
1.0 CULTURAL RESOURCES STUDY APPROACH

1.1 PROJECT NEXUS

Continued Project operation and maintenance (O&M) and Project-related recreation activities have potential to affect cultural resources. For the purpose of this Cultural Resources Study Approach (Study), “cultural resource” refers to any prehistoric or historic district, site, building, structure, or object, regardless of its National Register of Historic Places (NRHP) eligibility.

This study approach does not address ethnographic or Traditional Cultural Properties resources, which are addressed in the California Department of Water and Resources’ (DWR) *Tribal Resources Study Approach*, a separate study being undertaken as part of this relicensing effort.

1.1.1 Existing Information and Need for Additional Information

Existing, relevant, and reasonably available information regarding cultural resources identified during the background research is provided in Section 4.11 of the DWR Pre-Application Document. Additional information was recently provided to DWR by the San Manuel Band of Mission Indians (SMBMI) in a letter dated December 29, 2016. Relevant information based on the comments from the SMBMI has been incorporated into the study approach. As a summary of the background research, DWR reviewed 52 previous cultural resources investigations and 23 various letters and communications regarding studies or related information to specific cultural resources. Sixty-three of these studies and other documentation, and 11 cultural resources identified by these studies, are within the proposed FERC Project boundary. Eight resources are archaeological sites and three are historic built cultural resources. Archaeological resources include two prehistoric sites, five historic sites, and one multicomponent site. Of the 11 cultural resources located within the proposed Project boundary, one prehistoric site has been evaluated and previously recommended as not eligible for the NRHP, two historic built resources have been previously recommended to be NRHP eligible, and one historic built resource has previously been recommended to be potentially NRHP eligible. These determinations will be re-evaluated in accordance with current eligibility criteria and site conditions. Cultural resources in the immediate surrounding area include a California Historic Landmark listed on the California Register of Historical Resources. DWR’s review of historical maps indicates that approximately 25 potential historic-era sites or features may be located within the proposed Project boundary or surrounding area.

Approximately 90 percent of the investigations within the proposed Project boundary were performed ten or more years ago and were conducted for various DWR projects, private land developments, and transportation projects. Professional standards change over time, as do site and field conditions. This study approach includes a field survey, because the existing and relevant information indicates that the lands within the proposed Project boundary may contain both prehistoric and historic archaeological and

historic built-environment cultural resources, as well as potentially undocumented cultural resources.

1.1.2 Study Goals and Objectives

The goal of the study approach is to determine if continued Project O&M and Project-related recreation activities could affect cultural resources that have not been previously evaluated for the NRHP, or that are already listed on or are eligible for listing on the NRHP. Under 36 Code of Federal Regulations (C.F.R.) Section (§) 800.16(l)(1), “historic properties” are defined as prehistoric or historic archaeological sites, buildings, structures, objects, districts, or locations of traditional use or beliefs that are included in, or are eligible for inclusion in, the NRHP. Historic properties are identified through a process of evaluation against specific criteria found at 36 C.F.R. § 60.4.

The objective of this study approach is to gather sufficient data to fill recognized information gaps. This information will help determine if continued Project O&M and Project-related recreation activities could affect cultural resources.¹

This study approach focuses only on obtaining the data necessary to meet the study goal. As provided under 36 CFR 800.2(c)(4), FERC has designated DWR as its non-federal representative for purposes of day-to-day consultation with consulting parties. National Historic Preservation Act (NHPA) Section 106 consultation will be conducted outside of this study, and it will involve consultation with tribes; the United States Forest Service, San Bernardino National Forest (SBNF); the State Historic Preservation Officer (SHPO); and other potentially interested parties. Nevertheless, DWR will make every effort to assure the study area described below and the NHPA Section 106 Area of Potential Effect are the same. In addition, this study approach does not include tribal consultation under California Public Resources Code Section 21080.3.1, et seq. Consultations required under NHPA Section 106 and Public Resources Code Section 21080.3.1, et seq. will be conducted outside of this study.

In its letter of December 29, 2016, the SMBMI requested that botanical resources of importance and use to the tribe be included in the relicensing studies. An ethnographer will work closely with the Tribes during the *Tribal Resources Study Approach* to identify important plants and traditional plant use in the study area. Additionally, a “Non-Exhaustive List of Plants of Cultural Importance to Serrano Peoples” was provided to DWR by the SMBMI. All plant species on the list are included in the species lists for the *Botanical Resources Study Approach* and will be documented to the level specified in the plan. Moreover, many of the plants included on the cultural plant list are included in the *Special-status Terrestrial Wildlife - California Wildlife Habitat Relationships Study*

¹ A draft Historic Properties Management Plan (HPMP) will be prepared separately after the study approach has been completed and will be filed with the DLA. Any stakeholder comments on the draft HPMP will be addressed and a final HPMP will be filed with the FLA. A HPMP is a plan for considering and managing effects on historic properties that may occur from Project O&M and Project-related recreation activities and establishes a decision-making process for considering those effects.

Approach field verification. Information gathered on their locations within the proposed Project boundary will be collected in accordance with the methods of that plan.

1.1.3 Study Methods

1.1.3.1 *Study Area*

The study area consists of the area within the proposed Project boundary, including dams, spillways, powerhouses, recreation areas, and other appurtenant facilities. However, in specific areas the study area will be expanded outside of the Project boundary where continued Project O&M and Project-related recreation might affect cultural resources. The study area excludes lands overlying the San Bernardino Tunnel on which DWR does not perform any Project-related activities. The study area is shown in Figure 1.1-1.

1.1.3.2 *General Concepts and Procedures*

- Personal safety is the most important consideration of each fieldwork team. Fieldwork will only occur in safely accessible areas and under conditions deemed safe by the field crews.
- The study may begin as early as June 2017.
- The study does not include the development of requirements for the new license, which will be addressed outside the study.
- The study focuses on resources addressed by the study within the proposed Project boundary, but where necessary to evaluate a resource, the study area specific to that resource may be modified to extend beyond the proposed Project boundary.
- If required for the performance of the study, DWR will make a good faith effort to obtain permission to access private property well in advance of initiating the study. DWR will only enter private property if such permission has been provided by the landowner.
- DWR will acquire all necessary agency permits and approvals prior to beginning fieldwork for the study.
- Field crews may make variances to the study approach in the field to accommodate actual field conditions and unforeseen problems. Any such variances will be noted in the Privileged report resulting from the study.
- To prevent the introduction and transmittal of amphibian chytrid fungus and invasive aquatic species (e.g., quagga mussels, zebra mussel, and Asian clams), field crews will be trained on, provided with, and use materials (e.g., Quat) for

decontaminating their boots, waders, and other equipment when leaving or traveling between water-based study sites. Field crews will follow DWR's Quagga and Zebra Mussel Rapid Response Plan and CDFW's Aquatic Invasive Species Decontamination Protocol which can be found at the following link: (<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=43333>). All boats used during the study will follow cleaning protocols, including inspections before and after use. All decontamination requirements in place at Project reservoirs including those of DWR's *Quagga and Zebra Mussel Rapid Response Plan* for the SWP will be strictly followed (DWR 2010).

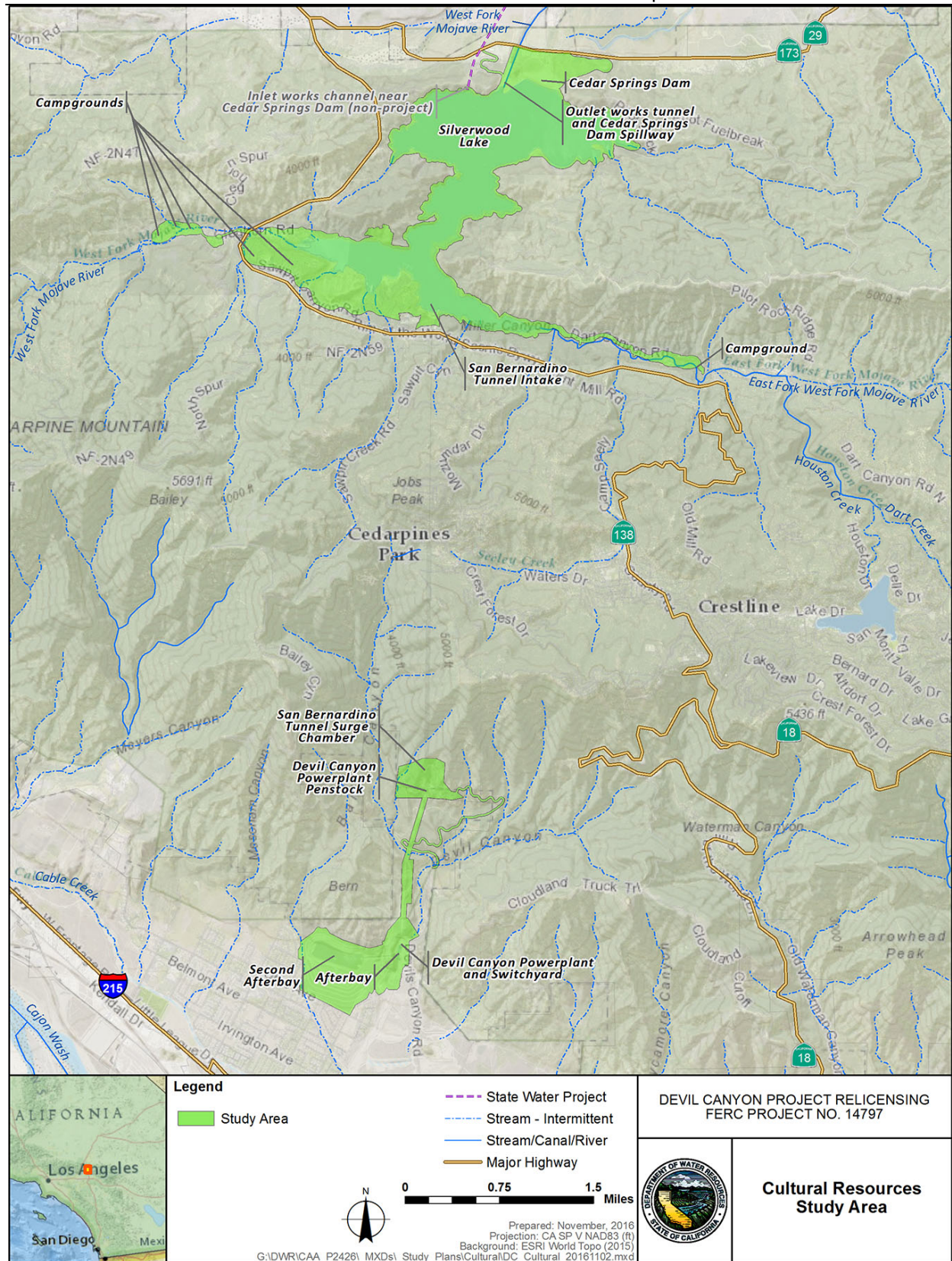


Figure 1.1-1. Cultural Resources Study Area

1.1.3.3 *Methods*

The study will consist of three steps: (1) perform archival research, (2) conduct field survey and identify resources, and (3) identify and assess potential Project effects on identified cultural resources. These steps are described below.

Step 1 – Perform Archival Research. Additional archival research will be conducted under this study. Appropriate repositories to be visited during this effort may include those listed below as well as other sources as they are identified during the study to obtain additional information specific to cultural resources in the study area. The results of the archival research will serve as the basis for preparing the prehistoric and historic contexts against which cultural resources identified during the study may be understood and potentially evaluated for the NRHP at a later date.

Potential places, repositories, or other sources that may provide relevant background information include:

- Oral histories, as applicable
- California State Library, Sacramento
- Local historical societies
- Local museums
- Local Universities and College Libraries
- Federal, State, or local agency documents not accessed during the PAD data gathering

Step 2 – Conduct Field Survey and Identify Resources

Archaeological Field Survey

Following completion of Step 1, DWR will prepare a privileged cultural resources sensitivity map and will conduct a field survey to verify locations of previously recorded cultural resources and to identify previously unknown cultural resources in the study area. The field survey will be completed by examining all accessible lands (i.e., gentle to moderate slopes, locations with no or moderate densities of vegetation, other areas deemed by field personnel to be safe) within the study area. Locations within the study area that cannot be accessed in a safe manner (e.g., locations containing dense vegetation or unsafe slopes) and areas inundated when the surveys are performed, will not be surveyed; these areas will be identified in the study report and an explanation for survey exclusion will be provided. DWR will obtain all necessary permissions and permits (i.e., Archaeological Resources Protection Act permits to survey USFS lands) to conduct the study. The field survey will follow the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* (NPS 1983).

Field methods will include surface observations by qualified crew members walking parallel transects spaced 15-20 meters apart. In areas containing moderately dense vegetation or moderately steep terrain, the survey strategy may employ 20- to 40-meter transects. All topographical features encountered in moderate areas and considered to be sensitive for cultural resources (e.g., springs and drainages) will be thoroughly inspected. If the ground surface of accessible lands located in areas of high probability for occurrence of cultural resources (i.e., flat ridge tops, ridge saddles, etc.) is obscured by dense ground cover, field survey crews will implement a limited subsurface survey using shallow surface scrapes (i.e., 3 centimeters deep or less and measuring 1 meter x 1 meter square) to determine if cultural resources are present. Field crews will use the privileged cultural resources sensitivity map to aid in the identification of moderate to highly sensitive cultural resources locations. To minimize potential ground disturbances, the lowest number of surface scrapes that can be employed to determine the presence or absence of cultural resources will be used and will be determined by the overall area of ground cover encountered. The locations of the surface scrapes will be plotted using a Global Positioning System (GPS) receiver with sub-meter accuracy. Lands typically inundated by the Project reservoir that become accessible during the survey season as a result of normal reservoir drawdown or other O&M activities will be surveyed when feasible. Although the reservoirs are normally kept at close to full pool, drawdowns happen occasionally for maintenance and other purposes. To the extent possible to take advantage of low water levels during drawdowns, the field survey of the reservoirs will be scheduled to occur as close to the periods of low reservoir levels as possible. Additionally, each site identified during the study will be assessed (i.e., visual only; no ground disturbing activities) for potential Project-related effects including, but not limited to, water fluctuation, wave action, and vegetation management activities. No subsurface testing related to NRHP evaluations is proposed at this time. Based on the results of this study and coordination with Indian Tribes, FERC, USFS, and SHPO, additional fieldwork and testing may be implemented, if needed, to further examine any identified cultural resources sites. Sites documented during the survey will be evaluated for their NRHP eligibility at the survey level if the results of the archival research and field survey are able to provide adequate information (i.e., surface sites with no potential for subsurface deposits, few or no diagnostic artifacts, etc., no discernible historic associations or data potential, etc.) to make the assessments.

The areas examined during the field survey will be plotted onto the appropriate United States Geological Survey (USGS) 1:24,000 scale topographic map. DWR will not collect artifacts during the survey. All encountered artifacts will be left in place. Diagnostic artifacts locations will be documented using a GPS receiver with sub-meter accuracy, or if diagnostic artifacts are concentrated within certain locations of the study area, the artifact concentrations and overall site areas will be documented as described below. The GPS data will be based on the North American Datum of 1983 (NAD 83) and utilize the Universal Transverse Mercator (UTM) system.

Locations of previously recorded cultural resources will be verified and the sites re-recorded only if their existing site records or other documentation do not meet the current Office of Historic Preservation (OHP) standards for recording resources (OHP

1995), or if the condition and/or integrity of the cultural resource has changed since its previous recording. Visits to previously recorded cultural resources that do not require re-recording will be documented on State of California, Department of Parks and Recreation 523 Continuation Sheets. The Continuation Sheets will contain summaries of the site visits that describe the current site conditions and any other relevant observations.

Newly discovered cultural resources, including isolated finds, will be fully documented following the procedures outlined in *Instructions for Recording Historical Resources* (OHP 1995), which utilizes State of California, Department of Parks and Recreation 523 Forms A-L. A sketch map will be drawn to scale for re-documented archaeological sites, if needed, and for newly discovered sites. Sites, historic built resources, and isolates will be photographed using digital color photography. The locations of archaeological sites, historic built resources, and isolates documented during the field survey will be plotted onto the appropriate USGS 1:24,000 scale topographic map by hand at the time of discovery, and the locations recorded using a GPS receiver. The GPS data will be based on the NAD 83 and utilize the UTM system.

All mapped cultural resource locations are considered to be confidential and will only be included in "Privileged" documents provided to those who have a need-to-know for the purpose of the relicensing (i.e., FERC, affected tribes, USFS, and SHPO).

Built-Environment Inventory

A field inspection and documentation of historic built-environment resources (i.e., buildings and structures 45 years in age or older) located within the study area will be conducted. Historic built-environment resources will be recorded or re-recorded to meet current OHP standards (OHP 1995). This will include digital color photography and sketch maps of individual features that show the relationship between buildings and structures.

Step 3 – Identify and Assess Potential Project Effects on Identified Cultural Resources.

During Step 2, DWR will document any potential Project-related effects to cultural resources identified in the study area. This information will be analyzed in Step 3 to determine whether any unevaluated or NRHP listed or eligible resources are being affected, thereby informing the need to conduct NRHP evaluations that may occur under the NHPA Section 106 consultation. The potential NRHP eligibility of other unevaluated cultural resources in the study area that are not affected by the Project will also be addressed during the NHPA Section 106 consultation.

1.1.3.4 Quality Assurance and Quality Control

The archival data gathered during this study will be collected in a manner that promotes high quality results, and shall be subject to appropriate quality assurance and quality control (QA/QC) procedures including checking field data sheets for accuracy and completeness. Data gathering during the field survey will be overseen by qualified

archaeologists and architectural historians who meet the Secretary of the Interior's Qualification Standards to ensure that data gathering techniques, documentation, and other efforts meet current professional standards. Cultural resources specialists will provide oversight and reviews for cultural resources document preparation.

1.1.3.5 Analysis of Potential Project Effects

The data gathered during this study will be compiled and summarized for incorporation into the Draft License Application and Final License Application. The results of the study will be used to determine whether Project O&M or Project-related recreational activities are affecting any identified cultural resources in the study area; to identify the need for NRHP evaluations of affected, unevaluated resources; and to determine if there is a need to implement treatment to mitigate potential Project effects on NRHP-eligible or listed properties.

1.1.3.6 Reporting

DWR will prepare a "privileged" report at the conclusion of the study that includes the following sections: (1) Study Goals and Objectives, (2) Methods, and (3) Results. The report will include maps that clearly depict the following on USGS 1:24,000 topographic maps: the area examined; current inventory coverage in the areas surveyed; and intensity of the survey coverage. The report will contain sensitive, confidential, and privileged information. As such, the report will only be distributed to interested tribes, FERC, USFS, and SHPO for review and comment as part of the NHPA Section 106 consultation process. DWR will seek SHPO's concurrence on historic property identification efforts and any NRHP eligibility evaluations conducted during the study. Following SHPO concurrence on the report, the report will be filed with FERC with a designation as "privileged."

1.1.4 Consistency of Methodology with Generally Accepted Scientific Practices

This study is consistent with the goals, objectives, and methods outlined for the most recent FERC hydropower relicensing efforts in California, including the Don Pedro Project (FERC No. 2299), the Yuba River Development Project (FERC No. 2246) and the Merced River Hydroelectric Project (FERC No. 2174). The methods are consistent with the Advisory Council for Historic Preservation's guidelines (ACHP 2007).

1.1.5 Schedule

DWR anticipates scheduling field surveys at a time when the weather permits, but will schedule the survey in the area below the normal maximum water surface elevations of the Project reservoir to make use of, to the extent possible, normal drawdown, low water levels, and scheduled Project O&M activities. DWR anticipates the schedule below will be followed to complete the study.

Fieldwork Preparation
Fieldwork

August 2017 – September 2017
September 2017 – January 2018

Data QA/QC

January 2018 – February 2018

Data Analysis & Reporting

February 2018– June 2018

1.1.6 Level of Effort and Cost

Based on the work effort described above, DWR estimates the current cost to complete this study approach will range between \$570,000 and \$600,000.

1.1.7 References

Advisory Council on Historic Preservation (ACHP). 2007. Policy Statement Regarding Treatment of Burial Sites, Human Remains, and Funerary Object. Washington, D.C.

DWR. 2010. The Quagga and Zebra Mussel Rapid Response Plan for the State Water Project. 93 pp. CONFIDENTIAL/PRIVILEGED – Not for Public Distribution.

Office of Historic Preservation (OHP). 1995. Instructions for Recording Historical Resources. Sacramento, CA.

United States Department of Interior, National Park Service (NPS). 1983. Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines in the Federal Register, September 29, 1983 (48 FR 44716). Department of the Interior, Washington, D.C.