Kaweah Project, FERC Project No. 298

CUL 1 – Cultural Resources Archaeology Final Technical Study Report

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Southern California Edison Company Regulatory Support Services 1515 Walnut Grove Avenue, Rosemead, CA 91770

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List of Acronyms

AGOL Archaeology GIS Data Viewer

APE Area of Potential Effects

BLM Bureau of Land Management

BP Before Present
BRM Bedrock Mortar

CFR Code of Federal Regulations

CHRIS California Historical Resources Information System

CRHR California Register of Historical Resources

CRMP Cultural Resource Management Plan

DPR Department of Parks and Recreation

ERMA Extensive Recreation Management Area

FERC Federal Energy Regulatory Commission

GIS geographic information system

GPS Global Positioning System

HPMP Historic Properties Management Plan

ILP Integrated Licensing Process

kV kilovolt kW kilowatts

msl mean sea level MW Megawatts

NAHC Native American Heritage Commission

NHPA National Historic Preservation Act

NNIP Non-native invasive plant
NPS National Park Service

NRHP National Register of Historic Places

O&M Operation and Maintenance
OHP Office of Historic Preservation

PQS Professional Qualification Standards

Project Kaweah Hydroelectric Project

RSP Revised Study Plan

SCE Southern California Edison Company
SHPO State Historic Preservation Officer

SNP Sequoia National Park
SOI Secretary of the Interior
SSP Special-status plant

SUP Special Use Permit
TSP Technical Study Plan
TSR Technical Study Report
TWG Technical Working Group

U.S.C. U.S. Code

USGS U.S. Geological Survey

1 INTRODUCTION

This Technical Study Report (TSR) describes the data and findings developed by Southern California Edison (SCE or Licensee) in association with implementation of the CUL 1 – Cultural Resources Technical Study Plan (CUL 1 – TSP) for the Kaweah Project (Project). The CUL 1 – TSP was included in SCE's Revised Study Plan (RSP)¹ (SCE 2017a) and was approved by the Federal Energy Regulatory Commission (FERC) on October 24, 2017, as part of its Study Plan Determination for the Project (FERC 2017). Specifically, this report provides a description of the methods and results of record searches, review of existing literature, and pedestrian surveys for archaeological resources completed in 2018.

SCE is seeking a new license for the existing Kaweah Hydroelectric Project, FERC Project No. 298, located on the Kaweah River and East Fork Kaweah River near the community of Three Rivers in Tulare County, California (Map CUL 1-1). The Project is located on private and public lands administered by the Bureau of Land Management (BLM). The Project also utilizes non-FERC Project diversions and flowlines located within the Sequoia National Park (SNP) operated under a Special Use Permit (SUP) issued by the National Park Service (NPS). The Project consists of three developments: Kaweah No. 1, Kaweah No. 2, and Kaweah No. 3, which commenced operation in June 1899, February 1905, and May 1913, respectively. The Project has limited storage capacity and is operated in a "run-of-river" mode. The total generating capacity is 8.85 megawatts (MW).

SCE currently operates the Project under a 30-year license that was issued by FERC on January 31, 1992. The current license expires on December 31, 2021. SCE is seeking renewal of its license to continue operation and maintenance (O&M) of the Project. SCE has elected to use the Integrated Licensing Process (ILP), as defined in 18 Code of Federal Regulations (CFR) Part 5, to relicense the Project. As a component of the ILP, the Licensee consulted with a variety of Interested Parties to develop and implement Technical Study Plans (TSP) addressing resources that may be affected by ongoing O&M of the Project.² On May 24, 2017, SCE filed its Proposed Study Plan with FERC, which contained 17 TSPs addressing aquatic resources, water quality, geomorphology, special-status amphibians and reptiles, terrestrial resources, land use, recreation, and cultural resources. SCE subsequently held a Study Plan Meeting with the Interested Parties on June 21, 2017 and filed its Revised Study Plan (RSP) on September 19, 2017. On October 24, 2017, FERC approved SCE's RSP in a Study Plan Determination pursuant to 18 CFR Part 5.13(c).

The FERC-approved CUL 1 – TSP includes three study elements covering the built environment, archaeological and ethnographic resources. Originally, report findings for all three cultural resource types were to be documented in a single combined TSR. Because of the complexity of resource findings and the distinct nature of the three cultural resource types, study implementation included the development of three separate TSRs: built environment, archaeology, and ethnography. This TSR documents the archaeological study components of the CUL 1 – TSP.

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SCE filed a Proposed Study Plan (PSP) on May 24, 2017 (SCE 2017b). Three comments were filed on the PSP, however, they did not result in revisions to any of the study plans. Therefore, SCE filed a Revised Study Plan (RSP) on September 19, 2017 which stated that the PSP, without revision, constituted its RSP. The FERC subsequently issued a Study Plan Determination on October 24, 2017 approving all study plans for the Kaweah Project.

Under 18 CFR Part 5, FERC designated SCE as the Commission's non-federal representatives for carrying out informal consultation under Section 106 of the NHPA in a Notice of Intent, February 10, 2017.

1.1 Regulatory Context

This TSR was prepared as part of the Licensee's ILP FERC relicensing in order to comply with Section 106 of the National Historic Preservation Act (NHPA) (16 U.S. Code [U.S.C.] § 470f) and its implementing regulations in 36 CFR Part 800, which requires that federal agencies consider the effect of their undertakings on cultural resources. This TSR was developed on behalf of the Licensee as a component of CUL – 1 TSP and was developed in collaboration with a Cultural Resources Technical Working Group (TWG) that includes representatives from FERC, the California State Historic Preservation Officer (SHPO), the BLM, and Tribes and Tribal Representatives identified by the Native American Heritage Commission (NAHC) and through SCE's tribal outreach.

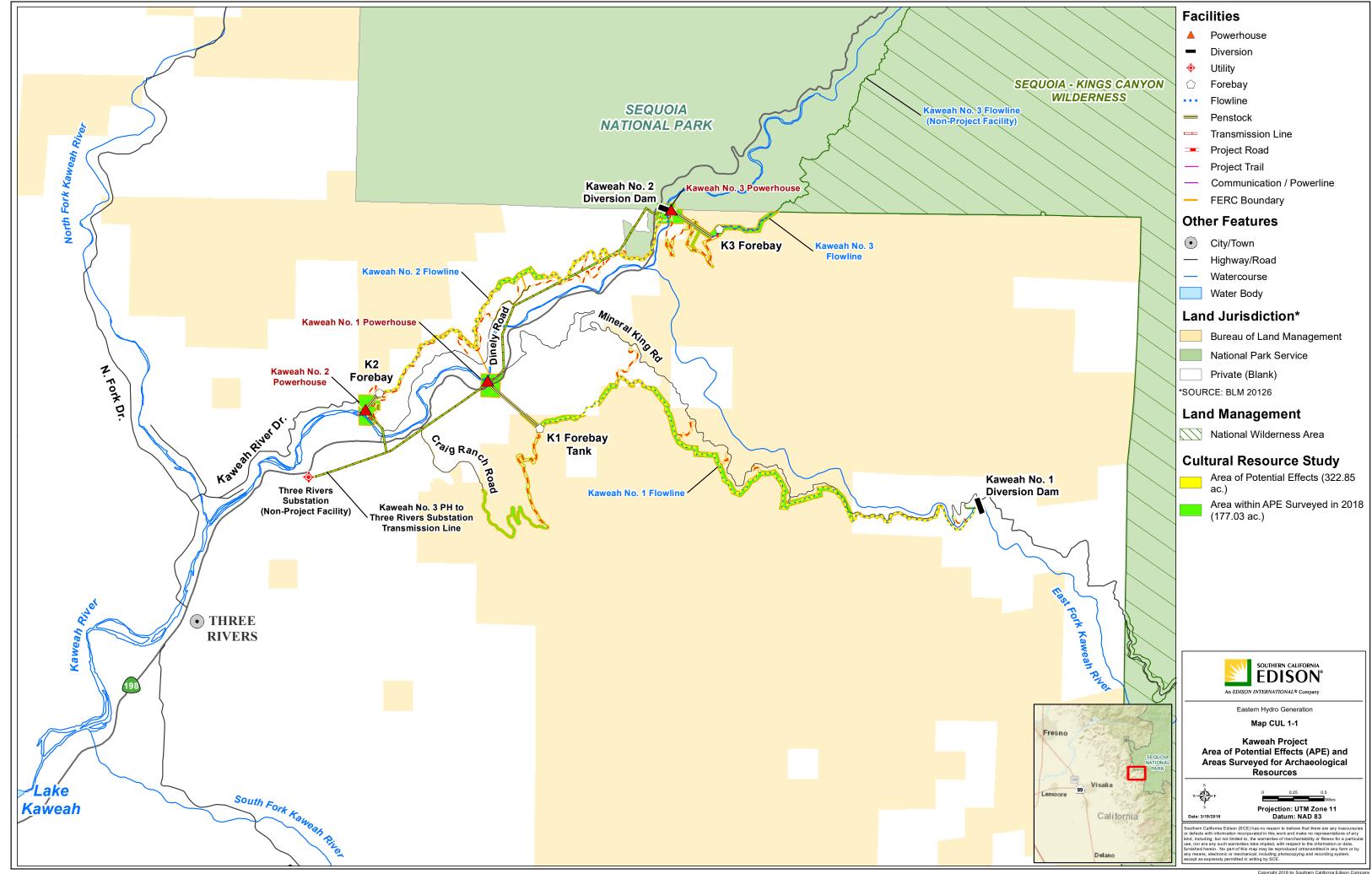
For the purposes of this TSR, and as defined in the NHPA (54 U.S.C. § 300308), a historic property or historic resource is any "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on, the National Register of Historic Places, including artifacts, records, and material remains related to such a property or resource." Following National Register Bulletin No. 36, "Guidelines for Evaluating and Registering Archaeological Properties," an archaeological site is "a location that contains the physical evidence of past human behavior that allows for its interpretation." The term archaeological site refers to sites that are eligible for or are listed on the National Register of Historic Places (NRHP) (historic properties) as well as those that do not qualify for the NRHP. Unevaluated archaeological sites are assumed eligible until determined otherwise. The term "archaeological site" or "site" will be used in this report to describe both eligible and unevaluated resources. The term "isolate" will be used to describe an isolated resource that does not constitute an archaeological site.

Archaeological sites identified within the Study Area will be evaluated for significance under the four NRHP Criteria (A-D) as part of a separate study and report undertaken as part of the TSP.

1.2 Personnel Qualifications

SCE contracted with Cardno, Inc. (Cardno) to conduct background research, fieldwork, and prepare this TSR specific to archaeological resources. All cultural technical studies were conducted under the supervision of Senior Architectural Historian and Cultural Resources Task Lead, Polly Allen (MS and 16 years of experience). Archaeological Principal Investigator Evan Elliott (MA and 13 years of experience) conducted and supervised archaeological field surveys and authored this report. Both personnel meet the Secretary of the Interior (SOI) Professional Qualification Standards (PQS) in History and Architectural History (36 CFR Part 61) and have extensive experience documenting historic properties in California. Cardno Senior Consultant and Hydro Relicensing Specialist Crystal West (BA and 16 years of experience) provided technical review, study plan coordination, and oversight. All analysis in support of this TSR was conducted under the supervision of SCE Senior Archaeologist, Audry Williams, who also meets the SOI PQS.

Cultural Resource Specialists Michella Rossi (BA and 10 years of experience), Amanda Kamp (BA and 9 years of experience), Carrie Pritchard (BA and 5 years of experience), and Ronald Johnson (BA and 10 years of experience) participated in fieldwork and provided general support for the Project. Senior Geographic Information System (GIS) Specialist Eric Lee created all mapping and graphics in this TSR.





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2 STUDY OBJECTIVES

The CUL 1 – TSP included the following objectives related to archaeological resources:

- Identify all known and currently undiscovered archaeological sites (sites) that may be potentially be affected by Project O&M activities (Phase 1).
- Evaluate newly discovered sites to determine if they are eligible for listing in the NRHP (Phase 2).

This current TSR serves to fulfill the initial objective of identifying all archaeological sites that may be affected by Project O&M activities, while the evaluation of their eligibility for listing in the NRHP will be conducted in accordance with an NRHP Evaluation Plan that is being developed as part of a Historic Properties Management Plan (HPMP) for the Project. The Draft HPMP, including the NRHP Evaluation Plan, will be included in the License Application for the Project. The identification and evaluation of built environment and ethnographic resources are covered in separate TSRs.

3 EXTENT OF STUDY AREA

3.1 Project Vicinity

The Project is located within Tulare County, surrounding the community of Three Rivers, along the Kaweah River and East Fork Kaweah River in the foothills of the Sierra Nevada Mountains. A large portion of the Area of Potential Effect (APE) (described below) is within the BLM Case Mountain Extensive Recreation Management Area (ERMA). The APE is within Township 17 South, Range 29 East, Mount Diablo Base and Meridian, extending into sections 3, 4, 5, 7, 8, 9, 14, 15, 16, 17, 37, 38, 39, and 40. The vast majority of the APE is depicted on the Case Mountain U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle, with a small portion in the west depicted on the Kaweah USGS 7.5-minute topographic quadrangle. It is located approximately 20 miles east-northeast of Visalia and 30 miles southwest of the crest of the Sierra Nevada (refer to Map CUL 1-1). Access to the APE is from State Route 198 (SR-198) and Mineral King Road.

3.2 Area of Potential Effects

The Study Area for the CUL 1 – TSP was developed in accordance with the requirements of Section 106 of the NHPA, as codified in 36 CFR Part 800, which requires FERC to develop an APE for the Project. Under 36 CFR Part 800, an APE is defined as "the geographic area or areas within which an undertaking may cause changes in the character or use of historic properties" (36 CFR 800.16[d]). An undertaking may have an adverse effect on historic properties when it directly or indirectly alters any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects can include but are not limited to: physical destruction of or damage to all or part of a historic property; alteration of a historic property that is not consistent with the SOI Standards for the Treatment of Historic Properties (36 CFR Part 68); removal of a historic property from its historic location; change of the character of the historic property's use; introduction of visual, atmospheric, or audible elements that undermine the integrity of the property; neglect of a historic property; and transfer, lease, or sale of a property out of federal ownership (36 CFR Part 800.5).

For the purposes of the archaeological inventory, the archaeological APE consists of the FERC boundary and any associated facilities outside the FERC boundary and a defined buffer area, depending upon facility type, as summarized in Table CUL 1-1 and shown on Map CUL 1-1.

Table CUL 1-1. Cultural Resource Survey Area for Facilities that Lie Outside of the Existing FERC Project Boundary

Project Facility	Survey Area
Diversion Dams and Pools	15 feet around the perimeter
Flowlines ¹	20 feet on either side
Forebays/Forebay Tank	20 feet around the perimeter
Penstocks	15 feet on either side
Powerhouses and Switchyards	Within and up to 15 feet around the perimeter fence
Transmission, Power, and Communication Lines	25 feet on either side
Gages	10 feet around gages
Project Access Roads	20 feet on either side
Project Trails	15 feet on either side
Ancillary and S	upport Facilities
Kaweah No. 1 Powerhouse Campus	Within the developed campus
Repeaters and Solar Panels	15 feet around the perimeter
River Access Parking	10 feet around parking area and beach

Notes:

Note that the APE does not include Project facilities or associated lands that are located within the boundaries of the SNP, with the exception of a small section (approximately 3.5 acres) located directly north of the Kaweah No. 3 Powerhouse and the northernmost portion of the transmission line between the Kaweah No. 3 and Kaweah No. 1 powerhouses. Project facilities located within the SNP are operated under a SUP issued by the NPS and are not under FERC jurisdiction.

A broader record search research buffer surrounding the Project APE was added to aid in study development. As defined in the TSP, the Study Area was synonymous with the APE for the Project, which was proposed in the TSP to include, "All Project facilities and lands located within the existing FERC Project boundary and any other lands where O&M is conducted." Upon implementation of the CUL 1 – TSP, the Study Area was expanded to include an additional 1-mile Record Search Study Area surrounding the APE to aid in study development and contextual research.

Footbridges, wildlife bridges, and wildlife escape ramps are located on Project flowlines and will be surveyed concurrently with the flowlines.

4 STUDY APPROACH

4.1 Research Methods

Qualified personnel under the SOI PQS conducted background research using a series of research methods. First, a record search was performed to gain an understanding of the known cultural resources within the APE and within a 1-mile radius surrounding the APE. Second, a broader regional context of the area was investigated using existing literature. This information was used to guide identification of archaeological resources and site types. Finally, a field pedestrian survey was conducted to ground-truth and record the condition of known resources as well as identify new resources.

4.1.1 Record Search

On February 13, 2018, a record search was conducted using SCE's Archaeology GIS Data Viewer (AGOL), a database comprised of previous cultural resources and previous cultural studies obtained internally from SCE, neighboring U.S. Forest Service lands, and the California Historical Resources Information System (CHRIS), Southern San Joaquin Valley Information Center (SSJVIC). SCE maintains a subscription to the SSJVIC and receives updated data every six months. Additionally, a record search at the BLM Field Office in Bakersfield, California, was performed by BLM Archaeologist, Amy Girado. The search area consisted of the Project APE and a 1-mile search radius around the APE. Together, these record searches reviewed the following sources:

- Previously recorded sites; and
- Reports of previous studies.

See Appendix A for results of the record searches.

4.1.2 Background Research

In addition to the record searches, additional data sources were reviewed to guide the field survey. These sources included:

- California Historical Landmarks;
- NRHP listings;
- California Register of Historical Resources (CRHR);
- Office of Historic Preservation (OHP) Historic Properties Directory;
- Huntington Library Southern California Edison Online Archives;
- General Land Office plat maps;
- USGS topographic quadrangles (USGS and ESRI 2018); and
- County historical maps.

4.1.3 Literature Review

A variety of archival sources were consulted to provide information on the general context of the wider Kaweah River watershed and to inform the identification and recordation of both prehistoric and historicera archaeological sites.

- Anthrohub, the electronic database of journals and monographs produced by the Department of Anthropology at University of California Berkeley since 1896;
- Phoebe A. Hearst Museum of Anthropology archives;

- Academia.edu;
- Research Gate:
- Sacramento State University Library;
- Huntington Library SCE collection;
- Internet Archive (Archive.org);
- Online Archives of California;
- Google Books; and
- Cardno archives.

4.2 Survey Methods

Pre-field records and data were collected as well as compiled spatially on field maps from SCE's AGOL database, record repositories, background research, and existing literature. Any areas that had been subject to pedestrian survey within the past ten years were excluded from the current survey (per SHPO and BLM standards).

Pedestrian surveys were implemented in all previously un-surveyed areas within the APE, excluding areas that were unsafe due to excessively steep slopes and/or covered by dense, impenetrable vegetation. Survey methods conformed to BLM protocols and the BLM Manual (BLM 2004), which adjusted the survey transect width from 30-meter transects in the original TSP to 15-meter-wide transects. For areas that allowed for intensive pedestrian survey, the APE was walked in evenly spaced transects, while the ground surface was examined for objects and features that might show evidence of archaeological resources. Although the field crew did not conduct any ground-disturbing activities, periodic boot scrapes were used to remove surface vegetation to observe the soils beneath. Spoils of rodent burrows and road cuts were also examined for signs of artifacts or anthropogenic soils.

General or cursory visual survey assessments were utilized in areas where physical obstructions (e.g., steep slopes, dense brush) and/or visual constraints (excessive grass or duff cover) precluded complete survey coverage. Additionally, portions of the APE were spot-checked where intact archaeological resources were unlikely due to natural disturbances such as stream channels where erosional effects would occur during high-flow events.

The plotted locations of previously identified archaeological sites were revisited to determine the accuracy of site location, update site condition, and record any new features or artifacts. Isolates were not revisited. If, upon further background investigation of site record descriptions, sites were determined to be outside of the APE, they were not revisited. Previously identified sites that were adequately recorded were updated, documenting any changes to the site. All site boundaries and feature locations were mapped with a portable sub-meter global positioning system (GPS) unit.

All previously identified and newly identified archaeological resources were recorded at minimum on Department of Parks and Recreation (DPR) 523 forms, with a primary record if the site had been recorded adequately. For new sites and inadequately recorded sites an archaeological record, linear feature record, location map and where warranted, milling feature records, rock art records, artifact records, sketch maps, and continuation sheets were completed.

4.2.1 Potential Archaeological Resource Types

With a varied ecological environment, abundant resources, and long-term occupation of the APE vicinity, it would be expected that diverse types of archaeological resources would be present within the Study Area. Based on the review of previous records and contextual research, the following site types are anticipated in the Kaweah River watershed and Southern Sierra Nevada, including but not limited to the following:

- Prehistoric/protohistoric (Native California resource procurement, processing and habitation) resource types:
 - Milling features and associated artifacts (bedrock milling stations, portable milling slabs, hand stones);
 - House pits;
 - Lithic and ceramic concentrations;
 - Midden deposits;
 - Trails;
 - Groundstone and toolstone quarries; and
 - Stacked rock features such as cairns, acorn granaries, and hunting blinds.

Historic-era resource types:

- Residential sites;
- Foundations and tent flats;
- Privies:
- Refuse dumps;
- Industrial remains of mining and timbering activities;
- Agricultural resources;
- Transportation resources;
- Construction camps; and
- Other resources related to the construction or operation of the Kaweah Hydroelectric Project.

As stated earlier, built environment and ethnographic resources were inventoried and documented as part of separate TSRs; please refer to those reports for specific site types associated with those resources.

5 STUDY RESULTS

5.1 Records Search Results

The SCE's AGOL database, record repositories, and BLM record searches identified 126 previously-known cultural resources within a 1-mile radius of the APE, including the Kaweah Hydroelectric System Historic District and its contributing features, which are addressed in the CUL 1 – Built Environment TSR³. Appendix A, Table A-1 provides the complete list of resources, including primary and trinomial numbers, description of the resource, eligibility status, year recorded and proximity to the APE. Forty-two of the previously-known archaeological resources identified in Appendix A, Table A-1 are within, partially within, or adjacent to the APE, and 83 archaeological resources are located outside the APE.

Table CUL 1-2 summarizes the previously-known archaeological resources that are within, partially within, or adjacent to the APE. Specifically, 30 resources, including 2 on BLM property, were found to be within or partially within the APE, and 12 abut or are adjacent to the APE.

Table CUL 1-2. Previously-Known Archaeological Resources Within, Partially Within, or Adjacent to the APE

Resource Type	Number of Resources	NRHP Eligibility Status	
Prehistoric	12	2 Eligible, 10 Unevaluated	
Historic-era	29	28 Unevaluated, 1 Eligible	
Multi-component	1	1 Eligible	

The SCE's AGOL, record repositories, and BLM record searches identified 76 previous cultural resource studies (completed within the last 10 years or up to current survey standards) within a 1-mile radius of the APE. Appendix A, Table A-2 provides the complete list of studies, including report number, author, title, year, resources identified, and proximity to the APE. Thirty-one of the studies are within or partially within the APE, 3 either abut or are adjacent to the APE, and 42 are located outside of the APE.

The entire APE was surveyed in 1989 by SCE Archaeologist, Tom Taylor, as part of the previous relicensing effort; however, due to the antiquity of this survey and potential that survey conditions have changed, it was not included in the current study. Other notable surveys that have occurred within the FERC boundary/APE within the last 10 years include District 6 Caltrans Cultural Resource Inventory of Hwy 168 (Leach-Palm et al. 2010) and numerous small cultural resource surveys for Kaweah Project O&M (Parr 2008, 2009). Pacific Legacy, Inc. surveyed the entirety of Kaweah No. 1 and No. 2 flowlines in 2010, updated existing site records, and recorded new resources within the APE (Kovak and Jackson 2012). Most recently, the BLM conducted cultural resource surveys along the Craig Ranch Road (Kaweah No. 1 Forebay access) as part of the Case Mountain ERMA Lower Trails and Routes Survey (Crosmer 2017, Whitley and Girado 2016).

A total of approximately 146 acres of the roughly 323-acre APE was previously surveyed for archaeological resources in the last 10 years, leaving 177 acres remaining to be surveyed as part this TSR.

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The Kaweah Hydroelectric System Historic District is not an archaeological resource and is therefore not included in the resource counts or discussion in this TSR. There are a total of 125 previously-known archaeological resources discussed in this report.

5.2 Environmental Context

5.2.1 Natural Setting

The Project APE is located in the lower elevations of the Southern Sierra Nevada mountain range in Tulare County, entirely encompassed by the Kaweah River watershed and specifically located along Kaweah River and East Fork Kaweah River in a southwest-trending river drainage. Elevations range from approximately 2,660 feet above mean sea level (msl) at the Kaweah No. 3 Forebay to approximately 970 feet msl near Kaweah No. 2 Powerhouse. The floor of the San Joaquin Valley lies approximately 10 miles southwest, and the Kaweah-Kings Divide and Great Western Divide lie approximately 15 to 20 miles east, separating the area from the Kings River and the Eastern Sierra Nevada watersheds. The region is characterized by deeply incised canyons cut by rivers, as well as narrow valley floors along both sides of the Kaweah River. Mediterranean climate defines the area and vegetation, consisting of hot, dry summers and cool, wet winters. Most of the precipitation from westbound storms during the winter months falls between 5,000 and 9,000 feet in elevation, generally producing ample snowpack to provide water to the lower elevations via river corridors (Schoenherr 1992).

5.2.2 Geology

The Sierra Nevada Mountains are formed from a large granite batholith and metamorphic prebatholithic rocks. Prebatholithic rocks are remnant rocks that have not been eroded and are composed of Paleozoic-age metasediments, such as quartzite, marble, slate, and schist, as well as metavolcanic rocks. The current state of the Sierra Nevada mountain range has been influenced by such factors as glaciation, as well as chemical and mechanical weathering of the granitic rocks (Schoenherr 1992). Geologic mapping indicates that the APE and the surrounding area rest on the Mesozoic-aged granitic batholith, while the northeastern portion of the APE is located over an intrusive plutolith of undivided pre-Cenozoic granitic and metamorphic rocks. A small portion west of the Kaweah No. 2 Powerhouse sits on Quaternary alluvium and marine deposits. Rock types common to the APE include quartz monzonite, granodiorite, quartz diorite, and gneiss (Gutierrez et al. 2010). Local soils are generally shallow to moderately deep and filled with rock outcrops. These soils include the Vista-Rock outcrop complex, Cieneba-Rock outcrop complex, Sheephead-Rock outcrop complex, Walong-Rock outcrop complex, Blasingame-Rock outcrop complex, as well as small areas of Walong sandy loam and Blasingame sandy loam. These soils are characterized as coarse to fine sandy loams formed from material weathered from granitic rock, gneiss, and other metamorphic and igneous rocks on mountainsides. All identified soils predate the Quaternary epoch (Meyer et al. 2010: Appendix C; U.S. Department of Agriculture Soil Conservation Service 2006).

5.2.2.1 Geoarchaeological Sensitivity

Although no geoarchaeological testing or area-specific analysis was completed for this investigation, overview reports contain information that can be used to gage a basic level of buried site sensitivity. Meyer et al. (2010) created a geoarchaeological sensitivity model that included both Tulare County and the Project APE. The vast majority of the APE is characterized as having a very low buried site sensitivity due to the relatively old soils and lack of significant deposition since the beginning of the Holocene. Small portions of the APE along the Kaweah River are rated as having a low to moderately low buried site sensitivity (Meyer et al. 2010: Map 2, Appendix C).

5.2.3 Flora and Fauna

The Project vicinity spans several ecoregions and vegetation communities. The majority of the APE falls within the Southern Sierran Foothills ecoregion, while the northern and eastern portions extend into the Southern Sierra Lower Montane Forest and Woodland ecoregion (Griffith et al. 2016). The Southern Sierran Foothills ecoregion represents a transitional zone between the Central Valley and the Sierra

Nevada regions. It contains multiple vegetation communities, with oak savannas present in the southwestern portion of the APE, particularly in areas with southern exposure.

The Sierra Nevada Foothills ecoregion is lower in elevation, warmer, and drier than the adjacent Southern Sierra Lower Montane Forest and Woodland. The oak woodlands and chaparral-covered hills of the low elevations transition to forest and woodlands dominated by ponderosa pine. The vegetation community for this area consists of a blue oak woodland, dominated by an intermittent canopy of blue oak (*Quercus douglasii*) and grey pine (*Pinus sabiniana*) over an understory of dispersed shrubs, including manzanita (*Arctostaphylos* spp.) and poison oak (*Toxicodendron* diversilobum) (California Native Plant Society 2018). Ground cover vegetation consists mainly of forbs and annual and perennial grasses, including soaproot (*Chlorogalum pomeridianum*). Riparian corridors cut through the blue oak woodland and contain interior live oak (*Quercus wislizeni*) and California laurel (*Umbellularia californica*), while the edges of the Kaweah River itself alternates between riparian vegetation and eroded boulder and cobble fields (Schoenherr 1992).

Local fauna typical to this region include mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), black bear (*Ursus americanus*), mountain lion (*Puma concolor*), spotted skunk (*Spilogale*), gray fox (*Urocyon cinereoargenteus*), ring-tailed cat (*Bassariscus astutus*), ground squirrel (*Spermophilus beecheyi*), brush rabbit (*Sylvilagus bachmani*), king snake (*Lampropeltis getula californiae*), and western rattlesnake (*Crotalus oreganus*) (Storer and Usinger 1963).

5.3 Cultural Context

The cultural context provides a framework for identifying and classifying resources during the TSP inventory phase. The context will also aid in determining appropriate research questions and guide the evaluation plan (TSP evaluation phase) in order to determine eligibility of identified archaeological sites within the APE. The context is divided into regional prehistoric, ethnographic, and historic contexts to better understand site types and their relationship to regional and temporal trends.

5.3.1 Regional Prehistoric Context

There is a lack of well-developed chronological sequences for the vicinity of the APE due to the paucity of major archaeological excavation in the southern Sierra Nevada low-elevation region. Thus, any discussion of the prehistory of this region will necessarily draw from the work done in the adjacent portions of the Sierra Nevada and the Central Valley. Archaeological investigations within the Sierra Nevada have historically focused on Lake Tahoe, Kings Canyon, Stampede Reservoir, and Yosemite National Park, among numerous river basin and reservoir surveys (Moratto 1984, Hull and Moratto 1999). The closest cultural chronology is likely that developed by Garfinkel et al. (1980) for the High Sierra based on a series of investigations along the Pacific Crest Trail. However, this was across the Great Western Divide from the APE and has been tied to a different ethnolinguistic group, the Tübatulabal, while the APE is within an area associated with the Monache and the Foothill Yokuts. As no comprehensive system equivalent to the Central California Taxonomic System has been developed and no regional chronology has been proposed, the regional prehistory is organized into a modified geologic system consisting of the Pleistocene-Holocene Transition (between 15000 and 10000 before present [BP]), the Early Holocene (between 10000 and 7000 BP), the Middle Holocene (between 7000 and 4000 BP), and Late Holocene (between 4000 and 150 BP).

5.3.1.1 Pleistocene-Holocene Transition

Little is known of the southern Sierra Nevada at the end of the Pleistocene and beginning of the Holocene epochs. During this period, the climate began a significant shift, as temperatures warmed, leading to increased precipitation and glacial melting. The earliest human populations appear in Tulare County in the San Joaquin Valley at least as early as 12000 BP, but there are no resources identified in the Sierra Nevada until approximately 10000 BP (Hull 2007). This period is referred to as the Paleoindian Period in

the San Joaquin Valley, drawing off Fredrickson's modifications to the Central California Taxonomic System (Rosenthal et al. 2007). These early inhabitants are primarily represented by wide-stemmed projectile points that tie them to the Western Pluvial Lakes Tradition and the Western Stemmed Tradition. The San Joaquin Valley is a semi-arid steppe environment; thus, occupation was focused primarily near the resources from rivers and lakes formed by snowmelt of the Sierra Nevada and melting glaciers of the Early Holocene period (Rondeau et al. 2007; Rosenthal et al. 2007). It is not clear how the lower slopes of the southern Sierra were used, if at all, during this period, and human occupation appears to have been focused around the margins of lakes and wetlands (Rondeau et al. 2007).

5.3.1.2 Early Holocene

The dramatic climate changes at the end of the Pleistocene accelerated the development of alluvial fans and floodplains during the Early Holocene (between 10000 and 7000 BP). This resulted in a large amount of soil accumulation between the late Pleistocene and early Holocene. A second episode of fan and floodplain deposition occurred at the beginning of the Middle Holocene, around 7500 BP, presumably washing away many sites in the Sierra foothills, and covering the majority of earlier archaeological resources in the Central Valley. Investigations of foothill sites dating to this period show abundant milling equipment and charred nuts and seeds, indicating a reliance on acorns and pine nuts. The one well-documented site in the San Joaquin Valley, CA-KER-116, contained hunting tools as well as dietary faunal remains, radiocarbon dated to between 9125 and 8400 BP (Rosenthal et al. 2007). The presence of large projectile points and atlatl spurs in Early Holocene deposits suggests a focus on hunting deer, elk, and pronghorn antelope. Together, these suggest that people moved seasonally between valley hunting areas and upland nut harvesting camps (LaJeunesse and Pryor 1996; Rosenthal and McGuire 2004; Rosenthal et al. 2007).

5.3.1.3 Middle Holocene

During the Middle Holocene a warmer climate developed, leading to the shrinking and evaporation of pluvial lakes in the San Joaquin Valley (Rosenthal et al. 2007). By 6000 BP, stone slabs appear for milling seeds in the lower areas and milling pine nuts in the upper elevations, possibly by the same populations. In the High Sierra, McGuire and Garfinkel found evidence pointing to the exploitation of pine nuts and higher elevation areas by people based in valleys along watercourses (1980). Pinto-series points are a common artifact in upper elevation areas and are generally manufactured from fine-grained basalt. This material may have been traded in from outside the Sierra. Large game hunting may have been an additional reason for people to use the Sierran high country (McGuire and Garfinkel 1980).

5.3.1.4 Late Holocene

In the Late Holocene (between 4000 and 200 BP) villages in lower elevations were used for most of the year, while higher elevation people lived in larger camps part of the year while harvesting pine nuts before dividing into smaller groups and living in hunting camps (Moratto 1984). Some evidence suggests that beginning around 4000 BP the settlement-subsistence patterns of central and southern Sierra Nevada can be divided into two traditions: Foothill Tradition and Valley Tradition (Fredrickson 1994:102-103; Rosenthal and McGuire 2004:161-163; Rosenthal et al. 2007). Artifact assemblages typical of the Foothill Tradition include flaked and ground stone tools, narrow concave base darts, and notched, stemmed, and thick-leaf projectile points. Bone and shell artifacts, beads, and ornaments are rare, with tabular pendants, incised slate, and perforated stone plummets slightly more common (Basgall and Hildebrandt 1989; Rosenthal and McGuire 2004; Rosenthal et al. 2007; Sundahl 1992; Wiberg 1992). Overall, assemblages seem to reflect a focus on acorn and pine nut processing (Rosenthal et al. 2007). A regional study by Stevens (2002) in areas of the southern Sierra Nevada to north of the APE suggests that bedrock mortars (BRM) become the dominant milling technology in the mid-elevations around 2500 BP. This continued to a peak usage around 1,500 years ago, while in the higher elevations mortars

proliferate between 1000 and 500 BP. This may represent the ancestors of the Monache coming into the eastern slope of the Sierra to exploit acorns (Stevens 2002). The population of the Sierra Nevada increased substantially by 1500 BP as shown by an increase in the number of large pine nut gathering camps and BRM stations. The bow and arrow enters the area around this time, signaled by smaller, triangular projectile points. This technology may have been brought by newer Penutian-speaking populations related to the Yokuts of the ethnographic period. The last several centuries before European contact are marked by increasing populations and increasing use of the higher elevations, as well as the introduction of brownware ceramics from Owens Valley to the east, likely by the early Monache (Hull 2007; Moratto 1984). The Kaweah River may have been the entry point for the Monache into the Sierra's western slope, marked by the early appearance of brownware ceramics around 500 BP (Moratto 2011).

5.3.2 Regional Ethnographic Context

The Kaweah Hydroelectric System occupies an area that lies within the westernmost traditional territory of Western Mono or Monache ethnolinguistic group, and near the traditional territory of the Foothill Yokuts ethnolinguistic group. Specifically, in the vicinity of the APE, there were two separate Mono-speaking groups, the Patwisha (also Padwishe) on the Middle Fork of the Kaweah River and the Waksachi on the North Fork into Eshom Valley (Gayton 1948; Golla 2011:151). Mono is a cluster of closely related dialects spoken by people on both sides of the Sierra Nevada at the southern end of the Western Numic dialectic continuum, belonging in turn to the Numic branch of the Uto-Aztecan language family (Golla 2011:171). The Wukchumni Yokuts (also Wikchamni), on the other hand, were speakers of the Tule-Kaweah dialect of the wider Yokuts language spoken throughout the San Joaquin Valley. Yokuts is part of the Penutian language phylum. The Tule-Kaweah dialect may have been influenced by its speakers' extensive contact with speakers of the Mono language (Golla 2011:147-148). Despite speaking languages from different families, the Monache and the Foothill Yokuts had a close, although not always friendly, relationship (Gayton 1948:55; Golla 2011:151).

Generally, the boundary between the two ethnolinguistic groups along the Kaweah River is placed around the confluence with the South Fork Kaweah River, where the mixed Wukchumni-Patwisha village of *hotnu'nyu* was located (Gayton 1948:56, 59). However, boundaries such as this were not firm, and there was apparently freedom of movement both within and across customary tribal boundaries without it being a major offense, and hunting and seed gathering activities were conducted across them (Gayton 1948:55; Von Werlhoff 1961:3). The Wukchumni traveled into Patwisha territory to hunt wild pigeons and sold the Patwisha the tule house mats that they brought with them (Gayton 1948:74).

Gayton (1948:1-2) suggested that the cultural similarities between the Monache and the Foothill Yokuts was due to a gradual adoption of Yokuts customs by the Monache. Notable among these customs was a patrilineal social organization, social groups linked to a home territory or central village, and particular ceremonies, as well as particular technologies, such as thatched houses. This certainly was not a unidirectional process; for instance, ceramic brownware pottery technology was almost certainly introduced from the Monache to the Foothill Yokuts. It is also not clear how much this was a product of the historic-era displacement of Yokuts people from the valley, but ultimately this trend and the influx of Euro-American colonists led to the disappearance of the Patwisha as a separate cultural identity (Gayton 1948:55).

The basic social and economic group of both Foothill Yokuts and the Monache was the family or household unit, with the nuclear and/or extended family forming an extended social unit. These basic units combined into distinct, named villages or hamlets (Gayton 1948, Spier 1978b). Among the Foothill Yokuts, these families then formed lineage groups, important political and economic units that combined to form tribelets. Leaders and their assistants and messengers exercised political control over tribelets as part of a dialect tribe, but their power was limited. These tribelets were centered on a principal village (Spier 1978b). Too little is known regarding the Patwisha social structure to know if their social structure closely mirrored that of the Foothill Yokuts and the Waksachi, or if they had a system like the North Fork Mono on the upper San Joaquin River. Rather than principal villages and smaller secondary villages and

resource camps, the North Fork Mono instead lived in a loosely knit collection of hamlets, each containing a small group of dwellings (Gifford 1932:17-19).

Subsistence activities of both the Foothill Yokuts and Monache included hunting, fishing, and collection of plant resources, particularly acorns. A variety of flaked and ground stone tools (e.g., knives, arrow and spear points, and shaped pestles), the plain and sinew-backed bow, and baskets were common. This area was an important link in a trade network that extended from the Pacific Ocean over the Sierra into the Great Basin. Within the Sierra Nevada, the Monache were important traders, acting as the intermediaries between the Yokuts and the Owens Valley Paiute (Eastern Mono). Obsidian, sinew-backed bows, moccasins, rock salt, pine nuts, and pinewood hot-rock lifters traveled west, while shell-bead money and finely made baskets traveled east (Gayton 1948:2, 56).

Likely due to resource availability more than any preference, there was a divide between the Wukchumni and the Patwisha when it came to their living structures. The Wukchumni built round, partially subterranean thatched houses. The thatched tule house was rarely used by the Patwisha, who instead generally used brush and bark house coverings equally (Gayton 1948:63, Spier 1978a:430). Each group surrounded their villages with shade arbors, acorn granaries, drying racks and other small structures (Gayton 1948:161, Spier 1978a:431).

Euro-American contact with Native American groups living in the California Central Valley began during the last half of the eighteenth century. At this time, the attention of Spanish missionaries shifted away from the coast, and its dwindling Native American population, to the missionization of interior populations including the Yokuts. The efforts of the Spanish to missionize the Native American population began a history of destructive Euro-American interactions with Native Americans that eventually led to the loss of traditional Native American culture. Around 1830, American trappers from the north brought an epidemic, probably malaria that killed over 75 percent of the natives of the San Joaquin Valley over a span of three years (Cook 1976). One result was that Coastal and Central Valley populations fled into the foothills, only to be caught in a new Euro-American influx during the Gold Rush.

5.3.3 Historic-Period Development Context

Although the California coast was explored primarily by Spanish expeditions in the 16th and 17th centuries, the interior regions remained untouched by European influence until 1769 when Franciscan missionaries and colonists led by Father Junípero Serra traveled overland to the site of present-day San Diego to begin establishing a coastal mission system. Missionary Father Garcés traveled the southern San Joaquin Valley up the east side of Tulare Lake. The first Spanish explorers to reach the Kaweah River were likely the party led by Gabriel Moraga in 1806, passing though the lower extents of the river near Visalia (Beck and Haase 1974, Berryman and Elasser 1966, Rawls and Bean 1993). Over the next half-century, 21 missions were established in the coastal strip from San Diego to Sonoma (Beck and Haase 1974). The primary effect of the Spanish occupation on the Kaweah River region would likely have been an influx of neophytes fleeing the missions and coastal ranches, as well as military raids into the interior to retrieve neophytes and to punish livestock raiding by Yokuts (Berryman and Elasser 1966).

By 1821, Mexico gained independence from Spain, began secularizing the mission system, and sought to further governmental rule over Alta California through a land grant system. As the "ranchos" grew in size and number, the demand for cheap labor grew and the rancho owners began to press the local native populace into service. As a result, hostilities between the tribes and ranchers and Mexican government intensified greatly (Castillo 1978:105). By the 1820s, the interior tribes including the Yokuts went on the offensive, engaging in active guerilla warfare (Castillo 1978:106, McCarthy 1993). As the interior peoples were beginning to resist the European newcomers with some success, they were overcome in 1830–1833 by a widespread and devastating epidemic often thought to have been malaria brought by American or British fur trappers. Due to the many demographic changes during this period and the depredations of the colonists, there was considerable restructuring of the tribal communities, who were dislocated from many of their home territories (Cook 1976).

During the 1840s, the potential natural wealth and strategic position of California became clear to the U.S. Government. The U.S. acquired California as a U.S. territory under the 1848 Treaty of Guadalupe Hidalgo, which ended the Mexican-American War (Rawls and Bean 1993; Castillo 1978:107). At that time the native population, despite the demographic catastrophe from disease and displacement, still outnumbered the non-Indian population in the state (Cook 1976). This ratio changed rapidly following the discovery of gold in the foothills of the Sierra Nevada in 1848. The entry of tens of thousands of miners, adventurers, and entrepreneurs during the Gold Rush period dramatically altered the circumstances of native peoples already stressed by the previous decades of Spanish and Mexican contact. The effects were particularly brutal on the interior tribes that had previously been somewhat removed from the effects of colonization and were among the few remaining relatively untouched native peoples in California (Castillo 1978). Despite the large influx of miners and settlers into the Sierra Nevada, the Kaweah River watershed was located south of the Mother Lode and did not see the creation of new towns and large gold mining operations. After California statehood in 1850, the Kaweah River Delta was considered for a military post for actions against Native Californians raiding into San Luis Obispo County to the west.

Considerable conflict between Native Californians and early settlers in the area surrounding Visalia began in 1850 when John Wood and a party of 15 men attempted to settle in a location about 7 miles west of Visalia. The settlers were warned to leave within 10 days by Francisco and his tribe, but they ignored the warning and were brutally murdered on the 10th day. Major James D. Savage, who is most known for the "discovery of Yosemite" and keeping a staff of Native Californians, avenged the massacre and was instrumental in provoking the "Indian Wars" during 1850-1851 that erupted in the foothill region between Yosemite (Merced River) and Kaweah or "Four Creeks" area (Beck and Hasse 1975 and Berryman and Elasser 1966).

The first known non-Native Californian settler (who survived) along the Kaweah River above Lemon Cove was Hale Dixon Tharp, who settled in 1856 near its confluence with Horse Creek, now under Lake Kaweah. Tharp's friendly relationship with the local tribe benefited him as they showed him the region, including bringing him to sequoia groves and mountain meadows, where he ultimately established a cattle ranch in the Giant Forest, now part of the SNP. At the time, Tharp noted that there were still over 2,000 Native Californians living along the river above Lemon Cove. During the 1860s, others settled along the various forks of the river and claimed large areas of land under the Homestead Act of 1862, although their population remained small (Berryman and Elasser 1966). This ushered in a period of logging, mineral exploration, farming, and ranching activities in the Kaweah River watershed. Logging and ranching, especially the grazing of sheep, resulted in extensive environmental degradation. Between 1873 and 1882, galena and silver were mined in the Mineral King area, above the APE along the East Fork Kaweah River. These mining operations ceased when the silver ore was found to be difficult to smelt profitably. However, the residents soon focused their attention on the ideal agricultural environment of the lower Tulare County region (Berryman and Elasser 1966).

In 1884, a group of socialist utopians founded a colony on the North Fork of the Kaweah River, called the Kaweah Cooperative Commonwealth, generally called the Kaweah Colony. The colony selected 53 timber claims between the Middle, Marble, and North Forks of the Kaweah, totaling 12,000 acres. At its height, 500 people were members of the colony, with up to 300 members and their families living at the colony settlement of Arcady (later called Haskell's Bluff). The Kaweah Colony had a lasting effect on the region as the members constructed roads throughout the region to reach their timber claims and to bring lumber to a plane at the mill. By 1890, the road was complete and a mill was in operation, but the same year Congress established SNP, invalidating the colony's timber claims. This proved to be the end of the colony, and by 1892 it had been disbanded and most of the colonists had left the area (Berryman and Elasser 1966). The road built by the colonists was extended by the U.S. Cavalry under the command of Captain Charles Young, at the time the only African American commissioned officer in the U.S. Army. Until 1927, this road was the only vehicular access to SNP, when the Generals Highway opened, bringing

most visitors to the Park through the Ash Mountain entrance, adjacent to the APE (Berryman and Elasser 1966, NPS 2017).

Following the completion of Generals Highway, tourism related to the SNP became the primary economic focus of Three Rivers, while some ranching and timbering continued in the surrounding area. Small hotels, motels, cabins, and other recreational facilities developed along SR-198, allowing tourists to stay near the entrance to the park and to visit the sequoia groves. At the same time, people from other areas of California built vacation homes in the region. In the 1960s, the Catholic Church built a retreat in Three Rivers, above Craig Ranch Road and Salt Creek (Sierra Business Council 2018).

5.3.3.1 Kaweah Hydroelectric System

The growth of the agricultural sector in the Kaweah Delta at end of the 19th century required an economic source of power to operate wells for irrigation purposes. The Kaweah Project was unusual in this regard. being specifically developed to provide power for electric agricultural pumps rather than for urban lights or electric trolley systems. The Tulare District Company, the Kaweah River Water Association, and the St. John River Water Association were formed after the Passage of the Wright Act in 1887, allowing agricultural communities to form irrigation districts. These districts divided the waters of the Kaweah River between them, leading some farmers to invest in wells with powered pumps. As gasoline pumps were expensive to run, a group of local businessmen, including Ben Maddox, Albert Wishon, and William Hammond, formed the Mount Whitney Power Company to develop hydroelectric power for pumps. This new company brought on engineer Robert McF. Doble to design the project and began construction of the Kaweah Project in 1898, with water diverted from the East Fork of the Kaweah River through tunnels and along a redwood flume to provide the first powerhouse with an impressive 1.300 feet of head. A telephone line was installed along the flowline for communication, with storehouses every mile to contain tools and supplies to make any necessary repairs to the flume. At the end of the flowline near the top of the penstock was the flumetender's house. This portion of the Kaweah Project, the Kaweah No. 1 Development, was completed in nine months, beginning service in 1899 (Lehman et al. 1990:7-14, Taylor 1992).

Despite the presence of power, the market was slower to develop, as many farmers were originally not convinced of the potential of the technology. Wishon purchased electric pumps and provided them to farmers on credit with no down payment, leading to over 700 subscribers by 1900. This spurred the use of electric pumps in Tulare County agriculture and the general use of the Mount Whitney Power Company's electricity. To make the water flow more consistent, the company began damming highelevation lakes above Mineral King, with three small lakes dammed by 1905. At the same time, they began construction of the Kaweah No. 2 Development, also completed in 1905, with three 500-kilowatt (kW) generating units (Lehman et al. 1990:15-20). Soon afterward, the SOI granted permission for hydroelectric development in the SNP, in exchange for the Mount Whitney Power Company building roads in the park for use by park officers and the public. The construction also required a permit for the portions of the system in what was then Sierra National Forest. A final, permanent permit was granted in 1912, superseded by a Federal Power Commission license in 1924. The flowline for this final component in the Kaweah Project, the Kaweah No. 3 Development, differed from the other two, with single-slab and double-slab concrete construction in place of redwood framing. L-shaped slabs were formed at a construction yard above the confluence of the main fork and the Marble Fork of the Kaweah River, and transported into place along a double track tramway. Kaweah No. 3 was completed in 1913 (Lehman et al. 1990:20-24; Taylor 1992).

The Mount Whitney Power Company operated the Project until 1916 when it was purchased by Henry Huntington's Pacific Light and Power Company, which merged with SCE in 1917 (Lehman et al. 1990;26). For further information regarding the historic-period development of the Project, please refer to the CUL 1 – Built Environment TSR.

5.4 Results of Pedestrian Survey

Over the course of two rotations in May and June 2018, Cardno archaeologists surveyed approximately 177 acres of the APE (Table CUL 1-3). Cursory visual assessments were conducted in areas where physical obstructions (e.g., steep slopes, dense brush) and/or visual constraints (excessive grass or duff cover) precluded complete survey coverage. This included a majority of the survey area above and below Kaweah No. 1 and Kaweah No. 3 flowlines that were not cleared of vegetation as part of routine O&M. Additionally, portions of the APE were spot-checked where intact archaeological resources were unlikely due to natural disturbances such as rocky island areas within the Kaweah River stream channel near all three powerhouses where erosional effects and cyclic deposition occur regularly during high-flow events.

Table CUL 1-3. Survey Acreage

Project APE Acres (Total)	Acres Previously Surveyed	New Survey Acreage		
322.85	145.82	177.03		

5.5 Relocation and Condition Assessment of Previously Recorded Archaeological Resources within the APE

The record search conducted on SCE's AGOL database, record repositories, and at the BLM identified 125 previously-known archaeological sites within a 1-mile radius of the APE⁴; where 42 of these were identified either within or adjacent to the APE and 83 are located outside of the APE (Appendix A).

Of the 42 identified sites within, partially within, or adjacent to the APE, 31 were relocated and revisited as part of this study. Of these 31 relocated sites, a total of 16 sites were updated or recorded with new locational and site information. Two previously recorded sites were combined with another site under one record, resulting in a total of 14 updated site records. Site P-54-001479 was combined with P-54-004596 and site P-54-004739 was combined with P-54-004756. All site records identified within the APE, plus updated site records are included in Appendix C. Updated site records will, upon final completion of this report, be submitted to all applicable records repositories to update their information.

5.5.1 Sites and Resources Not Relocated

A total of 11 resources out of the 42 were not relocated. Four archaeological sites could not be relocated within or immediately adjacent to the APE. These sites were recorded by Eric Barnes and reported by Jay von Werlhoff (1961) and were mapped within the APE; however, upon further investigation from the site record and on the ground investigation, it was found that they were located outside of the APE. This is most likely due to the age of the site recordation and mapping techniques during that time. These include prehistoric sites P-54-000261, P-54-000266, P-54-000271, and P-54-000290. These site records were updated with primary form stating that the locational information is incorrect as plotted and the site was not relocated during the 2018 study.

Seven isolates were not revisited because they are not classified as sites under the guidance of OHP and the NRHP.

5.5.2 Summary of Resources within APE

Table CUL 1-4 lists resources identified within the APE, their type, relocated or not, site record update, site condition, facility proximity, land ownership, any determinations of eligibility to date and any Project effects observed during site visit. Appendix B (confidential) includes maps showing the location of sites that were relocated as part of this study.

⁴ The Kaweah Hydroelectric System Historic District is not an archaeological resource and is therefore not included in the resource counts or discussion in this TSR. There are a total of 125 previously-known archaeological resources discussed in this report.

Table CUL 1-4. Previously-known Archaeological Resources Within, Partially Within, or Adjacent to the APE

P-Number/ Identifier	Site Type	Re-located	Site Record Update	Site Condition	FERC Facility	Land Owner	Eligibility/ Comments
P-54-000232	Prehistoric: AP02 (Lithic scatter); AP03 (Ceramic scatter); AP04 (Bedrock milling feature); AP07 (Architectural feature)	Yes	Yes	Fair to Good	Transmission line	Private	Eligible site, monitored every three years. H-Frame power pole in site boundary.
P-54-000258	Prehistoric AP02 (Lithic scatter); AP04 (Bedrock milling feature)	Yes	No	Fair	Transmission line	Private	Unevaluated site, has been impacted by State Route 198.
P-54-000261	Prehistoric AP04 (Bedrock milling feature)	No	Yes	Unknown	Unknown	Unknown	Unevaluated site, attempted to relocate incorrect site location, outside of APE.
P-54-000266	Prehistoric AP04 (Bedrock milling feature)	No	Yes	Unknown	Unknown	Unknown	Unevaluated site, attempted to relocate incorrect site location, outside of APE.
P-54-000271	Prehistoric AP02 (Lithic scatter); AP14 (Rock shelter/cave)	No	Yes	Unknown	Unknown	Unknown	Unevaluated site, attempted to relocate incorrect site location, outside of APE.
P-54-000278	Prehistoric AP02 (Lithic scatter); AP03 (Ceramic scatter) - potsherds; AP04 (Bedrock milling feature); AP15 (Habitation debris) - midden	Yes	Yes	Fair	Kaweah No. 3 Powerhouse access road	SCE	Unevaluated site, bisected by SCE road, updated site with additional features.
P-54-000290	Prehistoric AP04 (Bedrock milling feature)	No	Yes	Unknown	Unknown	Unknown	Unevaluated site, attempted to relocate incorrect site location, outside of APE.
P-54-001478	Prehistoric AP04 (Bedrock milling feature)	Yes	Yes	Good	Kaweah No. 2 Flowline access road	Private	Eligible site, monitored every three years.

P-Number/ Identifier	Site Type	Re-located	Site Record Update	Site Condition	FERC Facility	Land Owner	Eligibility/ Comments
P-54-001479/H- combined with site P-54-004596	Prehistoric, Historicera AP04 (Bedrock milling feature) -Historic-era HP29 (Landscape architecture); HP30(Trees); AH2 Foundations/structure pads; AH4 Trash scatters;	Yes	Yes	Poor to Unknown	Kaweah No. 1	SCE	Unevaluated site, located at SCE office complex. SCE historic housing and buildings have been previously removed. Majority of site is paved.
P-54-001480/H	Prehistoric, Historic- era AH11 (Walls/fences); AH16 (Other) - Historic-era rock lined hearth; AP04 (Bedrock milling feature)	Yes	Yes	Fair	Transmission line	Private	Eligible site, monitored every 3 years. Power pole in site boundary.
P-54-003332	Historic General's Highway	Yes	No	Good	Kaweah No. 3 Powerhouse and access road	SCE and Sequoia National Park	Eligible site. Managed by SNP.
P-54-004342	Prehistoric AP04 (Bedrock milling feature)	Yes	Yes	Fair	Transmission line	Private	Unevaluated site is located between 5 and 15 meters from the SCE transmission line.
P-54-004595	Historic-era AH02 (Foundations/structur e pads); AH04 (Privies/dumps/trash scatters); AH06 (Water conveyance system); AH11 (Walls/fences)	Yes	No	Fair	Kaweah No. 1 Powerhouse	SCE	Unevaluated site contains remains of housing for Kaweah No. 1 powerhouse complex. Original house was relocated across the street in the 1980s.
P-54-004616	Historic-era HP11 (Engineering structure)	Yes	No	Good	Kaweah No. 2 Flowline	SNP	Unevaluated site, historic box culvert adjacent to bridge on State Route 198.
P-54-004693	Historic-era AH04 (Privies/dumps/trash scatters)	Yes	No	Fair/Good	Kaweah No. 2 Intake Road	SCE	Unevaluated site, majority of artifacts date to 1950s most likely associated with SCE housing.

P-Number/ Identifier	Site Type	Re-located	Site Record Update	Site Condition	FERC Facility	Land Owner	Eligibility/ Comments
P-54-004694	Historic-era AH02 (Foundations/structur e pads); AH11 (Walls/fences); Prehistoric AP04 (Bedrock milling feature)	Yes	Yes	Fair	Kaweah No. 2 Intake Road	SCE	Unevaluated, site has been used for parking by SCE and contractors. SCE housing has been previously removed. Record update included a newly discovered bedrock milling feature.
P-54-004695	Historic-era AH05 (Wells/cisterns); AH16 (Other)	Yes	Yes	Good	Kaweah No. 2 Flowline	Private	Unevaluated site.
P-54-004696	Historic-era AH04 (Privies/dumps/trash scatters)	Yes	No	Good	Kaweah No. 2 Flowline	Private	Unevaluated site consists four coffee cans.
P-54-004697	Historic-era AH02 (Foundations/ structure pads)	Yes	Yes	Destroyed	Kaweah No. 2 Flowline	Private	Unevaluated site was demolished by non-Project activities.
P-54-004698	Historic-era AH04 (Privies/dumps/trash scatters)	Yes	No	Good	Kaweah No. 2 Flowline	Private	Unevaluated trash scatter dating from 1930s-1960s.
P-54-004739 combined with P- 54-004756	Historic-era AH02 (Foundations/structur e pads); AH04 (Privies/dumps/trash scatters); AH11 (Walls/fences)	Yes	Yes	Fair	Kaweah No. 2 Powerhouse	SCE	Unevaluated site associated with powerhouse housing. Housing has been previously removed.
P-54-004749	Historic-era Isolate	Yes	No	N/A	Kaweah No. 2 Flowline	SNP	Not eligible
P-54-004750	Historic-era Isolate	Yes	No	N/A	Transmission line	Private	Not eligible
P-54-004751	Historic-era Isolate	Yes	No	N/A	Kaweah No. 2 Flowline	Private	Not eligible
P-54-004752	Historic-era Isolate	No	No	N/A	Kaweah No. 2 Flowline	Private	Not eligible

P-Number/ Identifier	Site Type	Re-located	Site Record Update	Site Condition	FERC Facility	Land Owner	Eligibility/ Comments
P-54-004754	Historic-era AH11 (Walls/fences); AH16 (Other)	Yes	Yes	Fair/Good	Kaweah No. 2 Flowline access road	Private	Unevaluated rock-lined drainage and a wooden frame bridge, thick vegetation obscures features.
P-54-004755	Historic-era AH05 (Wells/cisterns)	Yes	No	Good	Kaweah No. 2 Flowline	Private	Unevaluated structure may be a water retention cistern.
P-54-004757	Historic-era AH04 (Privies/dumps/trash scatters); AH11 (Walls/fences)	Yes	Yes	Fair	Kaweah No. 2 Powerhouse	SCE	Unevaluated remains of a former residence with a series of terraces.
P-54-004758	Prehistoric AP04 (Bedrock milling feature)	Yes	No	Fair	Kaweah No. 2 Powerhouse	SCE	Unevaluated site, recreation use observed at site.
P-54-004759	Historic-era Isolate	No	No	N/A	Kaweah No. 2 Flowline	Unknown	Not eligible
P-54-004761	Historic-era AH02 (Foundations/ structure pads)	Yes	No	Fair/Good	Kaweah No. 1 Flowline	Private	Unevaluated concrete footings, sheet metal, hydraulic drill bit, misc. lumber, likely associated with reconstruction of flowline.
P-54-004762	Historic-era AH16 (Other)	Yes	No	Good	Kaweah No. 1 Flowline	BLM	Unevaluated inscription of flume tender 1907.
P-54-004763	Historic-era AH04 (Privies/dumps/trash scatters)	Yes	No	Good	Kaweah No. 1 Flowline	Private	Unevaluated historic can scatter.
P-54-004764	Historic-era AH11 (Walls/fences)	Yes	No	Fair	Mineral King Road	Private	Unevaluated dry stacked rock retaining walls.
P-54-004765	Historic-era AH11 (Walls/fences)	Yes	No	Fair	Kaweah No. 1 Flowline	Private	Unevaluated historic features associated with wooden bridge.
P-54-004766	Historic-era Isolate	No	No	N/A	Kaweah No. 1 Flowline	Private	Not eligible
P-54-004797	Historic-era Isolate	Yes	No	N/A	Mineral King Road	BLM	Not eligible

P-Number/ Identifier	Site Type	Re-located	Site Record Update		FERC Facility	Land Owner	Eligibility/ Comments
P-54-005300	Historic-era HP39 (Other) - bridge abutment remains	Yes	No	Fair	Mineral King Road	Private	Unevaluated wood debris and stacked rocks that appear to be the ruins of the abutment of a previous bridge on Mineral King Road predating the existing 1923 bridge over the East Fork of the Kaweah River.
P-54-005372	Prehistoric AP04 (Bedrock milling feature)	Yes	Yes	Fair/Good	Kaweah No. 1 Forebay Road	BLM	Unevaluated site adjacent to road.
P-54-005373	Prehistoric AP04 (Bedrock milling feature)	Yes	Yes	Fair/Good	Kaweah No. 1 Forebay Road	BLM	Unevaluated site adjacent to road.



5.6 Identification and Recordation of Newly Identified Cultural Resources

Eight new archaeological sites were identified during the archaeological field survey, mapped and recorded on DPR site forms. Seven are historic-era in age, with the majority associated with the construction and operation of the Kaweah Hydroelectric Project. One site is a bedrock milling station assumed to be used during the prehistoric or protohistoric period (Table CUL 1-5). Historic-era resources that relate to the construction and operation of the Kaweah Hydroelectric System, including construction camps, staff residences, and refuse dumps, were recorded as separate archaeological sites however any NRHP evaluation undertaken for these resources will be evaluated within the context of the historic hydroelectric project. New site records are included in Appendix C and, upon final completion of the CUL-1 study, will be submitted to all applicable records repositories.

5.7 Results Summary and Recommendations

The archaeological resources TSR was conducted as part of the Licensee's ILP FERC relicensing in order to comply with Section 106 of the NHPA (16 U.S.C. § 470f) and its implementing regulations in 36 CFR Part 800, which requires that federal agencies consider the effect of undertakings on cultural resources. This TSR was developed on behalf of the Licensee as a component of CUL 1 – TSP.

The CUL 1 – TSP set out two major objectives related to archaeological resources:

- Identify all known and currently undiscovered archaeological sites (sites) that may potentially be affected by Project O&M activities (**Phase 1**).
- Evaluate newly discovered sites to determine if they are eligible for listing in the NRHP (Phase 2).
- Phase 1 documented in this report completes the inventory and identification, which included a thorough search of archaeological databases, records repositories, and existing literature to determine archaeological sites that are present within the APE. This was followed by a field investigation to ground-truth, update previously recorded resources, and conduct new surveys. This resulted in identification of 37 resources (29 previously recorded sites after two resources were combined with other site records and 8 new archaeological sites) within the APE. Of these, 9 are prehistoric/ Native American land use sites consisting of lithic scatters, bedrock milling sites or habitation remains. Three are multi-component sites consisting of a combination of Native American and historic-era components. The remaining 25 sites contain historic-era only components. Three of these have been previously determined eligible for listing on the NRHP as part of the previous Project relicensing (1992) and the General's Highway has been determined eligible by the SNP. The remaining 33 sites have not been evaluated to date.
- Phase 2 will assess the need for eligibility studies for all 33 unevaluated resources identified within the APE through the development of an NRHP Evaluation Plan (Evaluation Plan) as part of the HPMP. This phase will be guided by the Evaluation Plan and identify the specific archaeological resources to be evaluated based on potential for effects from continued O&M activities. Sites will be evaluated within defined historic contexts and themes for significance. The Evaluation Plan will be developed in consultation with the Cultural Resources TWG, resource agencies, and identified Tribes and Tribal Representatives per the TSP and incorporated as part of the HPMP.

Protection and Treatment of Archaeological Resources: Continued implementation of the existing Cultural Resources Management Plan (CRMP) provides a mechanism for the protection of existing and new resources identified in the Project APE, including programmatic treatment measures during routine O&M activities such as road maintenance and power pole replacement until such time as the new license is issued and the HPMP takes effect. The HPMP will include updated programmatic and site-specific treatment and protection measures for eligible historic properties within the Project APE to avoid adverse effects to historic properties. The HPMP will also incorporate evaluation protocols from the Evaluation Plan for unevaluated resources identified within the APE.

Table CUL 1-5. Newly Identified Archaeological Resources

Primary No.	Temporary Site No.	Site Type	Site Condition	Facility	Land Owner	Comments
P-54-005364	K-ALK-001	Historic-era: AH16. Other – telegraph/early telephone line remains	Poor	Kaweah No.1 Flowline/ Forebay	BLM	A decomposing wood post and ceramic insulators with wiring on top of large granite boulders above forebay associated with hydroelectric project.
P-54-005365	K-ALK-002	Historic-era: AH4. Dumps/trash scatters; AH7. Roads; AH9. Quarries; AH11. Fences	Fair	Kaweah No. 1 Forebay Road	BLM	Appears to be a historic-era road cut, pad and refuse dump from a 1960s cabin or house. Not likely associated with hydroelectric project.
P-54-005366	K-ALK-003	Historic-era: AH2. Foundations/structure pads	Fair	Kaweah No. 1 Forebay Road	BLM	A large board-form concrete retaining wall likely associated with ranching or settlement. Barn that used to be associated with site has been torn down. No features located near road.
P-54-005367	K-ETE-002	Historic-era: AH4. Privies/dumps/trash scatters, AH6. Water conveyance system - unused penstock pipe	Good	Kaweah No. 3 Forebay	BLM	This site consists of discarded penstock sections that are likely associated with early construction of the forebay and horizontal penstock.
P-54-005368	K-ETE-003	Historic-era: AH2. Foundations/structure pads; AH7. Roads/trails/railroad grades	Fair	Kaweah No. 3 Penstock	BLM	Likely represents the remains of a Mt. Whitney Power Co. construction camp or tramway system that was used for construction per SCE historic drawings.
P-54-005369	K-ETE-007	Historic-era: AH2. Foundations/structure pads, Historic-era: AH16 (Other) - Survey Marker	Fair/Good	Kaweah No. 3 Powerhouse	SCE	Likely represents remains of the Kaweah No. 3 powerhouse cottages and associated buildings. Buildings have been removed.
P-54-005370	K-ETE-011	Historic-era: AH16. (Other) – Rock Art and Modern Graffiti	Good	Kaweah No. 2 Diversion Dam	SCE	1950 graffiti rock art may be associated with worker housing and workers at Kaweah No. 2 Diversion and No. 3 Powerhouse.
P-54-005371	K-MMR-006	Prehistoric: AP4: Bedrock Milling Feature	Fair	Kaweah No. 2 Flowline Access Road	Private	Feature adjacent to road and near culvert.

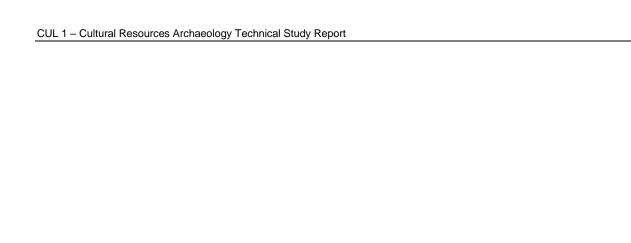
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APPENDIX A

Record Search Results Tables

,UL	i – Cultural Resources Archaeolog	gy rechnical Study Report	
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Table A-1. Previously-known Cultural Resources within a 1-mile Radius of the APE

Primary No.	Trinomial No.	Resource Description	CRHR/NRHP Eligibility Status	Year(s) Recorded	Proximity to APE			
	Archaeological Resources							
P-54-000091	CA-TUL-000091/H	Multi-component Site	Unevaluated	1959; 1980; 1980	Outside			
P-54-000133	CA-TUL-000133	Prehistoric Site	Unevaluated	1959	Outside			
P-54-000134	CA-TUL-000134	Prehistoric Site	Unevaluated	1959	Outside			
P-54-000135	CA-TUL-000135	Prehistoric Site	Unevaluated	1959	Outside			
P-54-000198	CA-TUL-000198	Prehistoric Site	Unevaluated	1960	Outside			
P-54-000208	CA-TUL-000208	Prehistoric Site	Unevaluated	1958	Outside			
P-54-000231	CA-TUL-000231	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000232	CA-TUL-000232	Prehistoric Site	Eligible	n.d.; 2006; 2015	Within (Partial)			
P-54-000233	CA-TUL-000233	Prehistoric Site	Unevaluated	n.d.; 2008	Outside			
P-54-000234	CA-TUL-000234	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000235	CA-TUL-000235	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000236	CA-TUL-000236	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000237	CA-TUL-000237	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000238	CA-TUL-000238	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000239	CA-TUL-000239	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000240	CA-TUL-000240	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000241	CA-TUL-000241	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000242	CA-TUL-000242	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000243	CA-TUL-000243	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000244	CA-TUL-000244	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000245	CA-TUL-000245	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000246	CA-TUL-000246	Prehistoric Site	Unevaluated	n.d.	Outside			
P-54-000251	CA-TUL-000251	Prehistoric Site	Unevaluated	n.d.	Outside			

Primary No.	Trinomial No.	Resource Description	CRHR/NRHP Eligibility Status	Year(s) Recorded	Proximity to APE
P-54-000252	CA-TUL-000252	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000253	CA-TUL-000253	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000254	CA-TUL-000254	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000256	CA-TUL-000256	Prehistoric Site	Unevaluated	n.d.; 2008	Outside
P-54-000257	CA-TUL-000257	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000258	CA-TUL-000258	Prehistoric Site	Unevaluated	n.d.; 2008	Adjacent
P-54-000259	CA-TUL-000259	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000260	CA-TUL-000260	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000261	CA-TUL-000261	Prehistoric Site	Unevaluated	n.d.	Within
P-54-000262	CA-TUL-000262	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000263	CA-TUL-000263	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000264	CA-TUL-000264	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000265	CA-TUL-000265	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000266	CA-TUL-000266	Prehistoric Site	Unevaluated	n.d.	Within
P-54-000267	CA-TUL-000267	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000268	CA-TUL-000268	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000269	CA-TUL-000269	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000270	CA-TUL-000270	Prehistoric Site	Unevaluated	1960	Outside
P-54-000271	CA-TUL-000271	Prehistoric Site	Unevaluated	n.d.	Adjacent
P-54-000274	CA-TUL-000274	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000275	CA-TUL-000275	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000276	CA-TUL-000276	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000277	CA-TUL-000277	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000278	CA-TUL-000278	Prehistoric Site	Unevaluated	n.d.	Within
P-54-000279	CA-TUL-000279	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000280	CA-TUL-000280	Prehistoric Site	Unevaluated	n.d.	Outside

Primary No.	Trinomial No.	Resource Description	CRHR/NRHP Eligibility Status	Year(s) Recorded	Proximity to APE
P-54-000281	CA-TUL-000281	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000282	CA-TUL-000282	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000283	CA-TUL-000283	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000284	CA-TUL-000284	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000285	CA-TUL-000285	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000286	CA-TUL-000286	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000287	CA-TUL-000287	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000290	CA-TUL-000290	Prehistoric Site	Unevaluated	n.d.	Within (Partial)
P-54-000323	CA-TUL-000323	Prehistoric Site	Unevaluated	n.d.	Outside
P-54-000337	CA-TUL-000337	Prehistoric Site	Unevaluated	1968	Outside
P-54-000933	CA-TUL-000933	Prehistoric Site	Unevaluated	1981	Outside
P-54-000934	CA-TUL-000934	Prehistoric Site	Unevaluated	1981	Outside
P-54-000935	CA-TUL-000935	Prehistoric Site	Unevaluated	1981	Outside
P-54-000962	CA-TUL-000962	Prehistoric Site	Unevaluated	1983	Outside
P-54-001229	CA-TUL-001229	Prehistoric Site	Unevaluated	1985	Outside
P-54-001478	CA-TUL-001478	Prehistoric Site	Eligible	1989; 2015	Within (Partial)
P-54-001479	CA-TUL-001479/H	Prehistoric Site	Unevaluated	1989; 2010	Within
P-54-001480	CA-TUL-001480/H	Multi-component Site	Eligible	1989; 2015	Adjacent
P-54-001593	CA-TUL-001593	Prehistoric Site	Unevaluated	1990	Outside
P-54-001596	CA-TUL-001596	Prehistoric Site	Unevaluated	1990	Outside
P-54-001597	CA-TUL-001597/H	Multi-component Site	Unevaluated	1990	Outside
P-54-001615	CA-TUL-001615	Prehistoric Site	Unevaluated	1990	Outside
P-54-001794	CA-TUL-001794	Prehistoric Site	Unevaluated	1983, 2016	Outside
P-54-002218	CA-TUL-002132	Prehistoric Site	Unevaluated	1996	Outside
P-54-003314	-	Historic Ash Mountain Entrance Sign	NRHP-Listed	1977	Outside

Primary No.	Trinomial No.	Resource Description	CRHR/NRHP Eligibility Status	Year(s) Recorded	Proximity to APE
P-54-003332	-	Historic Generals Highway	NRHP-Listed	1992	Adjacent
P-54-003386	-	Historic-era Site	Unevaluated	1999	Outside
P-54-003391	CA-TUL-002296	Prehistoric Site	Unevaluated	1999	Outside
P-54-003989	-	Historic Clarence Fry House/Johnson House	Unevaluated	1993	Outside
P-54-003990	-	Historic Mineral King Road /County Road	Unevaluated	1993	Outside
P-54-003991	-	Historic Bahwell Ditch	Unevaluated	1993; 2008	Outside
P-54-004196	-	Historic Hammond Forest Fire Station	Eligible (3D, 3S)	1994	Outside
P-54-004319	CA-TUL-002639	Prehistoric Site	Unevaluated	2003	Outside
P-54-004342	-	Prehistoric Site	Unevaluated	2005	Adjacent
P-54-004595	-	Historic-era Site	Unevaluated	2008	Within
P-54-004596	-	Prehistoric Site	Unevaluated	2008	Within
P-54-004616	-	Historic-era Site	Unevaluated	2008	Within
P-54-004617	-	Historic-era Site	Unevaluated	2008	Outside
P-54-004618	-	Historic-era Site	Unevaluated	2008	Outside
P-54-004693	CA-TUL-002919H	Historic-era Site	Unevaluated	2010	Within
P-54-004694	CA-TUL-002920H	Historic-era Site	Unevaluated	2010	Within
P-54-004695	CA-TUL-002921H	Historic-era Site	Unevaluated	2010	Adjacent
P-54-004696	CA-TUL-002922H	Historic-era Site	Unevaluated	2010	Within (Partial)
P-54-004697	CA-TUL-002923H	Historic-era Site	Unevaluated	2010	Adjacent
P-54-004698	CA-TUL-002924H	Historic-era Site	Unevaluated	2010	Within
P-54-004739	-	Historic-era Site	Unevaluated	2009	Within
P-54-004749	-	Historic-era Site	Unevaluated	2010	Within
P-54-004750	-	Historic-era Site	Unevaluated	2010	Adjacent
P-54-004751	-	Historic-era Site	Unevaluated	2010	Adjacent

Primary No.	Trinomial No.	Resource Description	CRHR/NRHP Eligibility Status	Year(s) Recorded	Proximity to APE
P-54-004752	-	Historic-era Site	Unevaluated	2010	Within
P-54-004753	-	Historic-era Site	Unevaluated	2010	Outside
P-54-004754	CA-TUL-002955H	Historic-era Site	Unevaluated	2010	Adjacent
P-54-004755	CA-TUL-002956H	Historic-era Site	Unevaluated	2010	Within
P-54-004756	CA-TUL-002957H	Historic-era Site	Unevaluated	2010	Within
P-54-004757	CA-TUL-002958H	Historic-era Site	Unevaluated	2010	Within
P-54-004758	CA-TUL-002959	Prehistoric Site	Unevaluated	2010	Within
P-54-004759	-	Historic-era Site	Unevaluated	2010	Within
P-54-004761	CA-TUL-002961H	Historic-era Site	Unevaluated	2010	Within (Partial)
P-54-004762	CA-TUL-002962H	Historic-era Site	Unevaluated	2010	Within
P-54-004763	CA-TUL-002963H	Historic-era Site	Unevaluated	2010	Within (Partial)
P-54-004764	CA-TUL-002964H	Historic-era Site	Unevaluated	2010	Within
P-54-004765	CA-TUL-002965H	Historic-era Site	Unevaluated	2010	Adjacent
P-54-004766	-	Historic-era Site	Unevaluated	2010	Adjacent
P-54-004797	-	Historic-era Site	Unevaluated	2010	Within
P-54-005132	CA-TUL-003071H	Historic-era Site	Unevaluated	2014	Outside
P-54-005137	CA-TUL-003076H	Historic-era Site	Unevaluated	2014	Outside
P-54-005300	CA-TUL-000091/H	Historic-era Site	Unevaluated	2016	Within
P-54-005372	CA-TUL-003142	CM-SSDV-2016-01, BRM locality	Unevaluated	2016	Within (Partial)
P-54-005373	CA-TUL-003143	CM-SSDV-2016-02, BRM locality	Unevaluated	2016	Within (Partial)
NA	NA	CM-SSDV-2016-03, BRM locality	Unevaluated	2016	Outside
NA	NA	CM-SSDV-2016-04, BRM locality	Unevaluated	2016	Outside
NA	NA	CM-SSDV-2016-05, BRM locality	Unevaluated	2016	Outside
NA	NA	CM-SSDV-2016-06, BRM locality	Unevaluated	2016	Outside
NA	NA	CM-SSDV-2016-IO-01, Obsidian flake Isolated	Not eligible	2016	Outside

Primary No.	Trinomial No.	Resource Description	CRHR/NRHP Eligibility Status	Year(s) Recorded	Proximity to APE
NA	NA	CM-SSDV-2016-06, BRM locality	Unevaluated	2016	Outside
NA	NA	CM-KMC-001; Historic-era site	Unevaluated	2018	Outside
		Historic Distr	ricts ¹		
-	-	Kaweah Hydroelectric System Historic District	Eligible	1989	-

Notes:

Blue Shading - within or adjacent to APE

¹ The Kaweah Hydroelectric System Historic District is described in detail in the CUL 1 – Built Environment TSR.

Table A-2. Previous Cultural Resource Studies within a 1-mile Radius of the APE

Report #	Author	Title	Year	Resources Identified	Proximity to APE
-	Millington, Chris	Cultural Resources Survey Report for Southern California Edison Company's Five Deteriorated Poles Replacement Project near Three Rivers (TD853631, TD827972, And TD853885), Tulare County, California	2015	0	Within - One location (SR 198/ Sierra Dr.)
-	Pollack, Linda	Cultural Resource Monitoring of National Register Eligible Properties Associated with Kaweah Hydroelectric Project, FERC Project No. 298 Tulare County, California	2015	3	Within
-	West, Crystal	Cultural Resource Monitoring of National Register Eligible Properties Associated with Kaweah Hydroelectric Project, FERC Project No. 298 Tulare County, California	2012	3	Within
-	Lehman, Susan; Williams, James; Hicks, Robert; Blount, Clinton	A History and Significance Evaluation of the Kaweah Hydroelectric System, Tulare County, CA	1989	-	Within
TU-00011	Wickstrom, Brian	Negative Archaeological Survey Report to repair flood damage to two culvert locations on Route 198	1997	0	Outside
TU-00022	Christian, Duane	Cultural Resource Inventory Report - Craig Boundary Fence	1995	0	Outside
TU-00083	Cantwell, R.J.	Archaeological Survey Report for the Crevoisier Property, Three Rivers, California	1990	0	Outside
TU-00088	Serpa, Luke	CDF Project Review Report for Archaeological and Historical Resources for the Hammond FFS - Apparatus Building Project	1995	0	Within (Partial)
TU-00235	Cantwell, R.J.	Archaeological and Historical Survey with Addendum on Ecological and Wildlife Resources - Three Rivers Change of Zone Project File Number PZ 78-89	1979	0	Within (Partial)
TU-00274	Cantwell, R.J.	Archaeological Survey Report - Case Property	1989	0	Outside
TU-00275	Cantwell, R.J.	Archaeological Survey Report for the Lentz Property, Three Rivers, California	1989	0	Outside
TU-00276	Cantwell, R.J.	Archaeological Survey Report for the Phil Ahlfeldt Property, Three Rivers, California	1990	0	Outside
TU-00277	Cantwell, R.J.	Archaeological Survey Report for the Dave Kendrick, et al. Property for Living Waters Realty Co	1990	0	Outside
TU-00303	Cursi, Kathleen L. and Varner, Dudley	Archaeological Reconnaissance of the "Fontana-Three Rivers" Parcel, Three Rivers, Tulare County, California	1981	1	Outside

Report #	Author	Title	Year	Resources Identified	Proximity to APE
TU-00306	Elliot, John F.	Cultural Resources Assessment: Johnson Property, Three Rivers California	1993	3	Outside
TU-00351	Kayser, David W.	Cultural Resource Inventory Report for the Three Rivers Road Maintenance	1993	0	Outside
TU-00396	Mundy, Joseph W., Jackson, Thomas L., and Origer, Thomas M.	The 1985 and 1986 Generals Highway Archaeological Survey, Sequoia National Park, California: The Generals Highway (Ash Mountain to Lodgepole), the Crystal Cave Road, and the Buckeye Flat Road, Vol 1	1990	12	Within (Partial)
TU-00396	Mundy, Joseph W.	Field Work Summary for the Generals Highway Archaeological Survey (SEKI 85A), Sequoia-Kings Canyon National Park, California	1985	-	Within (Partial)
TU-00399	Murphy, Peggy	An Archaeological Assessment of the Ten Acre Woodward Property, Three Rivers, Tulare County, California	1990	0	Outside
TU-00400	Murphy, Peggy	Archaeological Assessment for Road Right-of-Way Across BLM Land, Near Three Rivers, Tulare County, California	1990	0	Adjacent
TU-00401	Murphy, Peggy and Catherine Lewis Pruett	Archaeological Assessment for Utility Easement Across BLM Land, Near Three Rivers, Tulare County, California	1990	0	Outside
TU-00410	Osborne, Richard	An Archaeological Assessment of Parcel Number APN 069-070-12, Tulare County, California	1993	0	Within (Partial)
TU-00460	Schiffman, Robert	Archaeological Investigation for Tentative Parcel Map, Three Rivers, Tulare County, California	1989	0	Outside
TU-00465	Schiffman, Robert	Archaeological Investigation for Tentative Parcel Map Along Highway 198, Tulare County, California	1990	0	Outside
TU-00470	Schiffman, Robert	Archaeological Investigation of APN 069-190-33, Section 7, Township 17S., Range 29E., Three Rivers, Tulare County, California	1991	0	Within (Partial)
TU-00542	Weinberger, Gay	Archaeological Reconnaissance of Riverway Ranch, Tulare County	1981	3	Within (Partial)
TU-00588	Weinberger, Gay	Cultural Resource Assessment of Britten Property	1990	1	Outside
TU-00589	Weinberger, Gay	Cultural Resource Assessment of Rische Property	1990	2	Within (Partial)
TU-00590	Weinberger, Gay	Cultural Resource Assessment of Crisp Property In Three Rivers	1990	1	Outside
TU-00606	Weinberger, Gay	Cultural Resource Assessment of Moreno Property	1991	0	Outside

Report #	Author	Title	Year	Resources Identified	Proximity to APE
TU-00637	Thornton, Mark	A Survey and Historic Significance Evaluation of the CDF Building Inventory	1994	1	Within (Partial)
TU-00665	Fee, David J.	An Archaeological Assessment of Sequoia and Kings Canyon National Parks, California	1980	0	Outside
TU-00683	Martin, Carol A.	Archaeological Clearance Survey Form - Ash Mountain Plant Nursery Prescribed Burn, Ash Mountain, Sequoia and Kings Canyon National Parks, California	1988	0	Outside
TU-00689	Martin, Carol A.	Archaeological Clearance to Construct the Sequoia Natural History Association Building, Ash Mountain, Sequoia and Kings Canyon National Parks	1988	0	Outside
TU-00703	Unknown	Girder Bridge Rating Sheet for the Pumpkin Hollow Bridge	1986	0	Outside
TU-00707	Cantwell, R.J.	Archaeological Survey Report for Gerald Avents Property	1990	0	Outside
TU-00711	Cantwell, R.J.	Archaeological Survey Report for the Five Views River Property, Three Rivers, California	1989	0	Adjacent
TU-00712	Cantwell, R.J.	Archaeological Survey Report for the Phil Ahlfeldt Property, Three Rivers, California	1990	0	Outside
TU-00750	Laylander, D and M Marine	Negative Archaeological Survey Report for the Bicycle Lane Installation on State Route 198, Three Rivers, Tulare County	1997	0	Outside
TU-00764	Spude, Catherine H. and Carol A. Martin	Archaeological Clearance Survey Form to Rehabilitate Generals Highway, Phase I, Entrance Station to Alder Creek, Sequoia National Park, California	1992	0	Within (Partial)
TU-00780	Miller, Karen G. and Carol A. Martin	Archaeological Clearance Survey Form for the Ash Mountain and Hospital Rock Prescribed Burn Units	1993	0	Adjacent
TU-00781	Martin, Carol A. and Karen G. Miller	Archaeological Clearance for the Amphitheater Point Prescribed Burn Unit	1993	0	Within (Partial)
TU-00828	Teague, George	Archaeological Clearance Survey Form to Install An Office Building at Ash Mountain Visitor Center, Sequoia-Kings Canyon National Parks, Tulare County, California	1992	0	Within (Partial)
TU-00833	Teague, George and Mohler, Beverly A.	Archaeological Clearance Survey Form to Expand the Ash Mountain Visitor Center, Sequoia National Park, California	1991	0	Within (Partial)
TU-00858	Burge, Thomas L.	Archaeological Clearance Survey Form to Rehabilitate Generals Highway, Phase II, Alder Creek to Potwisha Campground	1996	1	Within (Partial)

Report #	Author	Title	Year	Resources Identified	Proximity to APE
TU-00941	Hale, M. R.	Archaeological Survey Clearance Form to Construct a Boundary Fence Along a Portion of the Southern Boundary, Sequoia National Park, California	1989	0	Within (Partial)
TU-00959	Taylor, T. T.	Cultural Resources Management Plan for Southern California Edison Company's Kaweah Hydroelectric Project, Tulare County, California	1992	0	Within
TU-00976	Craigo, S.	General's Highway, Sequoia and Kings Canyon National Parks, California	1992	0	Outside
TU-01189	Latta, F. F.	San Joaquin Primeval - Uncle Jeff's Story: A Tale of a San Joaquin Valley Pioneer and His Life with the Yokuts Indians	1929	0	Outside
TU-01190	Mitchell, A. R.	Jim Savage and the Tulareño Indians	1957	0	Outside
TU-01198	Eckhardt, W. T.	Archaeological Survey Report for Deteriorated Pole Replacement Program (630791, 630793, 1187593, and 2287612) Sequoia National Park Ash Mountain Entrance, Tulare County, California	2003	0	Within (Partial)
TU-01224	Schmidt, J. J.	Phase I Cultural Resource Investigation for Pawley 12 kV New Service Extension in the Three Rivers Area, Tulare County, California	2004	0	Outside
TU-01258	Jackson, T. L.	Reconnaissance Report for the Infrastructure Replacement Project on Six Circuits on Private Lands in Tulare County, California	2005	0	Outside
TU-01272	McMorris, C. and A. Hope	Caltrans Historic Bridges Inventory Update: Metal Truss, Movable, and Steel Arch Bridges	2004	0	Outside
TU-01343	Parr, Robert E.	Archaeological Assessment for the Replacement of Twelve Deteriorated Poles on the Southern California Edison Granite, Pawley, and Salt Creek 12 kV Circuits, Tulare County, California	2008	0	Outside
TU-01359	Parr, Robert E.	Cultural Resources Assessment for the Replacement of Four Deteriorated Power Poles on the Southern California Edison Company Pawley, Terminus, and Salt Creek 12 kV Circuits, Three Rivers, Tulare County, California	2008	0	Outside
TU-01361	Schmidt, James J.	Three Rivers Substation Road Extension Project, Tulare County, California	2009	0	Outside
TU-01362	Parr, Robert E.	Cultural Resource Assessment for the Southern California Edison Company Kaweah Powerhouse 1 Intake Modification Kaweah Hydroelectric Project Tulare County, California	2008	0	Outside

Report #	Author	Title	Year	Resources Identified	Proximity to APE
TU-01363	Parr, Robert E.	Cultural Resource Assessment for the Installation of Culverts on the Southern California Edison Company Kaweah 1 Flowline Lower Pine Access Road, Tulare County, California	2009	0	Within
TU-01364	Parr, Robert E.	Cultural Resource Assessment for the Southern California Edison Company - Kaweah Powerhouse 2 Intact Modification Kaweah Hydroelectric Project Tulare County, California	2008	0	Within
TU-01368	Parr, Robert E.	Cultural Resource Assessment for the Replacement of Deteriorated Power Pole #1467857E on the Southern California Edison Company Salt Creek 12 kV Circuit, Sequoia National Park, Tulare County California	2009	0	Outside
TU-01376	Parr, Robert E.	Cultural Resource Assessment for the Replacement of Two Deteriorated Power Poles for the Southern California Edison Company Big Foot 4 kV and Salt Creek 12 kV Circuits, Sequoia National Park, Tulare County, California	2009	0	Outside
TU-01429	Orfila, Rebecca S.	Archaeological Survey for the Southern California Edison Company: Replacement of Two Deteriorated Power Poles on the Pawley 12kV Circuit, Three Rivers Substation, Tulare County, California, and One Deteriorated Power Pole on the Soda Springs 12kV Circuit, Boxwood Substation, Tulare County, California	2009	0	Outside
TU-01462	Henrikson, Suzann	Cultural Resources Records Search for the Kaweah Culverts, Tulare County, California (CWA 37)	2008	0	Outside
TU-01491	Switalski, Hubert	Archaeological Survey Report for the Southern California Edison Company's Replacement of Four Deteriorated Pole Structures on the Pawley, Salt Creek, and Success 12kV Distribution Circuits (6051-4800, K-4845), Porterville and Three Rivers, Tulare County, California	2010	0	Outside
TU-01495	Cuevas, Kimberly	Cultural Resources Inventory of Range Allotments for the Blossom Peak Allotment #00005	2008	0	Outside
TU-01498	Leach-Palm, L, P Brandy, J. King, P Mikkelsen, L Seil, L Hartman, and J Bradeen	Cultural Resources Inventory of Caltrans District 6 Rural Conventional Highways in Fresno, Western Kern, Kings, Madera, and Tulare Counties	2010	9	Within (Partial)

Report #	Author	Title	Year	Resources Identified	Proximity to APE
TU-01506	Tsunoda, Koji	Archaeological Survey Report for Southern California Edison Company Capacitor Equipment No. 13232 Project on the Salt Creek 12 kV Circuit, Tulare County, California (WO#6531-4891, Al#L-4891)	2007	0	Outside
TU-01525	Delu, A. M.	Results of the Cultural Resource Assessment for the Kaweah/Tule Hydro Wildlife Resting Place Project (IO# 306621) Tulare County, California	2009	0	Within
TU-01527	Kovak, A. and T Jackson	Cultural Resources Inventory for the Kaweah No. 1 Hydroelectric Flowline FERC Project No. 298 Tulare County, California	2012	7	Within
TU-01561	Kovak, A. and T Jackson	Cultural Resources Inventory for the Kaweah No. 2 Hydroelectric Flowline FERC Project No. 298 Tulare County, California	2012	0	Within
TU-01622	Schmidt, James J.	Archaeological Survey Report for Southern California Edison Company's Grid Reliability and Maintenance Program CHO- Preventive Maintenance Project Salt Creek 12kV Distribution Circuit (Pole X15049E) Three Rivers, Tulare County, California	2013	0	Outside
TU-01648	Meyer, Jack, Young, D. Craig, and Rosenthal, Jeffrey	Volume I: A Geoarchaeological Overview and Assessment of Caltrans Districts 6 and 9 - Cultural Resources Inventory of Caltrans District 6/9 Rural Conventional Highways - EA 06-0A7408 TEA Grant	2010	0	Within-Along SR 198 ROW only
TU-01766	Asselin, Katie	Archaeological Survey Report Mineral King Road Bridge (No. 46C-0196) over the East Fork of the Kaweah River near the Three Rivers, Tulare County, California	2017	2	Within (Partial)
BLM 6000- 2016-046	Whitley, Tamara, and Amy Girardo	Cultural Resources Inventory Report for Case Mountain ERMA Lower Trails and Routes Survey	2016	8	Within (Partial)
BLM 6000- 2018-008	Crosmer, Katherine	Cultural Resources Inventory Report for Case Mountain Trail Survey Supplement	2017	1	Within (Partial)

Notes:

Blue Shading - within or adjacent to APE

APPENDIX B

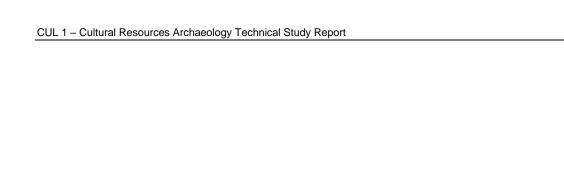
Cultural Resource Location Maps (CONFIDENTIAL)

CUL 1 – Cultural Resources Archaeology Technical Study Report		
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Appendix B is withheld from public disclosure in accordance with applicable regulations. It contains details on the locations of sensitive cultural resources, and qualifies as Confidential Information (36 CFR Section 800.11(c)(1)). Disclosure of such information could be harmful to these resources. To further understand FERC's regulations regarding confidential filings visit https://www.ferc.gov/legal/ceii-foia/foia.asp.

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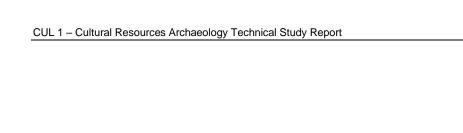
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APP	ENDIX C
Department of Parks and Recrea	ation (DPR) Forms and Other Records FIDENTIAL)
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CUL 1 – Cultural Resources Archaeology Technical Study Report		
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