

4.1.12 Cultural Resources Study

4.1.12.1 Project Nexus

Continued Project O&M and Project-related recreation activities have potential to affect historic properties. Under 36 Code of Federal Regulations (C.F.R.) Section (§) 800.16(l)(1), “historic properties” are defined as prehistoric or historic sites, buildings, structures, objects, districts, or properties of traditional religious and cultural importance that are included in, or 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. Therefore, Project O&M also has the potential to affect properties not yet evaluated for listing on the NRHP, referred to in this *Cultural Resources Study* as cultural resources, and defined herein as any prehistoric or historic district, site, building, structure, or object, regardless of its NRHP eligibility.

This *Cultural Resources Study* does not address ethnographic or TCP resources, which are addressed in the *Tribal Resources Study*, a separate study being undertaken as part of this relicensing effort.

4.1.12.2 Existing Information and Need for Additional Information

Existing, relevant, and reasonably available information regarding cultural resources within the proposed Project boundary is provided in Section 4.11 of the Licensees’ PAD. As a summary, the Licensees reviewed approximately 100 previous cultural resources investigations and other documents.

The majority of the previous cultural resources investigations within the proposed Project boundary were performed more than ten years ago. Professional standards may change over time, as may site and field conditions. This *Cultural Resources Study* 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 built cultural resources, as well as potentially undocumented cultural resources.

4.1.12.3 Study Goals and Objectives

The goal of the *Cultural Resources Study* is to determine if continued Project O&M and Project-related recreation could affect cultural resources that have not been previously evaluated for the NRHP, or that are already listed on or eligible for listing on the NRHP.

The objective of this *Cultural Resources Study* is to gather sufficient information necessary to fill recognized information gaps to help determine if continued Project O&M and Project-related recreation activities could and cultural resources.

4.1.12.4 Study Methods

Study Area

The study area for the *Cultural Resources Study* generally consists of all lands within the proposed Project boundary, as defined by the known or potential locations of Project O&M (including direct and indirect disturbances) and Project facilities and features, including dams, spillways, powerhouses, Project-related recreation areas, transmission lines, access roads, staging areas, and other appurtenant facilities. The *Cultural Resources Study* excludes lands overlying the Angeles Tunnel on which the Licensees do not perform any Project-related activities.

It is anticipated that the study area and the Area of Potential Effect (APE) are synonymous, pending the SHPO's concurrence on the APE. As defined in 36 C.F.R. Section 800.16(d), the APE is:

...the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

The study area (proposed APE) for the *Cultural Resources Study* is shown in Figure 4.1-20. If, following SHPO's concurrence on the proposed APE, potential Project-related effects are identified outside of the APE, Licensees will expand the APE in consultation with tribes and agencies, and seek additional concurrence on the modifications from the SHPO.

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. 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 Privileged Report and an explanation for survey exclusion will be provided.
- The *Cultural Resources Study* will begin after FERC issues its Study Plan Determination.
- The *Cultural Resources Study* does not include the development of requirements for the new license, which will be addressed outside the study.
- The *Cultural Resources Study* focuses specifically on the proposed APE. Resources that extend beyond the APE may be documented in full, to include

portions extending outside the APE, if found to be necessary to evaluate the resource and/or to assess Project-related effects on the resource.

- If required for the performance of the *Cultural Resources Study*, the Licensees will make a good faith effort to obtain permission to access private property well in advance of initiating the *Cultural Resources Study*. The Licensees will only enter private property if permission has been provided by the landowner.
- The Licensees will acquire all necessary agency permits and approvals prior to beginning fieldwork for the *Cultural Resources Study* (i.e., Archaeological Resources Protection Act permits to survey NFS lands and necessary permits from BLM to survey on BLM lands).
- Field crews may make variances to the *Cultural Resources Study* in the field to accommodate actual field conditions and unforeseen problems. Any variances from the *Cultural Resources Study* will be noted in the subsequent study report described below under *Methods*.
- 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).

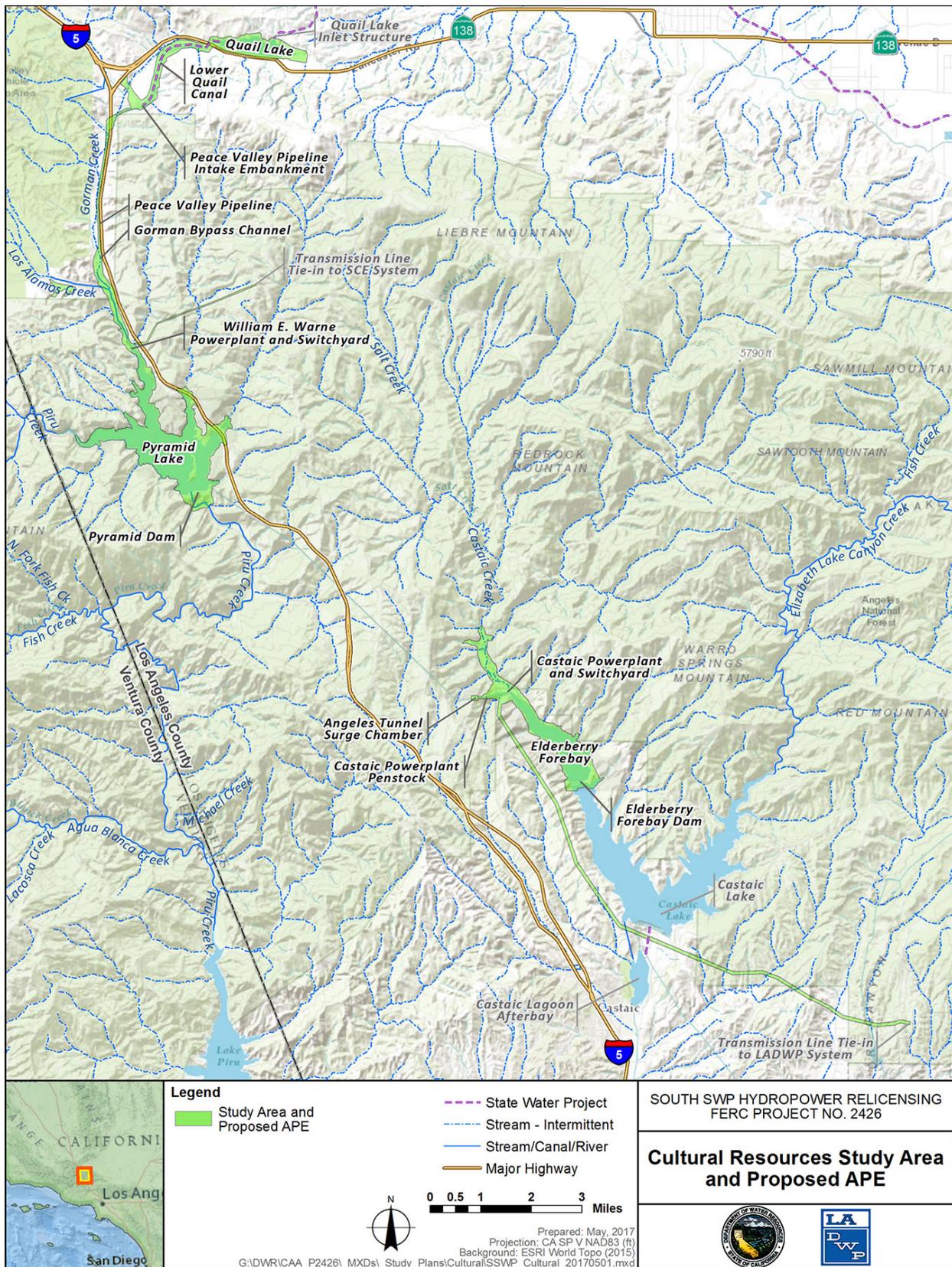


Figure 4.1-20. Cultural Resources Study Area and Proposed APE

Methods

The *Cultural Resources 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, beyond that already completed during the PAD development, will be conducted under this *Cultural Resources Study*. Appropriate repositories to be visited during this effort may include those listed below, if relevant information is found to be archived at these locations, as well as other sources as they are identified during the course of the *Cultural Resources Study*. These repositories will be visited to obtain additional information specific to known cultural resources in the study area and cultural resources that may potentially be present 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 *Cultural Resources Study* may be understood and potentially evaluated for the NRHP, and will provide detailed background information to facilitate the field survey portion of this study.

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

- Oral histories, as applicable
- California State Library, California Room
- Local historical societies
- Local museums
- Local universities and college libraries including the South Central Coastal Information Center at California State University, Fullerton
- Relevant federal, State, or local agency documents not accessed or made available during the PAD data gathering

Step 2 – Conduct Field Survey and Identify Resources

Archaeological Field Survey

Following completion of Step 1, the Licensees will conduct a field survey to verify locations of and document any changes to previously recorded cultural resources and to identify and document previously unknown cultural resources, if present, in the study area for the *Cultural Resources Study*. This will be completed by examining all accessible lands within the study area for the *Cultural Resources Study*. Locations within the study area for the *Cultural Resources Study* 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 *Cultural Resources Study* report and an explanation for survey exclusion will be provided. The field survey and recording of cultural resources will follow the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* (NPS 1983) and the State of California Office of Historic Preservation (OHP) publication *Instructions for Recording Historical Resources* (OHP 1995).

Field methods will include 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. Topographical features considered to be sensitive for cultural resources (e.g., springs, benches, terraces, ridgelines, knobs, and drainages) will be thoroughly inspected. Lands typically inundated by the Project reservoirs 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 or close to full pool, drawdowns happen occasionally for maintenance and other purposes. To the extent possible and to take advantage of low water levels during drawdowns, the field surveys 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 *Cultural Resources Study* will be assessed for potential Project-related effects including, but not limited to, water fluctuation, wave action, recreational impacts, and vegetation management activities. The areas examined during the field survey will be plotted onto the appropriate USGS 1:24,000 scale topographic maps. The Licensees will not collect artifacts during the survey. All encountered artifacts will be left in place, diagnostic artifact 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 for the *Cultural Resources Study*, 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 and utilize the Universal Transverse Mercator system. No subsurface testing will be conducted as part of this study. Additional fieldwork or evaluation may be required subsequent to this study based on consultation with Native American tribes, land managing agencies, FERC and SHPO. Should subsequent activities be planned in consultation with these parties, in which materials will be collected, the disposition of these materials, and any selected curation facility, will be determined as part of the consultation.

Previously recorded cultural resources will be located and their records updated to document their current condition, to note any changes from their previous documentation, and/or to bring their existing resource records up to current OHP standards for recording resources (OHP 1995). 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 provide adequate information (e.g., surface sites with no potential for subsurface deposits, few or no diagnostic artifacts, no discernible historic associations or data potential, etc.) to make the assessments.

Newly discovered cultural resources, including isolated finds, will be fully documented on State of California Department of Parks and Recreation 523 Forms A-L following the procedures outlined in the *Instructions for Recording Historical Resources* (OHP 1995).

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.

In the event that human remains are encountered during the survey, the provisions outlined in Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the Public Resources Code will be followed, and pertinent agency staff will be notified, in addition to the Advisory Council on Historic Preservation's (ACHP) policy for the treatment of human remains (ACHP 2007). If the remains are found on federal lands and determined to be of Native American ancestry, the provisions provided in the Native American Graves Protection and Repatriation Act, 43 C.F.R. 10.6 *Inadvertent discoveries*, will also be followed. Upon discovery, the field crew will immediately contact the Licensees. The Licensees will notify the federal land managing agency or county coroner, as appropriate. The field crew will cease all work within 100 feet of the discovery and secure the location to the extent possible. All remains and artifacts associated with the discovery will be left undisturbed and the location recorded using a GPS receiver. Field crew members will keep notes on any calls and events that occur during this process. Field crew members and other Project personnel will keep the location of the discovery confidential and will not publically disclose the location. Work will resume in the immediate vicinity of the find after the appropriate actions have been implemented. All resource locations are considered to be confidential and will only be included in Privileged documents provided on a need-to-know basis (e.g., to FERC, tribes, USFS, BLM, and SHPO for reviews).

Built Environment Inventory

A field inspection and documentation of historic built-environment resources (i.e., buildings and structures 45 years in age and older) located within the study area for the *Cultural Resources Study* will be conducted. Historic built-environment resources will be recorded or re-recorded to meet current OHP standards for documentation (OHP 1995). This will include digital color photography and sketch maps of individual features that show the relationship between buildings and structures. The historic built environment resources within the proposed Project boundary identified during the *Cultural Resources Study* will be assessed individually and, where appropriate, as a potential historic district for inclusion on the NRHP. These resources will be evaluated within an appropriate historic context to assess their importance.

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

During Step 2, the Licensees will document any potential Project-related effects to cultural resources identified in the study area for the *Cultural Resources Study*. This information will be analyzed in Step 3 to determine whether any unevaluated or NRHP listed or eligible resources are being affected by ongoing Project O&M or Project-related recreation activities, thereby informing the need to conduct NRHP evaluations for any resources that are potentially affected. Cultural resources that can be evaluated for the

NRHP based on archival research and field observations and documentation, regardless of whether or not they are experiencing Project-related effects, will be evaluated for the NRHP under Step 3. The Licensees will consult with the tribes, agencies, and SHPO regarding these evaluations, the need for any additional studies that may be necessary to evaluate other cultural resources experiencing Project effects, and to develop a schedule to conduct any subsequent evaluations¹. Minimally, the Licensees will include the results of this consultation, including the schedule, in the cultural resources report, DLA, and FLA.

Quality Assurance and Quality Control

Field data gathered during this *Cultural Resources Study* will be collected in a manner that promotes high quality results, and will be subject to appropriate QA/QC procedures to check 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 of cultural resources document preparation.

Analysis of Potential Project Effects

The data gathered during the *Cultural Resources 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 for the *Cultural Resources Study*; 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. This information will be provided in the report discussed below, and the DLA and FLA.

Reporting

Cultural Resources Study results, excluding confidential information, will be included in the Licensees' ISR, USR, DLA and FLA. In addition, the Licensees will prepare a Privileged report that includes the following sections: (1) Study Goals and Objectives; (2) Methods; (3) Results of the survey (i.e., descriptions of the cultural resources documented during the study, their NRHP status, and any Project-related effects identified); and (4) NRHP evaluations of Project-affected cultural resources and the schedule to conduct subsequent evaluations. Documentation of all tribal, agency, and

¹ Because it is not possible to determine all of the effects of various activities that may occur over the course of a license, FERC typically concludes its Section 106 responsibilities for the relicensing by issuing a Programmatic Agreement that requires Licensees develop and implement an HPMP that considers and manages effects on historic properties throughout the term of the license. While not a part of this study, it is anticipated that the information developed by this and other relicensing studies will be used to develop a HPMP in consultation with interested parties after the Cultural Resources Study has been completed.

SHPO consultation conducted during the study, including correspondences, will be appended to the report.

The Privileged report will include documentation that clearly depicts the following on USGS 1:24,000 topographic maps: the APE; survey coverage (i.e., which areas could be accessed safely and which areas could not and why); 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, land managing agencies as appropriate (e.g., USFS, BLM, etc.), and SHPO for review and comment as part of the NHPA Section 106 consultation process. The Licensees will seek SHPO's concurrence on historic property identification efforts and any NRHP eligibility evaluations conducted during the study. Following that review, the report will be filed with FERC as Privileged.

4.1.12.5 NHPA Section 106 Consultation

The PAD and draft *Cultural Resources Study* were provided to potentially-affected Indian tribes, land managing agencies, and the SHPO for review and comment. Additionally, FERC initiated consultation with the tribes and SHPO for purposes of the undertaking, and designated the Licensees as FERC's non-federal representative for purposes of day-to-day consultation. The day-to-day consultation serves to assist FERC in meeting its compliance requirement under Section 106 of the NHPA, though FERC maintains its responsibility for formal government-to-government consultation. The Licensees will consult with the tribes, agencies, and SHPO throughout the study and the relicensing process.

4.1.12.6 Consistency of Methodology with Generally Accepted Scientific Practices

This *Cultural Resources 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 NPS guidelines (1983).

4.1.12.7 Schedule

The Licensees anticipate scheduling field surveys at a time when the weather permits. Surveys in the area below the NMWSE of the Project reservoirs will be scheduled to make use of, to the extent possible, normal drawdowns and low water levels. The Licensees anticipate the schedule below will be followed to complete the study.

Fieldwork Preparation	July 2017
Fieldwork	August 2017 – October 2017
Data QA/QC	October 2017 – June 2018
Data Analysis and Reporting	July 2018 – December 2018

4.1.12.8 Level of Effort and Cost

Based on the work effort described above, the Licensees estimate the current cost to complete this *Cultural Resources Study* will range between \$387,000 and \$516,000.

4.1.12.9 References

Advisory Council on Historic Preservation. 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.

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.

OHP. 1995. Instructions for Recording Historical Resources. Sacramento, CA.