reservoir shoreline that would be affected by one or more alternatives. These include: the point where the conveyor route meets the shoreline, the access points for excavation equipment to be used for sediment removal, and the “saddle” between San Clemente Creek and the Carmel River that would be bisected to reroute the creek’s water under one alternative. The balance of the upper reservoir was silted in to the extent that the original shoreline of the reservoir is now some distance from the reservoir waters, across vegetated dry land. The archaeological survey in these areas focused on lower slope landforms with the potential to contain archaeological materials. In addition, the APE included 50 feet in both directions from the edges of San Clemente Drive to the extent feasible depending on topography to account for potential impacts to resources from the proposed upgrading of this road.

TULARCITOS
Most of the areas described for existing access would be used under the Tularcitos option and the same APE applies to those. In addition, the currently unimproved Tularcitos access road (Figure 4.10-1) would be rebuilt to access a proposed concrete batch plant and staging area for the Proponent’s Proposed Project. The historic resource inventory included an area 100 feet in both directions from the edges of this unimproved road, and in the area proposed for the batch plant and staging area.

The archaeological resources APE included all areas within 50 feet of the centerline of the unimproved road and 100 feet beyond the proposed boundaries of the batch plant and staging area.

Archaeology Fieldwork
Prior to fieldwork, archaeologists gathered previously prepared historic property inventory forms for resources within the APE of the Proponent’s Proposed Project from the Northwest Information Center of the California Historical Resources Information System.

Between June 27 and July 23, 2005, ENTRIX archaeologists conducted a pedestrian survey of the Proponent’s Proposed Project APE. The field inventory consisted of pedestrian survey using generally parallel, meandering transects no more than 10 meters wide. Due to the heavy brush, poison oak, and steep terrain encountered at certain points of the alignment, approximately eight percent of the entire alignment was
not surveyed. Heavy brush and dense poison oak coverage prohibited a complete archaeological survey of the sediment disposal site and the proposed conveyor route. The omitted areas are characterized by greater than 10 percent slopes, (sometimes as high as 75 percent) and heavy brush. Therefore, the likelihood of encountering intact cultural material in these areas was determined to be low.

The survey was accomplished by walking parallel transects of 30 to 60 feet (10 to 20 meters). Ground visibility was good in the areas surveyed, with some obstruction from low-lying grasses and shrubs. All visible ground within the APE was inspected for cultural remains as well as any cut banks, bedrock outcrops, boulders, or exposed sediments.

The SCD and surrounding area have undergone intensive archaeological reconnaissance over the past three decades. During the inventory for this Proponent’s Proposed Project, previously recorded sites were revisited and site records updated as necessary including photographs, GPS mapping and plotting, and current condition. When previously recorded sites were relocated, either an addendum to the site form was prepared or a new site form was completed to reflect any changes since the previous recording; site updates used the California Department of Parks and Recreation (DPR) site continuation forms (DPR 523l). During the field inventory, archaeologists visited two previously inventoried historic archaeological resources (CA-MNT-811H and CA-MNT-812H) located at the south end of the reservoir along the Carmel River. The historic archaeological resources were photographed and notes on the present condition of the resources were collected.

**Historic Structures Fieldwork**

Prior to fieldwork, architectural historians gathered previously prepared historic property inventory forms for resources within the Proponent’s Proposed Project APE from the Northwest Information Center of the California Historical Resources Information System. Information on specific resources in the APE was obtained from CAW Engineer Don Lingenfelter and CAW Consulting Engineer David Norris.

The SCD Historic District is one portion of the larger CAW Monterey Division public water system that serves the Monterey Peninsula. In June 2005, ENTRIX Architectural Historians conducted a reconnaissance level historic resources inventory of the Proponent’s Proposed Project APE to identify historical resources that appeared to be potentially eligible for the NRHP or the CRHR. ENTRIX identified resources that retained integrity and that shared a thematic association with the development of the Monterey Division water system. Architectural historians recorded physical features of each resource on inventory forms, mapped its location using GPS, and photographed the resource with black and white film and a digital camera.

An inventory form was prepared for the SCD Historic District, which identifies seven historical resources, including the OCRD and SCD, two dam keeper cottages, a
historical filtration plant, and two chemical treatment buildings. One additional resource, a Stone Cabin previously recorded as site CA-MNT-812, was also inventoried. This resource is located outside the boundary of the historic district. Figure 4.10-2 illustrates the location of each inventoried historical resource.

4.10.3 IMPACTS AND MITIGATION

Impact Issues
The issues potentially affecting historic properties regarding changes to the Dam and its associated facilities include the following:

- **CR-1**: Ground Disturbance (disturbance to archaeological sites)
- **CR-2**: Damage to Historic Structures from Construction-related vibration (construction related vibration)
- **CR-3**: Introduction of Temporary Dirt/Unintended Damage (construction/demolition-related accumulation of dirt)
- **CR-4**: Demolition or Alteration to the Historic Properties (alterations to the OCRD and associated fish ladder and to SCD)
- **CR-5**: Alteration to the Setting of Surrounding Environment (alter character of setting for SCD Historic Resource District)
- **CR-6**: Introduction of Visual Obstructions (loss of visual integrity for SCD Historic Resource District)

**Proponent’s Proposed Project (Dam Thickening)**

**Issue CR-1: Ground Disturbance**

*Disturbance to archaeological sites*

*Determination: less than significant with mitigation, long-term*

**IMPACT**

A large village site (AR-1) extends on both sides of the Tularcitos Access Route just north of the CVFP. Any improvement or increased use of the current access road near the CVFP would damage or destroy the archaeological resource. CA-MNT-33A and B have been recommended eligible for listing on the NRHP. As portions of these sites within the APE are still intact, monitoring of construction activities at these sites is recommended to protect those portions from inadvertent damage. Ground disturbance would occur in the short-term and could have long-term effects and a significant and unavoidable impact. CA-MNT-1253 remains unevaluated.
Complete avoidance of the sites during construction and maintenance could mitigate the impact to a level less than significant.

Due to the extent of siltation behind the SCD within the APE, the likelihood of encountering surface evidence of archaeological deposits during field surveys was very low. Based on our understanding of the surrounding area and the presence of two archaeological sites within the APE along low benches above the San Clemente River, it is considered likely that archaeological sites are present below the deposited sediment near the original river channel. However, since there would be no excavation of the overlying sediment behind the SCD under the Proponent’s Proposed Project, there would be no potential for such excavation to impact previously undiscovered archaeological resources.

MITIGATION
As portions of these sites within the APE are still intact, monitoring of construction activities at these sites is recommended to protect those portions from inadvertent damage. One site, CA-MNT-33A and B (AR-1), has been recommended eligible for listing on the NRHP. Site CA-MNT-1253 (AR-4) remains unevaluated. Under CEQA, complete avoidance of the sites during construction and maintenance could mitigate the impact to a level less than significant.

If avoidance is not possible at these sites, archaeological evaluation and/or historical documentation are recommended to achieve a less than significant level of impact.

Pursuant to 36 CFR 800.13, if historic properties are discovered or unanticipated effects on historic properties are found after completion of the Section 106 process, the agency official shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties. If buried cultural resources are discovered during the course of project activities, construction operations would immediately stop in the vicinity of the find and the federal lead agency would be notified. At the discretion of the agency, the undertaking may proceed, provided reasonable efforts are implemented to minimize harm to the resource until a determination of significance can be made. Cultural resources include artifacts of stone, bone, wood, shell, or other materials, or features, such as hearths, structural remains, or dumps.

In order to complete the Section 106 process, the mitigation measures would need to be incorporated into a Memorandum of Agreement (MOA). The MOA would include details about when the work would be done and the responsible parties. The agencies involved in the development of the MOA include the USACE, the SHPO, the Tribe, and CAW. The mitigation measures that are assumed to be a part of the MOA include:

- A comprehensive monitoring program would be implemented to ensure protection of archaeological sites within and adjacent to the APE for the Proponent’s Proposed Project. Construction activities would be monitored within 200 feet of site or as determined by a qualified professional archeologist. According to tribal interviews
(pers. comm. Rudolph Rosales, Fred Nason July 20, 2005), the sediment disposal site may be an archaeologically sensitive area.

- For those areas not previously surveyed, particularly the sediment disposal site and the areas exposed by excavation behind the SCD, a monitoring program would be developed prior to construction as part of the MOA between SHPO and the consulting parties. Sediment removal would be monitored as excavation approaches intact native soils within 200 feet of the historic river channel.

- The archaeological monitoring program would include the following tasks:
  - Pre-construction assessment and construction training
  - Construction monitoring
  - Site recording and evaluation
  - Mitigation planning
  - Curation
  - Tribal discussion
  - Report of findings
  - Review and approve any erosion control and revegetation procedures in the vicinity of a known significant site prior to implementation of these procedures

**Issue CR-2: Damage to Historic Structures from Construction-related Vibration**

*Construction-related vibration*

*Determination: less than significant with mitigation, short-term*

**IMPACT**

Construction activities could create temporary vibrations such that the Chemical Building near the Reservoir (HR-6), Dam Keeper’s House 2 (HR-2), OCRD and associated Fish Ladder (HR-4), and the SCD and Associated Fish Ladder (HR-7) could be damaged due to the loosening of paint or mortar, cracking of mortar, breakage of windows, weakening of structural elements, and/or crumbling masonry. This impact is short-term. No long-term impacts are anticipated.

**MITIGATION**

Mitigation measures for this short-term impact would include using rigid support of excavation structures to minimize the movement of the ground.

**Issue CR-3: Introduction of Short-term Dirt/Unintended Damage**

*Construction/demolition-related accumulation of dirt*

*Determination: less than significant with mitigation, short-term*
IMPACT
The accumulation of dirt on all contributing historic properties in the historic district, including the Chemical Building near Filtration Plant (HR-1), Dam Keeper's House 2 (HR-2), OCRD and associated Fish Ladder (HR-4), Dam Keeper's House 1 (HR-5), Chemical Building near Reservoir (HR-6), and the SCD and Associated Fish Ladder (HR-7), could result from construction activities and alteration/demolition of resources. This is a short-term impact. No long-term impacts are anticipated.

MITIGATION
Short-term dirt/unintended damage could occur to contributing historic properties within the historic district (Chemical Building HR-1, Dam Keeper's House 2 HR-2, Carmel River Dam HR-4, Dam Keeper's House 1 HR-5, Chemical Building HR-6, and SCD and Fish Ladder HR-7). Mitigation measures for this short-term impact would include reducing dust associated with construction activities by spraying water on the ground surface prior to ground disturbance. Section 4.7 Air Quality provides a more detailed discussion of dust reducing mitigation.

Issue CR-4: Demolition or Alteration to Historic Properties
Alterations to OCRD and associated fish ladder and to San Clemente Dam
Determination: significant, unavoidable, long-term

IMPACT
The OCRD and Associated Fish Ladder (HR-4) would undergo alteration of property due to proposed improvements to access roads to SCD. The Proponent’s Proposed Project would require structural improvements to the existing bridge that is placed on top of the embankment dam. The Proponent’s Proposed Project would replace existing piers with stronger and more deeply set piers, which would alter the OCRD. The thickening of the SCD would modify the SCD and Associated Fish Ladder (HR-7). The original engineering design of the bridge would be altered through the application of approximately 8 feet of concrete on the east end of the downstream side of the Dam. This would result in a change to the Dam and fish ladder due to the alteration of a historic property. This is a significant and unavoidable long-term impact.

MITIGATION
In order to complete the Section 106 process, the mitigation measures would need to be incorporated into a MOA. The mitigation measures that are assumed to be included in the MOA are as follows.

- Mitigation measures for long-term impacts would include recordation of the resources (OCRD and associated Fish Ladder (HR-4) and the SCD and associated Fish Ladder (HR-7)). Recordation would be completed prior to any construction, in the form of an HABS/HAER level documentation, which follows NPS regulations.
• Additional mitigation could include interpretive displays, development of an educational program on the Dam and associated facilities, and professional publications on the historic resources.

While this mitigation is necessary to complete the Section 106 process, the mitigation measures would not reduce the impact to a less than significant level.

**Issue CR-5: Alteration of Surrounding Environment**

*Alter character of setting for San Clemente Dam Historic Resource District*

*Determination: significant, unavoidable, long-term*

**IMPACT**

The Proponent’s Proposed Project impacts for Issue CR-5 affect specific contributing resources, such as the OCRD (HR-4) and the SCD (HR-7), as stated above, would result in alteration to the character of the setting of significant historic resources of the SCD Historic District (HR-9). This is a significant and unavoidable long-term impact.

**MITIGATION**

Mitigation measures for long-term impacts include preparation of a National Register of Historic Places Nomination Form for the SCD Historic District (HR-9) and the completion of a Historic Preservation Management Plan, included in a MOA. However, this mitigation could not reduce the impact to a less than significant level.

**Issue CR-6: Introduction of Visual Obstructions**

*Loss of visual integrity for San Clemente Dam Historic Resource District*

*Determination: significant, unavoidable, long-term*

**IMPACT**

Visual effects to the SCD Historic District (HR-9) and the alteration/demolition of individual historic resources within the district would adversely affect their visual integrity. This is a significant and unavoidable long-term effect.

**MITIGATION**

Mitigation measures for long-term impacts include photographic documentation of the historic resources prior to construction. Design, materials, and construction methods that are compatible with existing historic resources could be chosen to reduce visual impacts to the SCD Historic District (HR-9). However, this mitigation could not reduce the impact to a less than significant level.

**Alternative 1 (Dam Notching)**

*The impacts and mitigation measures described for CR-2 (Damage to Historic Structures from Construction-Related Vibration), CR-3 (Introduction of Temporary Dirt/Unintended Damage), CR-5 (Alteration to the Setting of Surrounding Environment),*
and CR-6 (Introduction of Visual Obstructions) would be the same as the Proponent’s Proposed Project.

**Issue CR-1: Ground Disturbance**

Disturbance to archaeological sites  
Determination: *less than significant with mitigation, long-term*

**IMPACT**

Impacts and mitigation measures for Cultural Resources Issue would be the same as the Proponent’s Proposed Project, with the addition of the potential for impacts arising from the effects to previously undiscovered archaeological resources from sediment excavation in the river channel and disposal at Site 4R.

The sediment disposal site 4R should be considered moderately sensitive for the presence of archaeological resources. Due to heavy brush and poison oak coverage, the area could not be effectively surveyed during the field season.

**MITIGATION**

As described for the Proponent’s Proposed Project, the Applicant will complete the Section 106 process, prepare a MOA, and conduct archaeological monitoring during clearing and grubbing of the site and during any subsurface excavation prior to disposal activities.

**Issue CR-4: Demolition or Alteration to Historic Properties**

Alterations to OCRD and associated fish ladder and to San Clemente Dam  
Determination: *significant, unavoidable, long-term*

**IMPACT**

The OCRD and Associated Fish Ladder (HR-4) would be altered, as described for Issue CR-4 under the Proponent’s Proposed Project. Notching SCD would also alter the SCD and Associated Fish Ladder (HR-7). This would entail removing a portion of the existing spillway bay as well as the gates, piers and walkway at the top of the Dam. Those changes would result in a change to the Dam and associated fish ladder due to alteration of the property. This would be a significant and unavoidable long-term impact.

**MITIGATION**

Mitigation measures for long-term impacts would include recordation of the resources (OCRD and associated Fish Ladder (HR-4) and the SCD and associated Fish Ladder (HR-7)). Recordation would be completed prior to any construction, in the form of an HABS/HAER level documentation, which follows NPS regulations. Additional mitigation could include interpretive displays, development of an educational program on the Dam and associated facilities, and professional publications on the historic resources. All
mitigation would be outlined in a MOA and approved by SHPO. However, this mitigation would not reduce the impact to a less than significant level.

Alternative 2 (Dam Removal)

The impacts and mitigation measures described for Issues CR-1 (Ground Disturbance would be the same as Alternative 1. The impacts and mitigation measures described for CR-2 (Damage to Historic Structures from Construction-Related Vibration, CR-3 (Introduction of Temporary Dirt/Unintended Damage), CR-5 (Alteration to the Setting of Surround Environment), and CR-6 (Introduction of Visual Obstructions) would be the same as the Proponent’s Proposed Project.

Issue CR-4: Demolition or Alteration to Historic Properties

Alterations to OCRD and associated fish ladder and to San Clemente Dam

Determination: significant, unavoidable, long-term

IMPACT

The OCRD and Associated Fish Ladder (HR-4) could undergo alteration of property due to proposed improvements to access roads to SCD. Structural improvements would be made to the existing bridge that is placed on top of the embankment dam. Existing piers would be replaced with stronger and more deeply set piers, which could damage the OCRD. The SCD and Associated Fish Ladder (HR-7) would be demolished under this alternative. This would be a significant and unavoidable long-term impact.

MITIGATION

Mitigation measures for long-term impacts would include recordation of the resources (OCRD and associated Fish Ladder (HR-4) and the SCD and associated Fish Ladder (HR-7)). Recordation would be completed prior to any construction, in the form of an HABS/HAER level documentation, which follows NPS regulations. Additional mitigation could include interpretive displays, development of an educational program on the Dam and associated facilities, and professional publications on the historic resources. All mitigation would be outlined in a MOA and approved by SHPO. However, this mitigation would not reduce the impact to a less than significant level.

Alternative 3 (Carmel River Reroute and Dam Removal)

The impacts and mitigation measures for Issues CR-2 (Damage to Historic Structures from Construction-Related Vibration, CR-3 (Introduction of Temporary Dirt/Unintended Damage), CR-5 (Alteration to the Setting of Surround Environment), and CR-6 (Introduction of Visual Obstructions) would be the same as described for the Proponent’s Proposed Project. The impacts and mitigation measures for Issue CR-4 (Demolition or Alteration to the Historic Properties) Obstructions would be the as same described for Alternative 2.
**Issue CR-1: Ground Disturbance**

*Disturbance to archaeological sites*

*Determination: less than significant with mitigation, long-term*

**IMPACT**

Impacts and mitigation measures for Cultural Resources Issue would be the same as the Proponent’s Proposed Project, except for the area described as the “saddle”. Activities involving the “saddle” (the peninsula of land bordered to the east, north and west by the reservoir) could damage or destroy buried deposits in CA-MNT-1253 (BRM features) (AR-4), which has not been tested. A Testing Plan would need to be developed for this site prior to construction. Once the testing is completed, an NRHP determination of eligibility (DOE) would be completed. The outcome of the DOE will determine whether additional mitigation measures would be necessary.

**MITIGATION**

As described for the Proponent’s Proposed Project, the Applicant will complete the Section 106 process, prepare a MOA, and conduct archaeological monitoring during clearing and grubbing of the site and during any subsurface excavation prior to disposal activities.

Mitigation measures for impact issue CR-1 would be the same as the Proponent’s Proposed Project, except for the area described as the “saddle”. Activities involving the “saddle” (the peninsula of land bordered to the east, north and west by the reservoir) could damage or destroy buried deposits in CA-MNT-1253 (BRM features) (AR-4), which has not been tested. If the site is eligible for the NRHP, avoidance would be the best form of mitigation. If avoidance is not possible, data recovery of the site could be required.

**Alternative 4 (No Project)**

None of the impact issues identified for the Proponent’s Proposed Project and other action alternatives would apply to Alternative 4. No actions would occur that affect cultural resources in the Project Area.