

C.4 Cultural Resources

A cultural resource is defined as any object or specific location of past human activity, occupation, or use, identifiable through historical documentation, inventory, or oral evidence. Cultural resources can be separated into three categories: archaeological, built environment, and traditional cultural resources.

Archaeological resources include both prehistoric and historical remains of human activity. Historical archaeological resources can consist of structural remains (such as cement foundations), historical objects (such as bottles and cans), and sites (such as trash deposits or scatters). Prehistoric archaeological resources can include lithic scatters, ceramic scatters, quarries, habitation sites, temporary camps/rock rings, ceremonial sites, and trails.

Built environment resources can include buildings, structures (e.g., canals, roads, bridges, and dams), and objects (e.g., boundary markers and monuments).

A traditional cultural resource or traditional cultural property (TCP) can include Native American sacred sites (such as rock art sites) and traditional resources or ethnic communities important for maintaining the cultural traditions of any group.

C.4.1 Affected Environment

C.4.1.1 Regional Setting and Approach to Data Collection

For the purposes of cultural resources, the Project Study Area includes the Littlerock Reservoir (Reservoir) and two off-site dumping locations (47th Street East property and the Hi-Grade Materials Company property). The Area of Potential Effect (APE) defined for the Project includes all disturbance areas within the Reservoir and the off-site dumping locations (totaling approximately 206 acres).

For the Project, records searches were conducted at the South Central Coastal Information Center (SCCIC) housed at the California State University, Fullerton. Records searches consisted of a review of relevant historic maps, and excavation and survey reports. Site forms for recorded sites within a 0.5-mile radius of the Project APE were copied.

Field surveys were conducted in order to verify the location of any previously identified cultural resources and to inspect lands within the Project APE. Field surveys are useful for identifying above-ground or surface cultural resources and for identifying high-probability areas. However, negative pedestrian survey results do not preclude the possibility that buried archaeological deposits could be discovered. Conejo Archaeological Consultants conducted a pedestrian field survey of the Reservoir in December 2006 (Maki, 2006). Applied EarthWorks, Inc. (Æ) conducted pedestrian field surveys of the two off-site dumping areas in September 2014 (Smallwood, 2014).

C.4.1.2 Prehistoric Background

Prehistoric archaeological sites in California are places where Native Americans lived or carried out activities during the prehistoric period before Europeans arrived in 1769 A.D. These sites contain artifacts and subsistence remains, and they may contain human burials. Artifacts are objects made by people and include tools (such as projectile points, scrapers, and grinding implements), waste products from making stone tools (flakes and debitage), and nonutilitarian or decorative artifacts (beads, ornaments, ceremonial items, and rock art). Subsistence remains include the inedible portions of foods, such as animal bone and shell, and edible parts that were lost and not consumed, such as charred seeds.

Over the past century, archaeologists have generally divided the prehistory of the Western Mojave Desert into five distinct periods or sequences distinguished by specific material (i.e., technological) or cultural traits. Early cultural chronologies were proposed by Amsden (1937), Campbell et al. (1937), and Rogers (1939), that were later adapted by Warren and Crabtree in 1972 (later published in 1986 and further detailed by Warren in 1984), in what many consider to be the most influential cultural sequence proposed for the region. Alternative sequences have since emerged (e.g., Bettinger and Taylor, 1974; Hall, 1993; Yohe, 1992) proposing new nomenclature (e.g., Newberry Period vs. Rose Spring Period vs. Saratoga Springs), slightly adjusted cultural chronologies, or attempting to link the Great Basin chronological framework to the Mojave Desert.

Recently, Sutton et al. (2007:233) proposed a cultural-ecological chronological framework based on climatic periods (e.g., Early Holocene) “to specify spans of calendric time and cultural complexes (e.g., Lake Mojave Complex) to denote specific archaeological manifestations that existed during (and across) those periods.” The new sequence draws heavily from Warren and Crabtree (1986) and Warren (1984), as well as from the vast body of recent archaeological research conducted in the region.

Pleistocene (ca. 10000 to 8000 cal B.P.)

The earliest cultural complex recognized in the Mojave Desert is Clovis, aptly named for the fluted projectiles often associated with Pleistocene megafaunal remains. Arguments for pre-Clovis Paleoindian human occupation in the Mojave Desert rely on relatively sparse evidence and unpublished data, although in light of the growing body of evidence suggesting a pre-Clovis occupation of the Americas, the argument cannot simply be ruled out. Paleoindian culture is poorly understood in the region due to a relative dearth of evidence stemming from a handful of isolated fluted point discoveries and one presumed occupation site on the shore of China Lake. Archaeologists tend to interpret the available data as evidence of a highly mobile, sparsely populated hunting society that occupied temporary camps near permanent Pleistocene water sources.

Early Holocene (ca. 8000 to 6000 cal B.P.)

Two archaeological patterns are recognized during the Early Holocene: the Lake Mojave Complex (sometimes referred to as the Western Pluvial Lakes Tradition) and the Pinto Complex. The Lake Mojave Complex is characterized by stemmed projectile points of the Great Basin Series, abundant bifaces, steep-edged unifaces and crescents. Archaeologists have also identified, in less frequency, cobble-core tools and ground stone implements. The Pinto Complex, on the other hand, is distinguished primarily by the presence of Pinto-style projectile points. Although evidence suggests some temporal overlap, the inception of the Pinto Complex is assigned to the latter part of the Early Holocene and is generally considered a Middle Holocene cultural complex.

During this period, the Lake Mojave cultural complex utilized more extensive foraging ranges, as indicated by an increased frequency of faraway materials. Spheres of influence also expanded, as potential long-distance trade networks were established between desert and coastal peoples. Groups were still highly mobile, but they practiced a more forager-like settlement-subsistence strategy. Residential sites indicate more extensive periods of occupation and recurrent use. In addition, residential and temporary sites also indicated a diverse social economy, characterized by discrete workshops and special-use camps (e.g., hunting camps). Diet also appears to have diversified, with a shift away from dependence upon lacustral (lake) environments such as lakeside marshes, to the exploitation of multiple environments containing rich resource patches.

Middle Holocene (ca. 7000 to 3000 cal B.P.)

The Pinto Complex is the primary cultural complex in the Mojave Desert during the Middle Holocene. Once thought to have neatly succeeded the Lake Mojave Complex, a growing corpus of radiocarbon dates associated with Pinto Complex artifacts suggest that its inception could date as far back into the latter part of the Early Holocene. Extensive use of toolstone other than obsidian and high levels of tool blade reworking were characteristic of this complex and the earlier Lake Mojave Complex. A reduction in toolstone source material variability, however, suggests a contraction of foraging ranges that had expanded during the Early Holocene. Conversely, long-distance trade with coastal peoples continued uninterrupted, as indicated by the presence of *Olivella* shell beads.

The most distinguishing characteristic of the Pinto Complex is the prevalence of ground stone tools, which are abundant in nearly all identified Pinto Complex sites. The emphasis on milling tools indicates greater diversification of the subsistence economy during the Middle Holocene. Groups increased reliance on plant processing while continuing to supplement their diet with protein from small and large game animals.

Late Holocene (ca. 2000 cal B.P. to Contact)

The Late Holocene in the greater Southern California region is characterized by increases in population, higher degrees of sedentism, expanding spheres of influence, and greater degrees of cultural complexity. In the Mojave Desert, the Late Holocene is divided into several cultural complexes; namely the Gypsum Complex (2000 cal B.C. to cal A.D. 200), the Rose Spring Complex (cal A.D. 200 to 1100), and the Late Prehistoric Complexes (cal A.D. 1100 to contact).

The Gypsum Complex is defined by the presence of side-notched (Elko series), concave-based (Humboldt series), and well-shouldered contracting stem (Gypsum series) projectile points. Other indicative artifacts include quartz crystals, paint, rock art, and twig figures, which are generally associated with ritual activities.

The Rose Spring Complex can also be defined by the presence of distinct projectile points (i.e., Rose Spring and Eastgate series) and artifacts, including stone knives, drills, pipes, bone awls, milling implements, marine shell ornaments, and large quantities of obsidian. Of greater significance, however, are the characteristic advancements in technology, settlement strategies, and evidence for expanding and diverging trade networks. The Rose Spring Complex marks the introduction of the bow and arrow weapon system to the Mojave Desert, likely from neighboring groups to the north and east. As populations increased, groups began to consolidate into larger, more sedentary residential settlements as indicated by the presence of well-developed middens (food refuse heaps) and architecture. West and north of the Mojave River, increased trade activity along existing exchange networks ushered in a period of relative material wealth, exhibited by increased frequencies of marine shell ornaments and toolstone, procured almost exclusively from the Coso obsidian source. East and south of the Mojave River, archaeological evidence suggests there was a greater influence from Southwest and Colorado River cultures (i.e., Hakataya and Patayan).

Between approximately A.D. 1100 and contact, a number of cultural complexes emerged that archaeologists believe may represent prehistoric correlates of known ethnographic groups. During the Late Prehistoric Cultural Complex, material distinctions between groups were more apparent, as displayed by the distribution of projectile point styles (e.g., Cottonwood vs. Desert Side-notched), ceramics, and lithic materials. Long-distance trade continued, benefiting those occupying “middleman” village sites along the Mojave River where abundant shell beads and ornaments, and lithic tools were

recovered from archaeological contexts (Rector et al., 1983). Later on, however, trade in Coso obsidian was significantly reduced as groups shifted focus to the procurement of local silicate stone.

C.4.1.3 Ethnographic Background

Tataviam

The Tataviam, which translates to “people who face the sun,” are a Native American group that resided in and around the area encompassing the Project region. They belong to the family of Serrano people who migrated down into the Antelope, Santa Clarita, and San Fernando valleys sometime before 450 A.D. They settled into the upper Santa Clara River Drainage. Some Tataviam settlements in the Santa Clarita and upper valleys were Nuhubit (Newhall); Piru-U-Bit (Piru); Tochonanga, which is believed to have been located at the confluence of Wiley and Towsley Canyons; and the very large village of Chaguibit, the center of which is buried under the Rye Canyon exit of Interstate-5. The Tataviam also lived where Saugus, Agua Dulce, and Lake Elizabeth are located today. This places the Serrano among the larger “Shoshonean” migration into Southern California that occurred 2,000 to 3,000 years ago (Higgins, 1996).

Although primarily living on the upper reaches of the Santa Clara River drainage system, east of Piru Creek, the Tataviam also marginally inhabited the upper San Fernando Valley, including present day San Fernando and Sylmar (which they shared with their inland Tongva/Gabrieleño neighbors). The Tataviam were hunters and gatherers who prepared their foodstuffs in much the same way as their neighbors did. Their primary foods included yucca, acorns, juniper berries, sage seeds, deer, the occasional antelope, and smaller game such as rabbits and ground squirrels. There is no information regarding Tataviam social organization, though information from neighboring groups shows similarities among Tataviam, Chumash, and Gabrieleño ritual practices. Like their Chumash neighbors, the Tataviam practiced an annual mourning ceremony in late summer or early fall which would have been conducted in a circular structure made of reeds or branches. At first contact with the Spanish in the late eighteenth century, the population of this group was estimated at fewer than 1,000 persons. However, this ethnographic estimate of the entire population is unlikely to be accurate, since it is based only on one small village complex and cannot necessarily be indicative of the entire population of Tataviam. Given the archaeological evidence at various Tataviam sites, as well as the numbers incorporated into the Spanish Missions, pre-contact population and early contact population easily exceeded 1,000 persons (Blackburn, 1962; Johnston, 1962).

Kitanemuk

The Kitanemuk belonged to the northern section of the people known as the “Serrano.” The name, “Serrano,” however, is merely a generic term meaning “mountaineers” or “those of the Sierras.” Ethnographers group the Kitanemuk with the Serrano based on linguistic similarities though the Kitanemuk did not identify themselves as Serrano. They lived on the upper Tejon and Paso creeks and also held the streams on the northern extent of the Tehachapi Mountains, the small creeks draining the northern slope of the Liebre and Sawmill Range, with Antelope Valley and the westernmost part of the Mojave Desert. The extent of their territorial claims in the desert region is not certain.

The Kitanemuk lived in permanent winter villages of 50 to 80 people or more. During the late spring, summer, and fall months they dispersed into smaller, highly mobile gathering groups. They followed a seasonal round, visiting different environmental regions as the important food producing plants became ready for harvest. Some staple foods important to the Kitanemuk include acorns and piñon pine nuts, yucca, elderberries, and mesquite beans were available as well (Duff, 2004).

While traveling in the Antelope Valley in 1776, Spanish explorer and Franciscan priest, Francisco Garcés, encountered the Kitanemuk living in communal tule houses. His written account describes the dwellings as consisting of a series of individual rooms surrounding a central courtyard. Each room housed a family and its own door and hearth. Garcés also relates that the Kitanemuk had extensive trade relations with sometimes distant groups. For example, he writes that the Kitanemuk traded with the “Canal” (Chumash of the Santa Barbara Channel region) and describes wooden vessels with inlays of *Haliotis* that bore stylistic similarities to decorations found on the handles of Chumash knives and other objects (Kroeber, 1925).

C.4.1.4 Historical Background

Antelope Valley

The Antelope Valley is a 3,000-square-mile-high desert closed basin that straddles northern Los Angeles County and southern Kern County. The Antelope Valley was a trade route for Native Americans traveling from Arizona and New Mexico to California’s coast. Exploration began in the early 1770s, but it was not until the 1840s that the Valley was first settled permanently. The 1854 establishment of the Fort Tejon military post near Castaic Lake and Grapevine Canyon created a gateway for Antelope Valley traffic (Antelope Valley Community History, 2010).

During the nineteenth century, gold mining at the town of Acton and cattle ranching contributed to the growth of Antelope Valley. When news broke that gold was discovered in the Soledad Canyon (located in between Palmdale and Santa Clarita), a number of miners arrived and set up various mining camps near the canyon’s rich mineral and silver discoveries. The area grew to the point that a post office was needed. The U.S. Postal Service rejected the area’s informal name of “Soledad City” to avoid confusion with Soledad in Monterey County. The city was named “Ravenna” in honor of a local merchant and saloon keeper, Manuel Ravenna. Ravenna became a shipping point from which the canyon’s gold, silver and copper ores were hauled off to port in San Pedro. Metal and ore products were first transported out of the area using freight wagons drawn by oxen or mules; this mode of transportation was replaced in 1876 with the completion of the Southern Pacific Railroad through the Antelope Valley. Ravenna became a ghost town shortly thereafter, as the miners moved up the canyon to new rail sidings where Acton now stands (City of Acton, 2010).

The Butterfield mail station, the Los Angeles to San Francisco telegraph line, and the Southern Pacific Railroad brought people and communication through the Valley during the 1860s and 1870s. Antelope Valley produced alfalfa and grain for some time until several dry years ensued. Mining near Acton helped residents sustain during the drought between 1874 and the Great Depression of the 1930s. By 1897 nearly everyone had left the Valley. Mining continues in and around the Antelope Valley today (County of Los Angeles, 1986).

City of Palmdale

The Antelope Valley, where the Project APE is located, was settled once the Southern Pacific Railroad line between San Francisco and Los Angeles was completed in 1876. The region was dependent on stock raising, dry farming, and fruit orchards. The origins of the city of Palmdale are in two early communities: Harold and Palmenthal. Harold (also known as Alpine Station) was at the intersection of the Southern Pacific Railroad tracks and Fort Tejon Road (now Barrel Springs Road). Palmenthal was settled in 1886 by approximately 55 Swiss and German families, mostly from Nebraska and Illinois. The name is supposedly from the settlers’ misidentification of the Joshua trees (City of Palmdale, 2009). A drought in the 1890s stifled growth. In 1899, residents from Harold and Palmenthal relocated to a new site, which became Palmdale, near the railroad station and the stagecoach line between San Francisco and New Orleans.

In 1895, the Harold Reservoir, now known as Palmdale Lake, was formed after the South Antelope Valley Irrigation Company constructed an earthen dam. A wooden ditch, flume, and wooden trestle were constructed at the same time to connect Little Rock Creek to the reservoir. The primary purpose of the reservoir was to supply water for agriculture in the area. Beginning in the 1950s, the reservoir's water was also used to supply residences. The Palmdale Irrigation District agreed to purchase water from the then-new East Branch of the California Aqueduct in 1963. Subsequently, the lake was expanded to contain the increased water supply, and a new treatment facility adjacent to the lake was built (Palmdale Water District, 2009).

In 1917, electricity was introduced in the area, and deep wells were constructed to provide a steady water supply. In 1912 and 1913, the construction of the Los Angeles Aqueduct attracted workers to the area. In 1919, a bond issue passed to construct the Little Rock Dam, which is approximately 11 miles southeast of Palmdale within the Angeles National Forest (Los Angeles County Department of Regional Planning, 2009:6).

Beginning in the 1930s, the aerospace industry contributed toward the development of Palmdale. The establishment of Muroc Air Base (now Edwards Air Force Base) in 1933 caused the population of the Antelope Valley to double. In addition, the Palmdale Airport was built in 1940. In 1950, the Federal Government took over the airport for a jet testing facility and renamed it U.S. Air Force Plant 42 (Los Angeles County Department of Regional Planning, 2009:6). The Skunk Works, an alias for Lockheed Martin's group that develops extremely confidential and advanced products, primarily for the U.S. military, is located at Air Force Plant 42. The Skunk Works was formed in 1943 and led by Clarence L. "Kelly" Johnson to create the airframe for the XP-80, a powerful jet designed to answer the German jet threat during World War II. Over the years, the Skunk Works has designed many more famous aircraft designs for the U.S. military (Lockheed Martin, 2009).

C.4.1.5 Little Rock Reservoir

The Little Rock Reservoir contains no previously recorded cultural resources. In addition, no cultural resources were identified within this portion of the Project APE during the pedestrian survey.

C.4.1.6 47th Street East Property

The 47th Street East Property contains one previously recorded cultural resource (P-19-002475/CA-LAN-2475H). Documented in 1996, P-19-002475 consists of a historic-era metal can scatter dating to the late 1930s and early 1940s. In addition to rusted metal cans, it also contained fragments of bottle glass, chinaware sherds, iron pipe, metal scrap, barrel hoops, nails, and spent ammunition cartridges. During the pedestrian survey of the Project APE, no evidence of this site was observed. The area where the site was located appears to have been graded in recent years. This resource is no longer extant. No other cultural resources were identified within this portion of the Project APE during the pedestrian survey.

C.4.1.7 Hi-Grade Materials Company Property

The Hi-Grade Materials Company Property contains no previously recorded cultural resources. In addition, no cultural resources were identified within this portion of the Project APE during the pedestrian survey.

C.4.2 Regulatory Framework

This section provides an overview of the regulatory framework for cultural resources. Section C.9 (Recreation and Land Use) contains an evaluation of policies within the Forest Service Land Management Plan that are applicable to cultural resources.

C.4.2.1 Federal

■ **National Historic Preservation Act (NHPA).** Under the NHPA of 1966, the Project is considered a federally licensed “undertaking” per 36 CFR § 800.2 (o) and subject to compliance with Section 106 of the NHPA of 1966, as amended. Under these guidelines, federal agencies are required to identify cultural resources that may be affected by project actions, assess the significance of these resources and their eligibility for inclusion on the National Register of Historic Places (NRHP) as per 16 USC 470w (5), and consult with the Advisory Council on Historic Preservation (ACHP) regarding project effects on significant resources. Eligibility is based on criteria defined by the Department of the Interior. Generally, districts, archaeological sites, buildings, structures, and objects that possess integrity are potentially eligible for inclusion on the NRHP under the following criteria:

- A) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- B) that are associated with the lives of persons significant in our past; or
- C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR § 60.4).

If a cultural resource is determined to be an eligible historic property under 36 CFR § 60.4, then Section 106 requires that the effects of the proposed undertaking be assessed and considered in planning the undertaking. According to 36 CFR § 800.3 (Regulations of the Advisory Council on Historic Preservation Governing the Section 106 Review Process), the lead agency, State Historic Preservation Office (SHPO), and Council must consider the special concerns of Indian tribes in historic preservation issues, and must allow tribes to participate as “interested persons” regarding properties of historic value to an Indian tribe on non-Indian lands.

■ **Native American Graves Protection and Repatriation Act (NAGPRA).** The NAGPRA was enacted on November 16, 1990, to address the rights of lineal descendants, Indian tribes, and Native Hawaiian organizations to Native American cultural items, including human remains, funerary objects, sacred objects, and objects of cultural patrimony. NAGPRA assigned implementation responsibilities to the Secretary of the Interior. If human remains are encountered on Federal lands, NAGPRA states that the responsible Federal official must be notified immediately and that no further disturbance shall occur in the area until clearance is given by the responsible Federal official (43 C.F.R. § 10.4). If the remains are determined to be Native American Indian, the Federal agency would then notify the appropriate federally recognized Native American tribe and initiate consultation.

■ **Archeological Resources Protection Act (ARPA).** If federal or Indian lands are involved, the ARPA may impose additional requirements on an agency. ARPA: (1) Prohibits unauthorized excavation on federal and Indian lands; (2) Establishes standards for permissible excavation; (3) Prescribes civil and criminal penalties; (4) Requires agencies to identify archeological sites; and (5) Encourages cooperation between federal agencies and private individuals.

■ **Antiquities Act of 1906.** The Antiquities Act of 1906 states, in part: That any person who shall appropriate, excavate, injure or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the United States, without the permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated, shall upon conviction, be fined in a sum of not more than five

hundred dollars or be imprisoned for a period of not more than 90 days, or shall suffer both fine and imprisonment, in the discretion of the court.

C.4.2.2 State

■ **California Environmental Quality Act.** Cultural resource management work conducted as part of the Project is to comply with CEQA Statute and Guidelines, which direct lead agencies to first determine whether cultural resources are “historically significant” resources. CEQA requires that impacts that a project may have on cultural resources be assessed and requires mitigation if significant (or “unique”) cultural resources are to be impacted (Section 21083.2 [a-1] and Appendix K). Generally, a cultural resource is considered “historically significant” if the resource is 45 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling, and association, and meets the requirements for listing on the California Register of Historical Resources (CRHR) under any one of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history (Title 14 CCR, § 15064.5).

The statutes and guidelines specify how cultural resources are to be managed in the context of projects, such as the Project. Briefly, archival and field surveys must be conducted, and identified cultural resources must be inventoried and evaluated in prescribed ways. Prehistoric and historical archaeological resources, as well as built environment resources such as standing buildings, structures, and objects, deemed “historically significant” must be considered in project planning and development. Additionally, any Project that may affect “historically significant” cultural resources must be submitted to the SHPO for review and comment prior to project approval by the responsible agency and prior to construction.

If a Lead Agency determines that an archaeological site is a historical resource, the provisions of California Public Resources Code (CPRC) §21084.1 and CEQA Guidelines §15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site is to be treated in accordance with the provisions of PRC §21083 regarding unique archaeological resources. The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of a project on that resource shall not be considered a significant effect on the environment (CEQA Guidelines §15064[c][4]).

If human remains of any kind are found during construction activities, CEQA Guidelines Section 15064.5(e) and Assembly Bill 2641 are to be followed. These require that all construction activities cease immediately and the County Coroner and a qualified archaeologist must be notified. The coroner would examine the remains and determine the next appropriate action based on his or her findings. If the coroner determines the remains to be of Native American origin, the Native American Heritage Commission (NAHC) must be notified. The NAHC would then identify a most-likely descendant to be consulted regarding treatment and/or reburial of the remains.

- **Native American Heritage Commission (Public Resources Code Sections 15064.5(e) and 15064.5(d), et seq.).** This code requires that excavation activities be stopped whenever human remains are uncovered and that the County coroner be called in to assess the remains. If the County coroner determines that the remains are those of Native Americans, the Native American Heritage Commission must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans as identified by the Native American Heritage Commission and the lead agency, under certain circumstances, should develop an agreement with the Native Americans for the treatment and disposition of the remains.

C.4.2.3 Local

- **County of Los Angeles General Plan.** The County of Los Angeles General Plan has the following policies regarding cultural resources:
 - Policy C/NR 14.1: Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
 - Policy C/NR 14.2: Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.
 - Policy C/NR 14.3: Support the preservation and rehabilitation of historic buildings.
 - Policy C/NR 14.4: Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).
 - Policy C/NR 14.5: Promote public awareness of historic, cultural, and paleontological resources.
 - Policy C/NR 14.6: Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.
- **City of Palmdale General Plan.** The City of Palmdale General Plan has an objective to promote the identification and preservation of historical structures, historical sites, archaeological sites, and paleontological resources in the City. The following policies would protect historical and culturally significant resources that contribute to the community's sense of history:
 - Policy ER7.1.1: Identify and recognize historic landmarks from Palmdale's past.
 - Policy ER7.1.2: Promote maintenance, rehabilitation, and appropriate reuse of identified landmarks where feasible.
 - Policy ER7.1.3: Require that new development protect significant historic, paleontological, or archaeological resources, or provide for other appropriate mitigation.
 - Policy ER7.1.4: Develop and maintain a cultural sensitivity map. Require special studies/surveys to be prepared for any development proposals in areas reasonably suspected of containing cultural resources, or as indicated on the sensitivity map.
 - Policy ER7.1.5: When human remains, suspected to be of Native American origin are discovered, cooperate with the Native American Heritage Commission and any local Native American groups to determine the most appropriate disposition of the human remains and any associated grave goods.
 - Policy ER7.1.6: Cooperate with private and public entities whose goals are to protect and preserve historic landmarks and important cultural resources.

C.4.3 Issues Identified During Scoping

Table C.4-1 below provides a list of cultural resource issues raised during the public scoping period for the EIS/EIR [see Appendix E (Summary of Scoping Process)]. Issues are listed by agency or members of the public providing comment. The table also includes a brief discussion of the applicability of each issue to the environmental analysis and where that issue is addressed in the EIS/EIR.

Table C.4-1. Scoping Issues Relevant to Cultural Resources	
Comment	Consideration in the EIS/EIR
Fernandeno Tataviam Band of Mission Indians	
The Project would break ground in traditional Tataviam tribal lands and may disturb culturally sensitive deposits.	As noted in Section C.4.4, Impact Assessment Methodology, no archaeologically sensitive areas were identified within the Project area. In addition, should culturally sensitive deposits be encountered during Project construction, SPC CUL-2 provides for treatment of previously unidentified cultural resources and SPC CUL-3 provides for treatment of human remains if encountered during construction.
Native American Heritage Commission	
The Project must adequately comply with CEQA guidelines §15064.5(b) and mitigate Project-related impacts on archaeological resources.	As noted in Section C.4.2, Regulatory Framework, the Project would comply with all state and federal guidelines regarding cultural resources.
Include in the mitigation plans provisions for the identification and evaluation of accidentally discovered archaeological resources, pursuant to CEQA §15064.5(f).	Mitigation Measure C-1b, as noted in Section C.4.4, Environmental Consequences, provides for treatment of previously unidentified cultural resources.
In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.	As noted in Section C.4.4, Impact Assessment Methodology, no archaeologically sensitive areas were identified within the Project area.
California Public Resources Code §21083.2 requires documentation and analysis of archaeological items that meet the standard in §15064.5 (a)(b)(f).	As noted in Section C.4.2, Regulatory Framework, the Project would comply with all state and federal guidelines regarding cultural resources.
If there is federal jurisdiction of this project due to funding or regulatory provisions, then consultation may be required with culturally affiliated Native American tribes to determine if the Project may have an adverse impact on cultural resources per NEPA 42 USC 4321-43351, §106 of the National Historic Preservation Act (16 USC 470 et seq.), and 36 CFR Part 800.14(b).	As noted in Section C.4.2, Regulatory Framework, the Project would comply with all state and federal guidelines regarding cultural resources.
Coordinate, as feasible, additional archaeological activity with the Native American Heritage Commission (NAHC), and submit the final report (including site forms, site significance and mitigation measures) to the NAHC planning department. Any information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure pursuant to California Government Code §6254.10.	PWD would coordinate and communicate with the NAHC regarding archaeological activity as appropriate. In addition, all confidential information would be placed in an appendix and not made available for public disclosure.
A list of appropriate Native American Contacts for consultation concerning the project site has been provided and is attached to this letter to determine if the proposed active might impinge on any cultural resources.	Consultation with Native American tribes in the area was conducted during the public scoping period.

Table C.4-1. Scoping Issues Relevant to Cultural Resources	
Comment	Consideration in the EIS/EIR
Consider first, avoidance for sacred and/or historical sites, pursuant to CEQA Guidelines §15370(a). If the Project goes forward, mitigation and monitoring plans should include provisions for the analysis and disposition of recovered artifacts, pursuant to California Public Resources Code §21083.2 in consultation with culturally affiliated Native Americans.	SPC CUL-2, as noted in Section C.4.4, Environmental Consequences, provides for treatment of previously unidentified cultural resources.
Include provisions for discovery of Native American human remains in mitigation plans. Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 mandate the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.	SPC CUL-3, as noted in Section C.4.4, Environmental Consequences, provides for treatment of human remains if encountered during construction.

C.4.4 Environmental Consequences

Impact Assessment Methodology. The cultural resource literature and records searches for the Littlerock Reservoir indicated that 22 archaeological surveys have been conducted within a 0.5-mile radius of the Littlerock Reservoir. None of these previous studies involved the Project. This search also noted 14 cultural resources within a one-mile radius of the Littlerock Reservoir. None of these previously documented resources are within the Project APE. Finally, no cultural resources were identified during the intensive archaeological survey of the Littlerock Reservoir.

The cultural resources literature and records search for the off-site dumping locations (47th Street East property and the Hi-Grade Materials Company property) indicated that 37 cultural resource studies have been conducted previously within a one-mile radius of the off-site dumping locations. Of these, three studies included various portions of the Project APE. The records search also noted 20 previously documented cultural resources within a one-mile radius of the off-site dumping locations. One of these resources, a historic-era can dump (P-19-002475/CA-LAN-2475H), was identified within the 47th Street East property. The intensive archaeological survey of the off-site dumping locations found no evidence of this site. In addition, the area where the site was documented appeared to have been graded in recent years. Finally, no newly identified cultural resources were observed during the pedestrian survey of the off-site dumping locations.

Information gathered from the cultural resource literature, records searches, and field surveys was also used to assess the potential for encountering previously unrecorded cultural resources in the Project APE.

Significance Criteria. The following significance criteria for cultural resources were derived from the CEQA Guidelines Appendix G. Impacts of the proposed action/project or alternatives would be considered significant and would require mitigation if:

- Criterion CR1: The Project would cause a substantial adverse change in the significance of a cultural resource.
- Criterion CR2: The Project could disturb human remains, including those interred outside of formal cemeteries.

Direct Impacts under CEQA and NEPA. Direct impacts to cultural resources are those associated with project development, construction, and co-existence. Construction usually entails surface and subsurface disturbance of the ground, and direct impacts to archaeological resources may result from

the immediate disturbance of the deposits, whether from vegetation removal, vehicle travel over the surface, earth-moving activities, excavation, or demolition of overlying structures. Construction can have direct impacts on historical built-environment resources when those buildings or structures must be removed to make way for new buildings or structures or when the vibrations of construction impair the stability of historical buildings or structures nearby. New buildings or structures can have direct impacts on historical built environment resources when the new buildings or structures are stylistically incompatible with their neighbors and the setting, or when the new buildings or structures produce a harmful effect to the materials or structural integrity of the historical built environment resources, such as emissions or vibrations.

Indirect Impacts under CEQA and NEPA. Generally speaking, indirect impacts to archaeological resources are those that may result from increased erosion due to site clearance and preparation, or from inadvertent damage or outright vandalism to exposed resource components due to improved accessibility. Similarly, historical built environment resources can suffer indirect impacts when project construction creates potentially damaging noise and vibration, improved accessibility and vandalism, or greater weather exposure. It should also be noted that NEPA requires the consideration of effects to both NRHP-eligible cultural resources (identified through the Section 106 process), as well as effects to resources that may not be eligible. This includes consideration of cultural resources identified through the consultation process.

Adverse Effects under Section 106. Rather than creating separate categories of direct and indirect impacts, the Section 106 regulations are focused on effects more broadly to historic properties. The regulatory definition of “effect,” pursuant to 36 CFR § 800.16(i), is that the term “means alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the NRHP.” The NHPA is specifically concerned about adverse effects to those properties. The regulations identify adverse effects as occurring when an undertaking is found to “alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling or association (36 C.F.R. § 800.5(a)(1)).” “Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative (36 C.F.R. § 800.5(a)(1)).”

C.4.4.1 Proposed Action/Project

Direct and Indirect Effects Analysis

This analysis of direct and indirect impacts for the Project is organized according to the following Project phases: construction and operation and maintenance.

Construction

Project construction would require both temporary and permanent disturbance areas and could result in the direct impact to unanticipated cultural resources including damage and/or displacement of resources, resulting in the loss of information about history and prehistory.

While no known resources are within the Project APE, five cultural resources are documented within a quarter mile of the Little Rock Reservoir and the area is sensitive for prehistoric and historical cultural resources. Therefore, the only potential for direct impacts to cultural resources during the construction phase of the Project is from unanticipated or inadvertent cultural resource discoveries. Due to various surface conditions or changes over time, not all cultural resources are expressed on the surface. Any

project with ground disturbing components has the potential to directly impact unanticipated cultural resources.

Sediment removal from the Reservoir would have no impact on cultural resources, as excavation would be limited to removing sediments deposited after construction of the Littlerock Dam (post-dam sediments) and would not reach the original ground surface that existed prior to construction of the Dam (pre-dam ground surface). Disposal of excavated sediments at the two off-site dumping areas would also have no impact on cultural resources, as sediments would either be stockpiled or dumped into low-lying gullies or exhausted mining pits. No native sediments would be disturbed in this process.

However, construction of the grade control structure would require excavation, with excavation occurring within the Littlerock Reservoir bed and banks adjacent to Rocky Point. Buried or otherwise obscured cultural resources may be present within the portions of the Project APE associated with the grade control structure that are located outside of the Littlerock Reservoir bed. If such resources are encountered, impacts would be reduced through the implementation of SPCs CUL-1 and CUL-2.

No human remains are known to be located within the Project APE. However, there is always the possibility that unmarked burials may be unearthed during construction. In the unlikely event of an accidental discovery of any human remains, the procedures and provisions in SPC CUL-3 would be implemented.

Indirect impacts to cultural resources are not anticipated for the Project.

Operation and Maintenance

Operation and maintenance of the Reservoir and grade control structure would not result in any disturbance of cultural resources. Although maintenance would require the excavation and removal of 38,000 cubic yards of sediment from the Reservoir annually, this excavation would be limited to removing post-dam deposited sediments and would not reach the original pre-dam ground surface. As with the initial excavation of sediment in the Reservoir, this sediment removal would have no impact on cultural resources.

The Project would cause a substantial adverse change in the significance of a cultural resource (Criterion CR1).

Impact C-1: Implementation of the Project would demolish, destroy, relocate, or disturb the cultural resource in a manner that would diminish its integrity or materially impair the significance of the resource.

Unknown buried resources (prehistoric and historical archaeological sites) could be inadvertently unearthed during ground-disturbing activities associated with Project construction. The procedures and provisions in SPCs CUL-1 and CUL-2 address inadvertent discoveries and provide detail on how these activities would be implemented.

SPCs Applicable to Impact C-1

SPC CUL-1 (Archaeological Monitoring Outside the Little Rock Creek and Reservoir Bed)

SPC CUL-2 (Unidentified Cultural Resource Discovery Procedures)

CEQA Significance Conclusion

Unknown buried resources (prehistoric and historical archaeological sites) could be inadvertently unearthed during ground-disturbing activities associated with Project construction of the grade control structure. In

accordance with the Forest Service Land Management Plan, any unknown cultural resources within the Project APE would be considered eligible for listing on the NRHP until proven otherwise. Implementation of SPCs CUL-1 and CUL-2 would ensure that construction is temporarily halted in the event that a previously unknown archaeological resource is discovered, and that impacts to unanticipated archaeological discoveries are reduced to a less-than-significant level (Class III).

The Project could disturb human remains, including those interred outside of formal cemeteries (Criterion CR2)

Impact C-2: Implementation of the Project could uncover, expose, and/or damage human remains.

No formal cemeteries or human remains are known to be located within the Project area. However, there is always the possibility that unmarked burials may be unearthed during construction. The procedures and provisions in SPC CUL-3 provide detail on how this activity would be implemented, in the unlikely event of an accidental discovery of any human remains.

SPCs Applicable to Impact C-2

SPC CUL-3 (Unidentified Human Remains Discovery Procedures)

CEQA Significance Conclusion

No human remains are known to be located within the Project area. However, there is always the possibility that unmarked burials could be inadvertently unearthed during excavation activities, which could result in damage to these human remains. In the unlikely event of an accidental discovery of any human remains in a location other than a dedicated cemetery, SPC CUL-3 would be implemented to reduce impacts. Nonetheless, the effect would be considered adverse under the regulations in the NHPA, and therefore, treatment of the remains, other than protection in place, would be a significant and unavoidable impact (Class I).

C.4.4.2 Alternative 1: Reduced Sediment Removal Intensity

Under Alternative 1, construction of the grade control structure would be identical to that of the Project. Once restored, ongoing sediment removal to maintain Reservoir capacity would be identical to that of the Project. Therefore, this alternative only differs from the Project during the initial (restorative) sediment removal. Alternative 1 seeks to reduce certain environmental impacts (primarily air quality, traffic, and noise) by:

- Starting the initial sediment removal period on July 1 (annually), instead of after Labor Day.
- Sediment removal activities would occur 5 days per week, instead of 6 (with the Project).
- Restoring the Reservoir to 1992 design water storage and flood control capacity within a minimum of 13 years, instead of 6 (with the Project).

Excavated sediment may first be stockpiled within the excavation area if drying is needed. PWD would first seek to recycle excavated material as feasible, likely for use PWD and other municipal projects within Palmdale and the surrounding area. All excavated material that cannot be recycled/reused would be trucked off-site for disposal at one of two locations:

- **The 47th Street East property.** This property is owned by PWD and encompasses approximately 36 acres. The property is located along the west side of 47th Street East, immediately north of the East

Branch of the California Aqueduct. The property comprises vacant, undeveloped land characterized by several ridges, gullies, and knolls, and is located approximately four miles driving distance north of the Reservoir. The Project proposes to stockpile removed sediment from the Reservoir within the low-lying gullies in a manner that it would not mound above adjacent grades.

- **The Hi-Grade Materials Company property.** This property encompasses approximately 170 acres near Pearblossom Highway. The property is located approximately five miles driving distance north of the Reservoir and is an active quarry containing large open pits that have been exhausted of quarry materials. The Project proposes to dispose of removed sediment within the quarry's exhausted pits.

Direct and Indirect Effects Analysis

This analysis of direct and indirect impacts for Alternative 1 is organized according to the following project phases: construction and operation and maintenance.

Construction

Construction of Alternative 1 would require both temporary and permanent disturbance areas and could result in the direct impact to unanticipated cultural resources including damage and/or displacement of resources, resulting in the loss of information about history and prehistory.

While no known resources are within the APE of Alternative 1, five cultural resources are documented within a quarter mile of the Littlerock Reservoir and the area is sensitive for prehistoric and historical resources. Therefore, the only potential for direct impacts to cultural resources during the construction phase of Alternative 1 is from unanticipated or inadvertent cultural resource discoveries. Due to various surface conditions or changes over time, not all cultural resources are expressed on the surface. Any project with ground disturbing components has the potential to directly impact unanticipated cultural resources.

Under Alternative 1, sediment removal would have no impact on cultural resources, as excavation would be limited to removing sediments deposited after construction of the Littlerock Dam (post-dam sediments) and would not reach the original ground surface that existed prior to construction of the Dam (pre-dam ground surface). Disposal of excavated sediments at the two off-site dumping areas would also have no impact on cultural resources as sediments would either be stockpiled or dumped into low-lying gullies or exhausted mining pits. No native sediments would be disturbed in this process.

However, construction of the grade control structure would require excavation to and below pre-dam ground surface levels with the vast majority of this excavation occurring within the Littlerock Reservoir bed and banks adjacent to Rocky Point. Buried or otherwise obscured cultural resources may be present within the portions of the Project APE associated with the grade control structure that are located outside of the Little Rock Creek bed. If such resources are encountered, impacts would be reduced through the implementation of SPCs CUL-1 and CUL-2.

No human remains are known to be located within the APE of Alternative 1. However, there is always the possibility that unmarked burials may be unearthed during construction. In the unlikely event of an accidental discovery of any human remains, the procedures and provisions in SPC CUL-3 would be implemented.

Indirect impacts to cultural resources are not anticipated for Alternative 1.

Operation and Maintenance

Operation and maintenance of the Reservoir and grade control structure would not result in any disturbance of cultural resources. Although maintenance would require the excavation and removal of 38,000 cubic yards of sediment from the Reservoir annually, this excavation would be limited to removing post-dam deposited sediments and would not reach the original pre-dam ground surface. As with the initial excavation of sediment in the Reservoir, this sediment removal would have no impact on cultural resources.

The Project would cause a substantial adverse change in the significance of a cultural resource (Criterion CR1)

Impact C-1: Implementation of the Project would demolish, destroy, relocate, or disturb the cultural resource in a manner that would diminish its integrity or materially impair the significance of the resource.

Unknown buried resources (prehistoric and historical archaeological sites) could be inadvertently unearthed during ground-disturbing activities associated with Project construction. The procedures and provisions in SPCs CUL-1 and CUL-2 address inadvertent discoveries and provide detail on how these activities would be implemented.

SPCs Applicable to Impact C-1

SPC CUL-1 (Archaeological Monitoring Outside the Little Rock Creek and Reservoir Bed)

SPC CUL-2 (Unidentified Cultural Resource Discovery Procedures)

CEQA Significance Conclusion

Unknown buried resources (prehistoric and historical archaeological sites) could be inadvertently unearthed during ground-disturbing activities associated with Project construction of the grade control structure. In accordance with the Forest Service Land Management Plan, any unknown cultural resources within the Project APE would be considered eligible for listing on the NRHP until proven otherwise. Implementation of SPC CUL-2 would ensure that construction is temporarily halted in the event that a previously unknown archaeological resource is discovered, and that impacts to unanticipated archaeological discoveries are reduced to a less-than-significant level (Class III).

The Project could disturb human remains, including those interred outside of formal cemeteries (Criterion CR2)

Impact C-2: Implementation of the Project could uncover, expose, and/or damage human remains.

No formal cemeteries or human remains are known to be located within the Project area. However, there is always the possibility that unmarked burials may be unearthed during construction. The procedures and provisions in SPC CUL-3 provide detail on how this activity would be implemented, in the unlikely event of an accidental discovery of any human remains.

SPCs Applicable to Impact C-2

SPC CUL-3 (Unidentified Human Remains Discovery Procedures)

CEQA Significance Conclusion

No human remains are known to be located within the Project area. However, there is always the possibility that unmarked burials could be inadvertently unearthed during excavation activities, which could result in damage to these human remains. In the unlikely event of an accidental discovery of any human remains in a location other than a dedicated cemetery, SPC CUL-3 would be implemented to reduce impacts. Nonetheless, the effect would be considered adverse under the regulations in the NHPA, and therefore, treatment of the remains, other than protection in place, would be a significant and unavoidable impact (Class I).

C.4.4.3 Alternative 2: No Action/No Project Alternative

Under the No Action/No Project Alternative, sediment removal activities would not occur and sediment would continue to accumulate upstream of Littlerock Dam. Under this alternative, sediment would continue to enter the Reservoir at the annual average rate of 38,000 cubic yards per year, reducing the capacity of the Reservoir by approximately 23.6 acre-feet annually.

Direct and Indirect Effects Analysis

In the event sediment buildup led to safety issues and required demolition/removal of the Dam, construction activities (and related noise) are expected to be greater than that of the Project or Alternative 1. Demolition of the dam and restoration of the waterway would require extensive construction. Activities would be similar or greater in intensity to the Project, and would likely require additional construction years. Unknown buried resources (prehistoric and historical archaeological sites) could be inadvertently unearthed during ground-disturbing activities associated with such construction. While unknown, it is likely similar procedures and provisions as SPCs CUL-1 and CUL-2 would be necessary to address inadvertent discoveries and provide detail on how these activities would be implemented.

In the event the Reservoir became filled with sediment and the Dam was left in place, it is likely that some type of downstream flood-control channeling would need to be constructed. While unknown, should these activities include any significant ground disturbance, it is likely similar procedures and provisions as SPCs CUL-1 and CUL-2 would be necessary to address inadvertent discoveries and provide detail on how these activities would be implemented.

CEQA Significance Conclusion

The No Action/No Project Alternative would not result in impacts to cultural resources.

C.4.5 Impact Summary

Table C.4-2 summarizes the direct and indirect environmental impacts of the proposed action and the alternatives on cultural resources. Refer to Section C.4.4 for the entire environmental analysis and recommended SPCs.

Table C.4-2. Summary of Impacts and Mitigation Measures – Cultural Resources					
Impact	Impact Significance				Mitigation Measures/SPC
	Proposed Action	Alt. 1	Alt. 2: No Action	NFS Lands ¹	
C-1: Implementation of the Project would demolish, destroy, relocate, or disturb the cultural resource in a manner that would diminish its integrity or materially impair the significance of the resource.	Class III	Class III	No impact	Yes	SPC CUL-1 (Archaeological Monitoring Outside the Little Rock Creek and Reservoir Bed) SPC CUL-2 (Unidentified Cultural Resource Discovery Procedures)
C-2: Implementation of the Project could uncover, expose, and/or damage human remains.	Class I	Class I	No impact	Yes	SPC CUL-3 (Unidentified Human Remains Discovery Procedures)

Notes:

1 - Indicates whether this impact is applicable to National Forest System lands.