SOUTHERN CALIFORNIA EDISON®
Energy for What's Ahead℠

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Electronically Filed

December 4, 2024

Debbie-Anne Reese, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Subject: Lundy Hydroelectric Project, FERC Project No. 1390-069; Revised Study Plan

Dear Secretary Reese:

Southern California Edison Company (SCE or Licensee) is the owner and operator of the Lundy Hydroelectric Project (Project), Federal Energy Regulatory Commission (FERC or Commission) Project No. 1390. Pursuant to Section 5.13(a) of the Commission's regulations, 18 C.F.R. § 5.13(a), SCE hereby files this Revised Study Plan (RSP) for relicensing the Project.

On February 23, 2024, SCE filed a Notice of Intent (NOI) and Pre-Application Document (PAD) to initiate the Project's relicensing, and on April 17, 2024, FERC issued Scoping Document 1 (SD1) to begin the environmental review process under the National Environmental Policy Act (NEPA). SD1 provided interested parties with FERC's preliminary list of issues and alternatives to be addressed in an Environmental Assessment (EA) or Environmental Impact Statement (EIS) that FERC will issue in support of its relicensing decision. FERC's SD1 solicited comments on the PAD and recommendations on additional Study Requests by June 24, 2024.

Comments were submitted to FERC in response to SCE's PAD and FERC's SD1, including new studies requested by various relicensing participants. On July 29, 2024, FERC issued Scoping Document 2 (SD2), which amended SD1 based on comments received. SCE addressed those comments and specific study requests with 12 proposed studies that were filed with FERC in its Proposed Study Plan (PSP) on August 5, 2024. Pursuant to 18 C.F.R. § 5.11(e), SCE held a public meeting virtually on September 3, 2024, with the purpose of clarifying the PSP, discussing participants' requests/comments, and attempting to resolve any outstanding issues on the PSP.

Pursuant to 18 C.F.R. § 5.12, relicensing participants were afforded 90 days from the date of the PSP filing to provide comments on the PSP or to request additional studies. Three comment letters were received on the PSP.

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In the attached revised study plan (RSP), SCE has addressed specific study plan comments, either as a modification to the previously filed PSP, or by specifically providing a rationale why a comment or new study request was not adopted.

In accordance with FERC's Process Plan and Schedule included in SD2, stakeholders have until December 19, 2024, to file comments on the RSP, after which FERC is expected to issue its Study Plan Determination by January 3, 2025.

This RSP and all relevant relicensing documents for the Project are available on SCE's Lundy Hydroelectric Project Relicensing website (www.sce.com/lundy), as well as FERC's eLibrary.

SCE looks forward to continuing to work with FERC and other interested parties on the Lundy Project relicensing. Should there be any questions or concerns regarding this filing, please contact Matthew Woodhall, SCE Senior Project Manager, by phone at (626) 302-9596 or via email at matthew.woodhall@sce.com.

Sincerely,

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Attachment A – Revised Study Plan

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Attachment A

Revised Study Plan

REVISED STUDY PLAN

LUNDY HYDROELECTRIC PROJECT
FERC PROJECT NO. 1390

SOUTHERN CALIFORNIA EDISON®

Energy for What's Ahead℠

December 2024

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TABLE OF CONTENTS

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LIST OF ATTACHMENTS

TERMS, ACRONYMS, AND ABBREVIATIONS

B

BLM	Bureau of Land Management

C

CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
cfs	cubic feet per second

F

FERC	Federal Energy Regulatory Commission

I

ILP	Integrated Licensing Process
INF	Inyo National Forest
ISR	Initial Study Report

L

Lundy Project	Lundy Hydroelectric Project No. 1390

M

MLC	Mono Lake Committee
MW	megawatt

N

NEPA	National Environmental Policy Act
NOI	Notice of Intent

P

PAD	Pre-Application Document
PSP	Proposed Study Plan

R

RSP	Revised Study Plan

S

SCE	Southern California Edison Company
SD1	Scoping Document 1
SD2	Scoping Document 2
SWRCB	State Water Resources Control Board

U

USDA	United States Department of Agriculture
USFS	United States Forest Service
USR	Updated Study Report

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1.0 INTRODUCTION AND PROJECT BACKGROUND

The following provides Southern California Edison Company's (SCE) revised study plan (RSP) for the relicensing of the Lundy Hydroelectric Project (Lundy Project), Federal Energy Regulatory Commission (FERC) Project No. 1390, required by the Code of Federal Regulations (CFR), Title 18, Chapter 1, Subchapter B, Part 5, § 5.13. To relicense the Lundy Project, SCE is using FERC's Integrated Licensing Process (ILP) as specified in 18 CFR Part 5.

SCE is the Licensee, owner, and operator of the Lundy Project. SCE currently operates the Lundy Project under a 30-year license that was issued by FERC on March 3, 1999 (86 FERC ¶ 61,230), which was subsequently amended in 1997 (81 FERC ¶ 61,162), 2004 (107 FERC ¶ 62,136), and 2019 (166 FERC ¶ 62,049). Because the current license will expire on February 28, 2029, SCE is seeking a license renewal for continued operation and maintenance of the Lundy Project.

SCE is in the preliminary stages of relicensing its FERC-issued license for the Lundy Project, pursuant to which it proposes to continue Lundy Project operations without any significant modifications.

On February 23, 2024, SCE filed a Notice of Intent (NOI) and Pre-Application Document (PAD) to initiate the ILP to obtain a new license for the Lundy Project. On April 17, 2024, FERC issued a Notice of Commencement of the Proceeding and Scoping Document 1 (SD1) with the intention to advise all interested parties of the proposed scope of FERC's National Environmental Policy Act (NEPA) document and solicited comments and suggestions on the preliminary list of issues and alternatives to be addressed in the NEPA document. FERC also requested interested parties to identify any studies that would help provide a framework for collecting pertinent information on the resource areas under consideration for FERC's NEPA document with a deadline of June 24, 2024, to file comments.

FERC held an in-person site visit, along with daytime and evening scoping meetings on May 14 and 15, 2024. Transcripts of the meetings can be found on FERC's eLibrary at eLibrary | File List (ferc.gov). SCE presented a drone video of the Lundy Project area and encouraged relicensing participants to visit the Lundy Project website at www.sce.com/lundy.

In accordance with 18 CFR § 5.11 and in response to relicensing participant study comments/requests filed with FERC, SCE filed 12 proposed study plans in its proposed study plan (PSP) filed with FERC on August 5, 2024.

Pursuant to 18 CFR § 5.11(e), SCE held a public meeting virtually on September 3, 2024, with the purpose of clarifying the PSP, discussing relicensing participant study requests/comments, and attempting to resolve any outstanding issues on the PSP. The PSP meeting was attended by representatives from SCE and its consultants, in addition to regulatory agencies, non-governmental organizations, and other interested parties.

Relicensing participants were afforded 90 days from the date of the PSP filing (i.e., until November 4, 2024) to provide comments on the PSP or to request additional studies.

2.0 STUDY PLAN OVERVIEW

SCE's RSP filing includes 12 study plans that encompass various resource topics, including water quality, aquatics, botanical, wildlife, recreation, land use, cultural, and tribal resources. The overall objective of the study plans is to address data gaps in existing information such that sufficient information is available to analyze potential environmental effects of the ongoing operation and maintenance of the Lundy Project.

Three relicensing participants filed comment letters with FERC in response to SCE's PSP:

- California Department of Fish and Wildlife (CDFW)
- State Water Resources Control Board (SWRCB)
- Mono Lake Committee (MLC)

Copies of all comment letters filed with FERC are provided in Attachment 1. In addition, all comment letters can be accessed via FERC's eLibrary at https://elibrary.ferc.gove/eLibrary/ under docket P-1390.

2.1. SCE REVISED STUDY PLANS

The studies proposed by SCE in this RSP are intended to collect information and data to analyze potential environmental effects of the ongoing operation and maintenance of the Lundy Project. SCE proposes the 12 studies listed in Table 2.1-1. The Study Plans appear in Attachment 2.

Table 2.1-1. SCE Proposed Study Plans

Study Plan Title	Summary of Modifications
WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring	• Relocation of sampling site to downstream of the confluence of Mill Creek and South Fork Mill Creek • Added sampling site between Highway 395 and Mono Lake • Added criteria for adding an additional field season • Clarification on timing of sampling, including bacterial sampling • Clarification of sampling components for bioavailability of mercury • Inclusion of trophic levels of targeted fish species and collection of prey species, if needed.

Study Plan Title	Summary of Modifications
WQ-2 Lundy Lake and Mill Creek Water Temperature Monitoring	• Addition of two water temperature monitoring sites in Mill Creek below the Project, and one site just upstream of the confluence of the Mill Creek Return Ditch (MCRD). • Added criteria for adding an additional field season
AQ-1 Fish Community Survey	• Addition of objective to understand how large unseasonal flow might affect brown trout populations of Mill Creek • Inclusion of literature review to synthesize available information around added objective
AQ-2 Fish Stranding Study	• Added objective to compile and summarize hydrologic gage data for use in other resource assessments • Addition of a study site in lower Mill Creek below the MCRD to assess downstream stranding risk
TERR-1 General Botanical Resources Survey	• No modifications
TERR-2 General Wildlife Survey	• Added species identified in Table 5.7-1 of the Pre-Application Document • Included pre-implementation consultation with CDFW on camera placement • Added criteria for extending portions study in response to first season's findings • Included habitat assessment for willow flycatcher • Defined procedures for assessing bat use of project facilities, including acoustic surveys, and notification as appropriate
REC-1 Recreation Use and Needs Assessment	• Added draft Recreation Use Visitor Intercept Survey
REC-2 Recreation Facilities Condition Assessment	No modifications
CUL-1 Cultural Resource – Archaeology	No modifications
CUL-2 Cultural Resource - Built Environment	No modifications
TRI-1 Tribal Resource	No modifications
LAND-1 Project Lands and Roads Study	No modifications

2.2. STUDY PLAN MEETING AND RESULTING ACTION ITEMS

SCE conducted a virtual PSP meeting on September 3, 2024. Attendance and notes from the PSP meeting are included in Attachment 3. From the meeting, SCE identified the following clarifications on the PSP and studies not adopted.

Settlement Agreement and water rights: SCE responded to questions from the US Forest Service about the relationship between the study program and the Lundy Hydroelectric Project Settlement Agreement between SCE and water rights holders and agencies, which was initially executed in 2005 and amended in 2022. SCE recognized that the Settlement Agreement expires by its terms on March 2, 2029, and explained that the Settlement Agreement primarily addresses state water rights issues that are not germane to FERC's relicensing of the Lundy Project. SCE affirmed, however, its intent to ensure that the provisions of the Settlement Agreement that are relevant to the FERC relicensing process (e.g., study of ramping rates) are reflected in the RSP, and to work with settlement parties to ensure that relevant provisions of the Settlement Agreement that fall beyond FERC's relicensing jurisdiction continue beyond the expiration of the current license term.

Sediment transportation: in response to a question from FERC about the absence of a Sediment Transport Study Plan, SCE and its consultants explained discrepancies between the figures filed with the PAD, which showed historic water-courses and the current disposition of Deer Creek which no longer discharges into Lundy Lake and instead is a tributary to Mill Creek below the Dam. Deer Creek is not within the Lundy Project boundary nor does it discharge into Mill Creek within the Lundy Project boundary. As further clarification, SCE filed a follow up letter in response to SD2 on October 1, 2024 identifying the existing data that is available to inform FERC's NEPA analysis.

2.3. RELICENSING PARTICIPANT COMMENTS

A total of three comment letters were filed by relicensing participants in response to SCE's PSP (Attachment 1). Several comments pertaining to proposed studies were offered and are presented in Table 2.3-1.

Table 2.3-1. Relicensing Participant Comments on Proposed Study Plans (full justifications for comments are found in Attachment 1)

Entity[1] and Comment #	Comment	SCE Response and Rationale
CDFW-1	**Comment:** Studies that involve the handling of fish, wildlife, or plant species listed as rare, threatened, or endangered, or candidates for these listings, may require a permit or other authorization from State and/or federal agencies, including CDFW and the U.S. Fish and Wildlife Service (USFWS). CDFW encourages Licensees to pursue any necessary permits or authorizations for proposed Project relicensing studies as soon as possible to avoid delays in implementing studies. Licensee should document all invasive species encountered during Project relicensing studies and provide this information in the technical memos for each study.	**Response:** All biologists assigned to field surveys will possess appropriate state and/or federal permits. All wildlife and plant species observed will be documented in the respective technical reports.
CDFW-2	**Comment:** CDFW requests that Licensees provide sufficient notification of the implementation of Project studies, so all Project relicensing participants have the opportunity to be onsite to observe Project field activities.	**Response:** SCE will provide notification for the implementation of studies and would look for opportunities to involve relicensing participants in field activities.
CDFW-3	**Comment:** CDFW requests that SCE provide the raw data gathered under each Relicensing Study to the appropriate Technical Working Group members	**Response:** SCE will provide raw data after it has been QC'ed by study leads, except where data is considered confidential/privileged (Cultural and Tribal Resource Studies, for example). This will typically include annotating data where appropriate to flag suspect or anomalous outcomes.
CDFW-4	**Comment:** CDFW requests that an additional temperature monitoring location be added to WQ-2 in Mill Creek in the vicinity of Mono City to assess if high summer temperatures in this reach of Mill Creek persist	**Accept:** SCE has updated Study WQ-2, Section 4.1 to include a water temperature monitoring location in Mill Creek near Mono City, as requested by the commenter, as well as one site just upstream of the MCRD confluence and one site downstream near Mono Lake. Data from these sites will help SCE evaluate questions of cumulative effects raised in FERC's SD2.
CDFW-5	**Comment:** CDFW recommends that SCE commit to conducting at least two years of water temperature studies. Collecting only one year of water temperature data could be misleading as potential temperature issues may be missed if the data is collected during a normal to wet year	**Modify:** SCE has modified Study WQ-2, Section 8.0 to include a second year of monitoring in 2026 if the water year type for that year differs from the first year of sampling (2025)[2], or if anomalous conditions, erroneous measurements, or equipment malfunctions necessitate additional effort.

Entity[1] and Comment #	Comment	SCE Response and Rationale
CDFW-6	**Comment:** The PSP states that reservoir fish surveys will occur once during summer or fall, that will include variable mesh gill nets at three locations at 4 to 8 hour net-set periods, including one day and one night period as well as night time boat electroshocking. CDFW recommends attempting to target a lower pool to increase sampling efficiency.	**Reject:** SCE proposed study AQ-1 occurs in the summer or fall due to safety and access considerations at Lundy Lake. Furthermore, similar studies have been conducted in neighboring watersheds with acceptable sample efficiencies for both gillnetting and boat electrofishing.
CDFW-7	**Comment:** CDFW recommends that SCE commit to conducting at least two years of fish population studies. Collecting only one year of data on fish populations would likely result in an incomplete understanding of the fish populations in the FERC Project area and would not account for inter-annual variability	**Reject:** SCE believes one year of study will be sufficient to inform an evaluation of potential Project Effects and develop PM&Es if necessary. Because the fish populations are heavily influenced by the put-take nature of the fishery, one year of sampling will enable SCE to adequately characterize the fish population and address questions of Project effects.
CDFW-8	**Comment:** CDFW recommends that the General Botanical Resource Surveys for special-status native plants follow the guidelines provided in the State of California, California Natural Resource Agency and Department of Fish and Wildlife's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW, 2018). This includes conducting multiple visits to the Project area (e.g., in early, mid and late-season) to adequately capture the floristic diversity at a level necessary to determine if special-status plants are present in the Project area. The protocol also describes that additional focused surveys may be needed that are limited to habitats known to support special-status plants. CDFW recommends that SCE identify habitats that may support specific special-status plants and may require focused surveys	**Response:** The study, as proposed in the RSP, aligns with CDFW's recommendations. Two years of surveys have been proposed (with two visits each year), which would allow for the second year to focus on high priority areas that result from year one survey observations. Specifically, Section 6.2.2 of TERR-1 states that surveys will follow CDFW 2018. Additionally, Section 6.2.2 states that two visits each year will be conducted and there will be two years of surveys. Section 6.2.1 covers vegetation mapping and states that vegetation alliances/associations will be cross-referenced to define habitats for special-status plants. Section 6.2.2 states that the field maps will include areas of potentially suitable habitat for special-status botanical resources.
CDFW-9	**Comment:** Section 1.0 Potential Resource Issue lists the species that could be affected by the Project. Table 5.7-1 of the Pre-Application Document (PAD) for the Project lists the rare, threatened, or endangered plants and wildlife species with the potential to occur within the Project area. This table also includes the following species that may occur within the Project area that are not listed in Section 1.0 of TERR 2: bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), Crotch's bumblebee (*Bombus crotchii*), and	**Accept:** The bald eagle and golden eagle are listed in the study plan. The Crotch's bumblebee and willow flycatcher have been added to Section 1.0 of TERR-2 as requested.

Entity[1] and Comment #	Comment	SCE Response and Rationale
	willow flycatcher (*Empidonax traillii*). CDFW requests that the above listed species be added to Section 1.0 of the PSP	
CDFW-10	**Comment:** Section 6.1 General Wildlife Surveys outlines the field methods and trail camera methods for conducting wildlife surveys. These general survey methods do not include species-specific methods for all the special status species that may occur within the Project area and may result in an incomplete understanding of how wildlife may be affected by Project operations. CDFW recommends that survey methods outlined in CDFW's Survey and Monitoring Protocols and Guidelines webpage https://wildlife.ca.gov/Conservation/Survey-Protocols be used, when available	**Response:** CDFW's Survey and Monitoring Protocol's and Guidelines webpage will be reviewed and used, if applicable, and when in conformance with best scientific and industry practices. The purpose of this study is to identify potentially occurring special status species and their habitats. Protocol-level surveys identified in the referenced web-page are not necessary for an existing project with no proposed ground-disturbing activities.
CDFW-11	**Comment:** CDFW would like to provide input from our Wildlife Branch on trail camera locations and placement prior to implementation.	**Accept:** SCE has modified Section 6.1.2 of TERR-2 reflect pre-implementation consultation with CDFW on the locations for trail cameras.
CDFW-12	**Comment:** CDFW requests that SCE conduct a habitat assessment for willow flycatcher in conjunction with the vegetation mapping efforts in TERR-1. Protocol level surveys for willow flycatcher should be conducted adjacent to and extending 500 feet from all potential suitable nesting habitat identified	**Modify:** A habitat assessment for willow flycatcher has been added to Section 6.1.1 of TERR-2. The habitat assessment will be performed during wildlife surveys. Protocol level surveys are not needed to inform the relicensing process as there is no habitat disturbing action being proposed.
CDFW-13	**Comment:** CDFW recommends that SCE commit to conducting at least two years of wildlife surveys. Conducting only one year of studies could result in an incomplete understanding of how wildlife use habitat within the FERC Project boundary.	**Modify:** The study plan has been designed to obtain the information needed in one season. However, SCE has added criteria in Section 6.1.1 of the study plan to conduct a second year of the study under the following conditions: (1) Should evidence of listed or candidate species be found within the FERC Boundary (other than as migrants or fly-overs) a second year of surveys will be scheduled to focus on investigating the intensity of habitat use within the FERC boundary by those species; or (2) Should evidence of bat maternity roosting be found in a Project facility a second year of surveys will be scheduled.
CDFW-14	**Comment:** SCE should detail how SCE will determine if a Project facility could support bat roosts. SCE should also list what types of facilities would be looked at (e.g., bridges, buildings, dam structures, tunnels, rip-rap, culverts). After	**Accept:** A bullet point has been added to section 6.1.1 Field Surveys in the TERR-2 study plan to examine Lundy Project facilities to determine which facilities have the potential to support bat roosts.

Entity[1] and Comment #	Comment	SCE Response and Rationale
	SCE conducts the preliminary visual assessment of Project facilities to determine the potential for facilities to support bat roosts, CDFW requests that SCE provide a summary of all the Project facilities, survey methodology, photos, description of features that provide roosting habitat (e.g. expansion joints, hinges), a description of the surrounding environmental conditions and a detailed explanation if determining that no bat habitat is present on or adjacent to a Project facility. All species of bats, not just special-status species bats, that could potentially be utilizing (e.g. day roost, night roost, maternity roost) the Project facilities and Project area (e.g. foraging) need to be identified.	
CDFW-15	**Comment:** Not all bat species can be identified with just a visual assessment, and acoustic monitoring should also be implemented to help identify bat species in the Project area. A complete inventory of the bat species using the FERC Project area is required, as well as an understanding of what types of roosts the Project area provides. This information is necessary to avoid impacts to bats. Habitat loss, habitat degradation, light, noise, and human disturbance can all have impacts on bats. Additionally, if exclusion from or disturbance to a maternity roost occurs due to maintenance or repair of other operational needs, large loss of young could occur	**Modify:** A bullet point has been added to section 6.1.1 Field Surveys in the TERR-2 study plan to conduct acoustic bat surveys. The acoustic bat surveys will be performed at relevant Project facilities and in likely flight corridors within select portions of the FERC Project area. Targeting representative bat flight corridors is expected to appropriately sample the bat foraging activity within the FERC Project area.
CDFW-16	**Comment:** Bats use roost locations for several different reasons. Maternity colonies are generally formed in spring (varies with species and geographic location) and in conditions that are very warm and thermally stable. During summer bats are most active and raise their young, frequently using a day roost to sleep and rear their young and night roost for resting, digesting after foraging, and socializing. Day roosts are often cryptic, concealed and not always predictable in their location. Some species use roosts for short periods as migratory stop-over sites. Information regarding bat roost type (day, night, maternity) and size, bat species, reproductive status, and health, should be collected.	**Accept:** The study plan includes inspecting Project facilities for evidence of critical bat roosts (including maternity roosts, hibernacula, and established night roosts) that will be assessed for potential effects associated with the Project in Section 6.1.1. SCE agrees that many bat roosts are cryptic and not always predictable, however, structures that support critical bat roosts have features that are unique within the local vicinity and experience high seasonal site fidelity with respect to bat use. The consistent annual use of these roosts concentrates the evidence of use increasing the likelihood of detection. Further, the climate at the Project location concentrates the roosting activity to limited periods increasing the likelihood of detection during survey periods.

Entity[1] and Comment #	Comment	SCE Response and Rationale
		Should roosts be detected, information regarding roost size and bat species will be collected. Reproductive status and health status data will also be collected, where visibly detectable.
CDFW-17	**Comment:** CDFW requests that SCE notify CDFW if roosting bats are detected in early spring in the facilities so CDFW can conduct swab sampling	**Accept:** Section 6.1.1 of TERR-2 has been modified to indicate that SCE will notify CDFW if bats are detected.
SWRCB-1	**Comment:** A single year of sampling is insufficient to characterize water quality. Interannual differences in water chemistry in the Sierra Nevada are largely controlled by water year type (Sadro et al., 20181); thus, sampling across multiple years, and more importantly over a range of water year types, is necessary to adequately determine the range of water quality conditions within Project waters. State Water Board staff request an additional study season for water quality sampling at Lundy Lake and Mill Creek	**Modify:** Similar to the response to comment CDFW-5, SCE has modified Study WQ-1, Section 8.0 to include a second year of reservoir and stream water quality, and bacterial sampling in 2026 if the water year type for that year differs from the first year of sampling (2025)[2].
SWRCB-2	**Comment:** State Water Board staff request that, as possible, seasonal sampling be conducted at the end of winter stratification rather than during spring overturn or early summer stratification, and at the end of summer stratification rather than in mid-summer (assuming Lundy Lake is dimictic). Low-oxygen conditions are most likely to occur at the end of a period of extended stratification and as such sampling should be timed to capture those conditions.	**Modify:** Samples will be collected once reservoirs are safely accessible. The reservoir is not generally accessible during the end of winter when ice may be melting; therefore, samples will be collected during early spring. Sampling will also be conducted between mid and late summer when low-oxygen conditions may have the potential to occur in the reservoir. SCE has updated Study WQ-1, Section 6.1 to include clarification on when seasonal sampling will occur.
SWRCB-3	**Comment:** In its June 2024 comment letter on the Pre-Application Document (PAD), State Water Board staff recommended SCE map the bathymetry of Lundy Lake to determine which areas may be of greatest concern for hypoxia or anoxia. SCE proposed to collect water quality data "near the location of maximum reservoir depth", but do not explain how this location will be determined without additional bathymetric data. In its response to PAD comments, SCE states that "SCE has not identified a need for bathymetry or updating storage as there is no evidence that sediment accumulation is affecting storage in the reservoir" – but this does not address its connection to WQ-1. As reiterated above, the relevance of bathymetric data for Lundy Lake is to determine locations of potential anoxia or	**Reject:** Bathymetry surveys are not necessary to find the location near the maximum depth of the reservoir. Development of bathymetry requires significant investment in time and technology to post-process, tie to a survey monument, and knit together data to accomplish what is a simple task using available fish-finder technology in a small reservoir. The licensee proposes to determine the location for the deepest part of the reservoir using a pre-Project topographic map and a depth finder; this approach is considered a widely accepted method. SCE has updated Study WQ-1, Section 6.1.1 to include these proposed methods.

Entity[1] and Comment #	Comment	SCE Response and Rationale
	hypoxia, where metals sampling proposed in WQ-1 would be most useful to collect.	
SWRCB-4	**Comment:** Similar to Comment 1, the number of recreationalists within the Project area is likely variable by year. Bacterial sampling data is dependent on how many recreation users are present around the time of sampling. Because of this variability, State Water Board staff request two study seasons for bacterial sampling in all selected sites to accurately assess of the prevalence of E. coli within the Project area	**Modify:** Similar to the response to comment CDFW-5, SCE has modified Study WQ-1, Section 8.0 to include a second year of bacterial sampling in 2026 if the water year type for that year differs from the first year of sampling (2025)[2]. Sample collection will occur over six consecutive weeks during the peak summer recreation period, including sampling before and after a holiday weekend (e.g., Labor Day). Variation in the number of recreationists should be captured during the extended sampling period.
SWRCB-5	**Comment:** Methylmercury fish tissue sampling should run for two consecutive water-years to meet the goals and objectives described in the State Water Board's June 2024 PAD comment letter. Extensive mining operations for a variety of metals occurred upstream of Lundy Lake with no available data on how these mining operations have affected water quality. An additional study year will also help better understand Project impacts to the bioavailability and transport of those metals. State Water Board staff request an additional year of methylmercury fish tissue sampling at the selected sites or for modified language in Section 6.3 Fish Tissue Mercury Sampling of WQ-1 to state that an additional year of analysis will occur if conditions warrant, while also specifying what values may trigger a second study season	**Reject:** SCE believes one year of study will be sufficient to inform an evaluation of potential Project effects and develop PM&Es if necessary. To better understand the conditions that increase the methylation and potential bioavailability of mercury in Lundy Lake, the WQ-1 study plan will include multiple sampling components: 1) dissolved oxygen profiles to assess the potential for anoxia and hypoxia during summer; 2) total and dissolved metal concentrations in Lundy Lake water across multiple seasons, and 3) mercury in fish tissue within multiple trophic levels. Furthermore, the fish tissue sampling will occur in summer or fall when the concentration of metals tends to be highest in fish. The inclusion of multiple study components will provide sufficient data in one sampling year to assess how reservoir conditions may increase methylation of mercury, the potential for bioaccumulation of mercury in fish, and for comparison to California statewide mercury water quality objectives.
SWRCB-6	**Comment:** State Water Board staff request that SCE amend the WQ-1 proposed fish tissue protocol to include sampling that will address the Prey Fish Water Quality Objective as stated in the Statewide Mercury Provisions. Please note that compliance with the Statewide Mercury Provisions will be a requirement of any future water quality certification	**Accept:** SCE has reviewed the Statewide Mercury Provisions, and notes that the Sport Fish Water Quality Objective is sufficient to ensure wildlife beneficial uses are protected if trophic level 4 (TL4) fish data are used or if the Sport Fish water quality objective is exceeded when applied to TL3 fish. The mercury in fish tissue study includes collection of TL4 fish (brown trout). While no change in the study is anticipated, the Study WQ-1, Section 6.3, was modified to include the trophic

Entity[1] and Comment #	Comment	SCE Response and Rationale
		levels of targeted fish species and the collection of prey fish if no TL 4 fish are captured.
SWRCB-7	**Comment:** As stated in Comment 1, to accurately characterize conditions in a snowmelt-dominated system, water temperature data must be collected across a range of water year types. WQ-2 states that "Sampling within one calendar year is proposed"; State Water Board staff request that this be updated to state that data collection will occur over two water year types	**Reject:** The proposed study will collect data necessary to inform potential effects of Project operations effects and develop PM&Es if necessary. Please see response to comment CDFW-5.
SWRCB-8	**Comment:** Additionally, Site 1 potentially could be located downstream of the confluence of Mill Creek and South Fork Mill Creek to better capture the actual inflow temperature to Lundy Lake	**Accept:** SCE has relocated the location of Site 1 in Study WQ-1, Section 4.0 to downstream of the confluence of Mill Creek and South Fork Mill Creek to better capture the actual inflow temperature to Lundy Lake.
SWRCB-9	**Comment:** State Water Board staff similarly requested that MCRD data be shared with relicensing stakeholders in Comment 8 of its PAD comment letter without requesting a specific study, but SCE did not respond to this request. The MCRD is a Project facility and flows through it are controlled by the Project. A future water quality certification issued by the State Water Board may include conditions on the MCRD and, as such, must be informed by the available information regarding the MCRD. SCE appears to acknowledge potential Project impacts of the MCRD in proposed WQ-2, but without information regarding flow in the MCRD, it will be difficult for stakeholders to determine Project effects, and for State Water Board staff to determine compliance with Lahontan Basin Plan water quality objectives. State Water Board staff again request that SCE share the MCRD performance data with relicensing stakeholders	**Modify:** SCE recognizes SCWRB requested that SCE provide data and reports developed as part of the 2023 revised Stream Gaging Plan which are not publicly available from the US Geological Survey to broader relicensing participants. SCE has no concerns with providing MCRD data to the SWRCB as it has been developed as part of ongoing O&M requirements to monitor flows in the MCRD consistent with License Article 412, as amended. These data, along with an effort in 2024, are being used to calibrate gages and meet SCE's reporting requirements under the license and separately to water right holders. Additionally, the MCAPT tool that SCE and water rights holders have developed reports flows in the MCRD, and SCE is able to share these data with the MLC and the SWRCB—although, as explained in SCE's response to MLC-1 below, the Commission has already determined that issues related to the administration of state water rights are beyond the scope of this relicensing effort. To the extent that flows in the MCRD may affect other resources, this issue is already captured by the entirety of the environmental study program represented in this RSP. Compliance with Lahontan Basin Plan water quality objectives will be informed by data collected under Study WQ-1 and WQ-2. Although not specifically requested by SWRCB, SCE has

Entity[1] and Comment #	Comment	SCE Response and Rationale
		added three water temperature study sites to Study WQ-2 (see response to comment CDFW-4).
MLC-1	**Comment:** SCE should assess leakage or loss of water within the Mill Creek Return Ditch and evaluate existing gauging infrastructure.	**Reject:** SCE is not proposing to implement the MCRD "performance" study proposed by MLC. As an initial matter, this study request lacks a nexus to the FERC-licensed Project and would not render any information to inform requirements under the new license, as required by study criterion 5 (18 C.F.R. § 5.9(b)(5)). From a legal perspective, administration of water rights along this earthen water supply ditch is not a purpose of the Lundy Project. As the Commission explained in its 2007 order rejecting a proposed settlement that would have incorporated into the license certain requirements for the operation and maintenance of MRCD: "We see no basis for adopting as license requirements provisions whose purpose is to implement an agreement reached by the licensee and some (but not all) of the water rights holders for the distribution of water. While, under section 27 of the FPA, the Commission may not take actions that interfere with state water rights, it is quite another thing for the Commission to compel a licensee to adhere to privately reached agreements for supplying water to satisfy those rights. To incorporate these settlement provisions as license articles would make us responsible for enforcing the licensee's compliance with this private scheme of water distribution. *S. Cal. Edison Co.*, 121 FERC ¶ 61,154, at 84 (2007). MLC's proposed study would have SCE study issues related to the supply of water for privately held water rights, a subject matter that the Commission previously held is beyond the scope of its licensing authority under the Federal Power Act. Moreover, from a practical standpoint, the MLC's requested study in unnecessary. Under the 2022 amendment to the 2005 Lundy Hydroelectric Project Settlement Agreement between SCE and water rights holders and agencies, SCE

Entity[1] and Comment #	Comment	SCE Response and Rationale
		already conducts O&M on the return ditch to address performance challenges when identified. These ongoing activities also include an evaluation of the existing gauging infrastructure to measure MCRD flows. SCE is already contractually committed to and will continue to work with its settlement partners and other water right holders to meet its commitments under the Settlement Agreement. For that reason, the information sought by the MLC from this study will not inform any new license requirements, as SCE is already in the process of identifying and addressing carriage loss in the MCRD. Finally, to the extent MLC is seeking its proposed study to understand Project-related effects other than state water rights, those information needs will be met through other proposed relicensing studies, as explained in SCE's response to SWRCB-9.
MLC-2	**Comment:** SCE should gather information or conduct a study about how the seasonal timing and magnitude of high-season water releases could negatively impact Brown Trout populations in Mill Creek.	**Modify:** SCE has modified Study AQ-1, Sections 3.0 and 6.2.3 to include a literature review to understand how large (e.g., greater than 60 cfs), unseasonable (e.g., fall and winter) flow releases might affect non-native brown trout populations in Mill Creek. Additionally, SCE has clarified Section 3.0 of Study AQ-2 specifying an objective to compile and summarize hydrologic gage data for use in other resource assessments. For purposes of evaluating Project effects, SCE will use hydrology data from Study AQ-2, fish population findings and literature review outcomes of Study AQ-1, and existing flow-habitat data (i.e., weighted usable area) to characterize potential effects of current and potential Project operations, including the timing and magnitude of high-season water releases (great than 60 cfs) on non-native brown trout populations in Mill Creek.
MLC-3	**Comment:** SCE's Proposed Study AQ-2 – Fish Stranding Study Technical Study Plan should be modified to address downstream impacts as well as up-ramping.	**Modify:** Study AQ-2, Section 4.0 has been modified to address downstream impacts with the addition of a study site in lower Mill Creek below the MCRD to assess downstream stranding risk. SCE also agrees that adding this site below the MCRD will support the discussion of the cumulative effects of

Entity[1] and Comment #	Comment	SCE Response and Rationale
		the proposed action's effect on the resources and contributing effects from other hydropower and non-hydropower activities within the Mono Lake Subbasin, as articulated by FERC's proposed cumulative effects analysis of SD2. Although specific methods to evaluate up-ramping were not proposed by the commenter, SCE proposes in Study AQ-2 to increase flows consistent with the Settlement Agreement once stage equipment is installed and prior to initiating the second phase of monitoring (see Study AQ-2, Section 6.2). Stage will be continuously recorded during this up-ramp and correlated to flow. In its effects analysis for the license application, SCE will evaluate the hydrology information collected under Study AQ-2 as well as hydrology from the USGS gage, Project operations information, fish population data from Study AQ-1, and available scientific literature regarding the effects of up-ramping on fish populations to inform potential impacts of up-ramping on non-native trout populations in Mill Creek.
MLC-4	**Comment:** SCE should correct inaccurate maps in the PSP.	**Response:** Maps will be reviewed and corrected as necessary in time to inform study reporting and the license application.

Notes:
[1] CDFW= California Department of Fish and Wildlife; SWRCB= State Water Resources Control Board; MLC= Mono Lake Committee
[2] The water year will be determined using the adjacent Lee Vining Project [P-1388] forecast. A water year is considered "wet" when the annual precipitation was in the highest 30 percent of the previous years, back to 1966. A water year is "dry" when the precipitation is in the lowest 30 percent of the previous years, back to 1966. A "normal" water year is when it is neither wet nor dry.

2.4. STUDY PLAN COMPONENTS

The individual Study Plans include the following information:

- **Potential Resource Issue(s)** – This section identifies the environmental or cultural resource issues that are specifically addressed in the study plan.
- **Project Nexus and How the Results will be Used** – This section identifies the nexus between project operations and maintenance activities to the environmental or cultural resource issue(s). It also describes how the study results will be used to identify potential license conditions that may be necessary to address the issue(s).
- **Study Goals and Objectives** – This section describes the specific study objectives or goals of the study.
- **Study Area and Study Sites** – This section clearly identifies the limits of the study based on the potential project nexus for each study plan.
- **Existing Information** – This section briefly describes the existing information identified in the PAD, if any, including reference pages or literature relating to the issue, and describes the information gaps the study is intended to fill.
- **Study Approach** – This section provides a description of the study elements and methodologies proposed to meet each study objective.
- **Reporting** – This section includes a brief statement regarding how study results will be shared.
- **Schedule** – This section presents a schedule for the implementation of each study.
- **Level of Effort and Cost** – This section includes a cost estimate (2024 dollars) to provide an understanding of the level of effort anticipated in the study.

2.4.1. CONTENT AND ORGANIZATION OF STUDY PLANS

The following sections describe three additional study plan components that apply to all study plans. These components are not addressed individually within each study plan.

2.4.1.1. Lundy Project Description

The Lundy Project is located on the eastern slope of the Sierra Nevada along Mill Creek, approximately 7.6 miles northwest of Lee Vining off Lundy Road, in Mono County, California. The 3-megawatt (MW) Lundy Project is partially in the Inyo National Forest (INF), managed by the USDA Forest Service and partly on federal land administered by the United States Department of the Interior, Bureau of Land Management (BLM), Bishop Field Office. The remaining Lundy Project lands are owned by SCE except for a small parcel of land near the powerhouse owned by Mono County.

The Lundy Project facilities include Lundy Lake, Lundy Dam, an intake, a flowline, a penstock, a powerhouse, and a water distribution system by which flows are directed to meet the water rights of water rights holders. The flowline and penstock convey water from Lundy Lake to the powerhouse (Figure 2.4-1).

For more details on the Lundy Project description, including operation of the Lundy Project, please refer to Section 4.0 Project Location, Facilities, and Operations in the PAD.

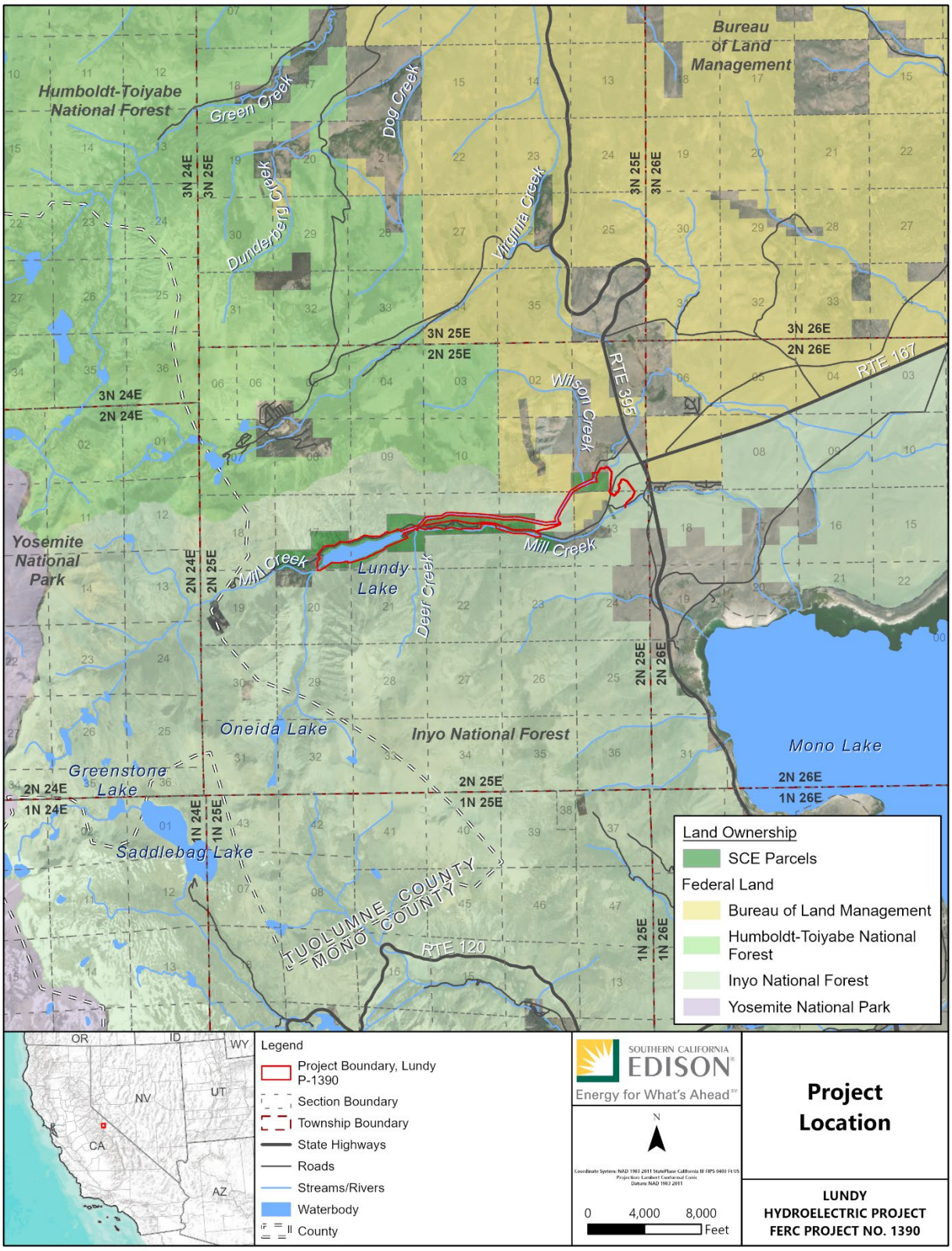

Figure 2.4-1. Lundy Hydroelectric Project Map.

2.4.1.2. Relevant Resource Agency Jurisdiction/Management Goals

Table 2.4-1 identifies relevant resource agency jurisdiction/management goals related to the operation and maintenance of the Lundy Project. This list reflects the general content and range of management goals that may be under consideration for the Lundy Project relicensing. For each goal, a corresponding study plan(s) was identified which would result in the collection of sufficient data to adequately address the resource agency management goals.

Table 2.4-1. Relevant Resource Agency Jurisdiction / Management Goals

Agency	Resource Agency Jurisdiction / Management Goals	Lundy Project Study Plans											
		WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring	WQ-2 Lundy Lake and Mill Creek Water Temperature Monitoring	AQ-1 Fish Community Survey	AQ-2 Fish Stranding Study	TERR-1 General Botanical Resources Survey	TERR-2 General Wildlife Survey	REC-1 Recreation Use and Needs Assessment	REC-2 Recreation Facilities Condition Assessment	CUL-1 Cultural Resource - Archaeology	CUL-2 Cultural Resource - Built Environment	TRI-1 Tribal Resource	LAND-1 Project Lands and Roads Study*
California Department of Fish and Wildlife	In the State of California, fish and wildlife resources are held in trust for the people of the state, and the CDFW has statutory responsibility for managing and protecting all fish, wildlife, and habitat to support these species in the public interest (California Fish and Game Code § 711.7). The CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (California Fish and Game Code § 1802).	X	X	X	X	X	X						
California Office of Historic Preservation	The California Office of Historic Preservation is charged with ensuring that projects and programs conducted or sponsored by federal and state agencies comply with federal and state historic preservation laws and that projects are planned in ways that avoid or minimize adverse effects to heritage resources. Section 106 of the National Historic Preservation Act of 1966, as amended (54 United States Code § 300101 et seq.), requires federal agencies to take into account the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. In accordance with section 101(b)(3) of the National Register of Historic Places, the State Historic Preservation Office advises and assists federal agencies in conducting their Section 106 (36 CFR § 800) responsibilities and cooperates with such agencies, local governments, and organizations and individuals to ensure that historic properties are taken into consideration at all levels of planning and development. The regulations implementing Section 106 (36 CFR § 800) define “historic properties” as any pre-contact or historic period district, site, building, structure, or individual object included in or eligible for inclusion in the National Register of Historic Places. This term includes artifacts, records, and remains that are related to and located within historic properties, as well as Traditional Cultural Properties that meet the National Register Criteria.									X	X	X	
State Water Resources Control Board	A certification issued by the State Water Resources Control Board (State Water Board) for the Project must ensure compliance with the water quality standards in the Water Quality Control Plan for the Lahontan Region (Basin Plan). Water quality control plans designate the beneficial uses of water that are to be protected, water quality objectives for the reasonable protection of the beneficial uses and the prevention of nuisance, and a program of implementation to achieve the water quality objectives (California Water Code, §§ 13241, 13050, subds. (h), (j)). The beneficial uses, together with the water quality objectives contained in the water quality control plans and applicable anti-degradation requirements, constitute California’s water quality standards for purposes of the Clean Water Act. In issuing water quality certification for a project, the State Water Board must ensure consistency with the designated beneficial uses of waters affected by the project, the water quality objectives developed to protect those uses, and anti-degradation requirements.	X	X	X	X	X	X						

Agency	Resource Agency Jurisdiction / Management Goals	Lundy Project Study Plans											
		WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring	WQ-2 Lundy Lake and Mill Creek Water Temperature Monitoring	AQ-1 Fish Community Survey	AQ-2 Fish Stranding Study	TERR-1 General Botanical Resources Survey	TERR-2 General Wildlife Survey	REC-1 Recreation Use and Needs Assessment	REC-2 Recreation Facilities Condition Assessment	CUL-1 Cultural Resource - Archaeology	CUL-2 Cultural Resource - Built Environment	TRI-1 Tribal Resource	LAND-1 Project Lands and Roads Study*
U.S. Fish and Wildlife Service	Working with others to conserve, protect, and enhance, fish, wildlife, plants, and their habitats for the continuing benefit of the American people reflects the value the agency places on working in partnership with others. As the principal federal partner responsible for administering the Endangered Species Act, the U.S. Fish and Wildlife Service leads the recovery and conservation of imperiled species through protection of endangered and threatened species and conservation of candidate species and species-at-risk.	X	X	X	X	X	X						
U.S. Forest Service	The U.S. Forest Service (Forest Service) was established in 1905 to sustainably manage national forests and promote conservation across the country. The overriding objective of the Forest Service's forest management program is to ensure that the National Forests are managed in an ecologically sustainable manner. The National Forests were originally envisioned as working forests with multiple objectives: to improve and protect the forest, to secure favorable watershed conditions, and to furnish a continuous supply of timber for the use of citizens of the United States. Forest management objectives have since expanded and evolved to include ecological restoration and protection, research and product development, fire hazard reduction, and the maintenance of healthy forests. Guided by law, regulation, and agency policy, Forest Service forest managers use timber sales, as well as other vegetation management techniques such as prescribed fire, to achieve these objectives. A portion of the Project facilities occupy federal lands within the Inyo National Forest, which is under the jurisdiction of the Forest Service. As such, much of the Project Area is managed in accordance with the goals and policies of the 2019 Land Management Plan for the Inyo National Forest and the 2001 Wilderness Management Plan for the Ansel Adams, John Muir, and Dinkey Lakes Wildernesses	X	X	X	X	X	X	X	X	X	X	X	X

Notes:
CDFW = California Department of Fish and Wildlife
CWA = Clean Water Act
FERC = Federal Energy Regulatory Commission
NHPA = National Historic Preservation Act
USFWS = U.S. Fish and Wildlife Service

2.4.1.3. Consistency with Generally Accepted Practice in the Scientific Community

The study methodologies (including data collection and analysis techniques, field schedules, and study durations) identified in the RSP are consistent with the generally accepted practice in the scientific community. The scope of each study plan, provided in Attachment 2, is consistent with common approaches used for other relicensing proceedings in California and the nation, and where appropriate, reference specific protocols and survey methodologies.

2.4.2. CONSIDERATION OF LEVEL OF EFFORT AND COST

The overall objective of the RSP is to develop sufficient information to identify potential Lundy Project impacts and collaborate on the proposed Lundy Project included in the License Application. The study plan approaches were evaluated first to verify that the desired information was focused on potential impacts associated with the Lundy Project (i.e., Project Nexus), second to confirm that the information collected would substantially influence decisions on new license conditions (i.e., clear linkage between information obtained and decision process), and third to substantiate that the study approaches and resulting level of efforts were consistent with generally accepted practices in the scientific community. The study plans provided in Attachment 2 meet these evaluation criteria.

As no alternative study methods have been proposed to address identified questions, there appears to be no need for FERC to determine whether an alternative method may be preferred. Should alternatives be advanced during the comment periods described in 18 CFR § 5.12 and 5.13, SCE will clarify the basis for its selection of methods and practices. Table 2.4-2 presents the estimated cost for completion of each study plan.

Table 2.4-2. Total Cost for Study Implementation

Study Plan Title	Total Estimated Cost ($2024)
Aquatic Resources	
WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring	$228,000
WQ-2 Lundy Lake and Mill Creek Water Temperature Monitoring	$68,000
AQ-1 Fish Community Survey	$153,000
AQ-2 Fish Stranding Study	$206,000
Total	**$655,000**
Terrestrial Resources	
TERR-1 General Botanical Resources Survey	$208,000
TERR-2 General Wildlife Survey	$167,500
Total	**$375,500**
Recreation Sources	
REC-1 Recreation Use and Needs Assessment	$280,000
REC-2 Recreation Facilities Condition Assessment	$68,000
Total	**$348,000**
Cultural Resources	
CUL-1 Cultural Resource - Archaeology	$83,000
CUL-2 Cultural Resource - Built Environment	$84,000
TRI-1 Tribal Resource	$90,000
Total	**$257,000**
Land Resources	
LAND-1 Project Lands and Roads Study	$45,000
Total	**$45,000**
Project Total	**$1,680,500**

2.4.3. Study Plan Schedule

The overall study plan development schedule is included in Table 2.4-3. The schedule includes timeframes for formal dispute resolution even though SCE anticipates that consensus with relicensing participants on the study plans will be reached without the need for formal dispute resolution.

Table 2.4-3. Lundy Hydroelectric Project Relicensing—Study Plan Process Plan and Schedule

FERC 18 CFR §	Relicensing Activity [a]	Responsible Party	Activity Time Frame	Deadline [b,c]
Study Plan Development				
5.13	**RSP and Study Plan Determination**			
5.13(a)	File RSP	SCE	Within 30 days following the deadline for filing comments on the PSP	December 4, 2024
5.13(b)	File final comments on RSP	Participants	Within 15 days following the filing of the RSP	December 19, 2024
5.13(c)	Issue Study Plan Determination	FERC	15 days following the deadline for filing comments on the RSP	January 3, 2025
Formal Study Dispute Resolution Process				
5.13(d) 5.14(a)	File Notice of Study Dispute	Mandatory Conditioning Agencies	Within 20 days of the Study Plan Determination	January 23, 2025
5.14(d)	Convene Dispute Resolution Panel, if notice of Study Dispute is filed	FERC	Within 20 days of the Notice of Study Dispute	February 12, 2025
5.14(i)	File with FERC and serve upon panel members' comments and information regarding the dispute	SCE	No later than 25 days following the Notice of Study Dispute	February 17, 2025
5.14(k)	Issue findings and recommendations regarding the Study Dispute to Director of the Office of Energy Projects	Dispute Resolution Panel	No later than 50 days following the Notice of Study Dispute	March 14, 2025
5.14(l)	Issue Written Determination on Study Dispute	FERC	No later than 70 days from the date of filing of the Notice of Study Dispute	April 3, 2025

CFR = Code of Federal Regulations; FERC = Federal Energy Regulatory Commission; NOI = Notice of Intent; PAD = Pre-Application Document; PSP = Proposed Study Plan; RSP = Revised Study Plan; SCE = Southern California Edison

Notes:

[a] Shaded milestones represent the steps in the Study Dispute process that are unnecessary if no disputes arise.

[b] Dates indicate the day or time frame within which an activity must occur in accordance with 18 CFR Part 5 based on a February 23, 2024, filing date for the NOI/PAD.
[c] If the deadline falls on a weekend, part-day holiday, or legal public holiday, the deadline is extended to the next business day.

3.0 EXECUTION OF STUDY PLANS

3.1. STUDY PLAN IMPLEMENTATION

SCE will initiate implementation of the 12 studies in the spring/summer of 2025 after FERC issues their Study Plan Determination (anticipated January 3, 2025).

Should any subsequent disputes arise, SCE will plan to initiate implementation of the 12 studies after the issuance of a written determination on the Study Dispute (if needed, anticipated April 3, 2025) (Table 2.4-3). Each study plan contains a detailed schedule for data collection and analysis, development and distribution of draft and final study reports. Table 3.1-1 provides an overview of these activities for each study.

Table 3.1-1. Anticipated Study Implementation Schedule

Study Plan		2025				2026				2027			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Reporting (ISR/USR)					▲				▲			
	Application for New License								★	★			
WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring													
Conduct Monitoring			■	■	■								
Analyze Data and Prepare Report					■	■	■	■					
WQ-2 Lundy Lake and Mill Creek Water Temperature Monitoring													
Conduct Monitoring			■	■	■	■	■						
Analyze Data and Prepare Report					■	■	■	■					
AQ-1 Fish Community Survey													
Conduct Monitoring				■	■								
Analyze Data and Prepare Report					■	■	■						
AQ-2 Fish Stranding Study													
Conduct Monitoring		■	■	■									
Analyze Data and Prepare Report					■	■	■						
TERR-1 General Botanical Resources Survey													
Conduct Botanical Resources Study			■	■			■	■					
Analyze Results and Prepare Report					■	■			■	■			
TERR-2 General Wildlife Survey													
Conduct Wildlife Surveys			■	■	■								
Analyze Data and Prepare Report					■	■	■						
REC-1 Recreation Use and Needs Assessment													
Conduct Recreation Visitor Intercept Surveys			■	■	■								
Analyze Data and Prepare Report					■	■	■	■	■				
REC-2 Recreation Facilities Condition Assessment													
Conduct Facility Condition Assessments				■									
Analyze Data and Prepare Report					■	■							
CUL-1 Cultural Resource - Archaeology													
Initiate Consultation and Conduct Archival Research			■	■									
Conduct Cultural Resource Surveys			■	■	■								
Compile Cultural Resource Survey Data and Information					■	■	■						
Continue Evaluation of Cultural Resources, as needed					■	■	■						

Study Plan		2025				2026				2027			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Reporting (ISR/USR)					▲				▲			
	Application for New License								★		★		
Analyze Data and Prepare Cultural Resources Report													
CUL-2 Cultural Resource - Built Environment													
Initiate Consultation and Conduct Archival Research													
Conduct Field Surveys													
Compile and Conduct Built Resources recordation and evaluation													
Prepare draft Report; Circulate drafts and prepare responses													
Draft Finding of Effect (if needed); Prepare built resources section HPMP													
TRI-1 Tribal Resource													
Initiate Consultation and Conduct Archival Research													
Conduct Tribal Site Visits and Evaluate Tribal Resources													
Analyze Data and Prepare Tribal Resources Report													
Continue Evaluation of Tribal Resources, as needed													
Analyze Data and Prepare Report													
LAND-1 Project Lands and Roads Study													
Conduct Desktop Analysis and interviews													
Consult with appropriate agencies and determine need for site assessments, potential field season for site assessments													
Analyze Data and Prepare Report													

Study Implementation and Reporting: May include desktop review of existing information, agency consultation, field surveys, data analysis, and development of a Technical Memorandum, as outlined in the individual Study Plans.

▲ Reporting: Schedule assumes FERC will issue its Study Plan Determination on January 3, 2025, as presented in SD1. SCE will file the Initial Study Report (ISR) within 1 year (January 3, 2026) and the Updated Study Report (USR) within 2 years of FERC's determination (January 3, 2027).

★ Submittal of SCE's Draft License Application (October 1, 2026) and Final License Application (February 28, 2027) in accordance with 18 CFR § 5.16(a) and 5.17(a).

3.2. INITIAL STUDY REPORTS AND MEETINGS

SCE will follow the standard FERC study plan progress reporting and meeting sequence as described in 18 CFR § 5.15(c) and (f). SCE will file an Initial Study Report within 1 year following FERC's Study Plan Determination (estimated January 3, 2025) and an Updated Study Report (USR) no later than 2 years after FERC's determination. The reports will describe the progress of implementing each study plan, proposed schedule to complete any remaining tasks, and an overview of data collected to date. If a study-specific Technical Report is complete, it will be appended to the filing. The progress reports will note any variances or modifications from the FERC-approved study plan.

A study plan meeting with relicensing participants and FERC staff will occur within 15 days of the Initial Study Report (ISR) and Updated Study Report (USR) filing to discuss the study results. SCE will file a meeting summary within 15 days of each meeting.

ATTACHMENT 1

COMMENT LETTERS FILED WITH FERC

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Boulevard, Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

November 4, 2024
Sent via email

Kimberly Bose, Secretary
Federal Energy Regulatory Commission
Division of Hydropower Licensing
888 First Street NE
Washington, DC 20426

Subject: Comments from the California Department of Fish and Wildlife on Southern California Edison's Proposed Study Plan for the Relicensing of the Lundy Hydroelectric Project, FERC Project No. 1390-069

Dear Ms. Bose,

The California Department of Fish and Wildlife (CDFW) has received and reviewed the Proposed Study Plan (PSP) filed by Southern California Edison (SCE) for the relicensing of the Lundy Creek Hydroelectric Project (Project, FERC No. 1390). SCE notified CDFW via email on August 5, 2024 that the PSP was available through the Federal Energy Regulatory Commission's (FERC) eLibrary. Pursuant to §5.12 of FERC's regulations, CDFW is providing comments within 90 days following filing of the PSP.

AUTHORITIES

CDFW is the relevant State fish and wildlife agency for resource consultation pursuant to the Federal Power Act Section 10(j) (16 U.S.C. section 803 (j)). The fish and wildlife resources of the State of California are held in trust for the people of the State by and through CDFW pursuant to Fish and Game Code Section 711.7. CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species (Fish & G. Code § 1802). Information generated through the appropriate studies will be utilized by CDFW in the development of 10(j) recommendations.

CDFW's mission is to manage California's diverse fish, wildlife, and plant resources, and the habitats on which they depend, for their ecological values and for their use and enjoyment by the public. It is the goal of CDFW to preserve, protect, and as needed, to restore habitat necessary to support native fish, wildlife, and plant species within the FERC-designated boundaries of the Project, as well as the areas adjacent to the Project in which resources are affected by ongoing Project operations, maintenance, and recreational activities.

COMMENTS AND RECOMMENDATIONS

General Comments

Studies that involve the handling of fish, wildlife, or plant species listed as rare, threatened, or endangered, or candidates for these listings, may require a permit or other authorization from State and/or federal agencies, including CDFW and the U.S. Fish and Wildlife Service (USFWS). CDFW encourages Licensees to pursue any necessary permits or authorizations for proposed Project relicensing studies as soon as possible to avoid delays in implementing studies. Licensee should document all invasive species encountered during Project relicensing studies and provide this information in the technical memos for each study. To avoid the introduction, transfer, and spread of aquatic, riparian, and terrestrial invasive species, including plants, animals, and microbes (e.g., algae, fungi, parasites, mussels, and bacteria), while conducting Project relicensing studies, CDFW recommends Licensees and their contractors follow the protocols listed in the following documents:

- *California Department of Fish and Wildlife Aquatic Invasive Species Decontamination Protocol* (CDFW 2013)
- *Preventing the Spread of Invasive Plants: Best Management Practices for Land Managers* (Cal-IPC 2012)
- *Preventing the Spread of Invasive Plants: Best Management Practices for Transportation and Utility Corridors* (Cal-IPC 2012)

CDFW requests that Licensees provide sufficient notification of the implementation of Project studies, so all Project relicensing participants have the opportunity to be onsite to observe Project field activities.

CDFW requests that SCE provide the raw data gathered under each Relicensing Study to the appropriate Technical Working Group members.

WQ 2 – Water Temperature Technical Study Plan

CDFW Comment: The proposed study includes water temperature sampling at six locations throughout the project area, with the farthest downstream site located in Mill Creek approximately 0.25 miles downstream of the confluence of the Mill Creek Return Ditch (MCRD) and Mill Creek. Existing water temperature data for Mill Creek is sparse with a 1996 CDFW study containing the most robust dataset (CDFW, 1996). In this report a site identified as “Lower Mill Thermograph” located in Mill Creek adjacent to the community of Mono City had the highest recorded temperatures up to 80°F during low flow summer months (p. 90). CDFW requests that an additional temperature monitoring location be added to WQ-2 in Mill Creek in the vicinity of Mono City to assess if high summer temperatures in this reach of Mill Creek persist.

CDFW Comment: The schedule in section 6.0 Study Approach only identifies one year of studies in spring 2025 to spring 2026. CDFW understands that stakeholders can request an additional year of studies after reviewing the draft report. However, CDFW recommends that SCE commit to conducting at least two years of water temperature studies. Collecting only one year of water temperature data could be misleading as potential temperature issues may be missed if the data is collected during a normal to wet year.

AQ 1 – Fish Community Survey Technical Study Plan

CDFW Comment: The PSP states that reservoir fish surveys will occur once during summer or fall, that will include variable mesh gill nets at three locations at 4 to 8 hour net-set periods, including one day and one night period as well as night time boat electroshocking. CDFW recommends attempting to target a lower pool to increase sampling efficiency.

CDFW Comment: The schedule in Section 8 of AQ 1 only identifies one year of fish population studies (streams and reservoirs) in 2025. CDFW understands that stakeholders can request an additional year of studies after reviewing the draft report. However, CDFW recommends that SCE commit to conducting at least two years of fish population studies. Collecting only one year of data on fish populations would likely result in an incomplete understanding of the fish populations in the FERC Project area and would not account for inter-annual variability.

TERR 1 – Botanical Resources Technical Study Plan

CDFW Comment: CDFW recommends that the General Botanical Resource Surveys for special-status native plants follow the guidelines provided in the State of California, California Natural Resource Agency and Department of Fish and Wildlife's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW, 2018). This includes conducting multiple visits to the Project area (e.g., in early, mid and late-season) to adequately capture the floristic diversity at a level necessary to determine if special-status plants are present in the Project area. The protocol also describes that additional focused surveys may be needed that are limited to habitats known to support special-status plants. CDFW recommends that SCE identify habitats that may support specific special-status plants and may require focused surveys.

TERR 2 – General Wildlife Resources Technical Study Plan

CDFW Comment: Section 1.0 Potential Resource Issue lists the species that could be affected by the Project. Table 5.7-1 of the Pre-Application Document (PAD) for the Project lists the rare, threatened, or endangered plants and wildlife species with the potential to occur within the Project area. This table also includes the following species

that may occur within the Project area that are not listed in Section 1.0 of TERR 2: bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), Crotch's bumblebee (*Bombus crotchii*), and willow flycatcher (*Empidonax traillii)*. CDFW requests that the above listed species be added to Section 1.0 of the PSP.

CDFW Comment: Section 6.1 General Wildlife Surveys outlines the field methods and trail camera methods for conducting wildlife surveys. These general survey methods do not include species-specific methods for all the special status species that may occur within the Project area and may result in an incomplete understanding of how wildlife may be affected by Project operations. CDFW recommends that survey methods outlined in CDFW's Survey and Monitoring Protocols and Guidelines webpage https://wildlife.ca.gov/Conservation/Survey-Protocols be used, when available.

CDFW Comment: CDFW would like to provide input from our Wildlife Branch on trail camera locations and placement prior to implementation.

CDFW Comment: CDFW requests that SCE conduct a habitat assessment for willow flycatcher in conjunction with the vegetation mapping efforts in TERR-1. Protocol level surveys for willow flycatcher should be conducted adjacent to and extending 500 feet from all potential suitable nesting habitat identified.

CDFW Comment: The schedule outlined in Section 8.1 only identifies one year of studies in 2025 for wildlife surveys. CDFW understands that stakeholders can request an additional year of studies after reviewing the draft report. However, CDFW recommends that SCE commit to conducting at least two years of wildlife surveys. Conducting only one year of studies could result in an incomplete understanding of how wildlife use habitat within the FERC Project boundary.

CDFW Comment: SCE should detail how SCE will determine if a Project facility could support bat roosts. SCE should also list what types of facilities would be looked at (e.g., bridges, buildings, dam structures, tunnels, rip-rap, culverts). After SCE conducts the preliminary visual assessment of Project facilities to determine the potential for facilities to support bat roosts, CDFW requests that SCE provide a summary of all the Project facilities, survey methodology, photos, description of features that provide roosting habitat (e.g. expansion joints, hinges), a description of the surrounding environmental conditions and a detailed explanation if determining that no bat habitat is present on or adjacent to a Project facility.

All species of bats, not just special-status species bats, that could potentially be utilizing (e.g., day roost, night roost, maternity roost) the Project facilities and Project area (e.g., foraging) need to be identified. All maternity colonies of bats need protection, not just species of special concern.

If bat roosting habitat is present in a Project facility, but no sign of bats is observed, additional surveys may be needed to support the conclusion that bats are not present. If only a few bats are present, the sign of occupancy may not be obvious. If suitable habitat and signs of bats are observed, focused surveys to determine approximate size of the colony(s) and species present must be conducted by a qualified bat biologist. The qualified bat biologist would utilize methods to survey the roost such as evening exit counts, nighttime inspections, and the use of an Anabat detector.

CDFW Comment: Not all bat species can be identified with just a visual assessment, and acoustic monitoring should also be implemented to help identify bat species in the Project area. A complete inventory of the bat species using the FERC Project area is required, as well as an understanding of what types of roosts the Project area provides. This information is necessary to avoid impacts to bats. Habitat loss, habitat degradation, light, noise, and human disturbance can all have impacts on bats. Additionally, if exclusion from or disturbance to a maternity roost occurs due to maintenance or repair of other operational needs, large loss of young could occur.

CDFW Comment: Bats use roost locations for several different reasons. Maternity colonies are generally formed in spring (varies with species and geographic location) and in conditions that are very warm and thermally stable. During summer bats are most active and raise their young, frequently using a day roost to sleep and rear their young and night roost for resting, digesting after foraging, and socializing. Day roosts are often cryptic, concealed and not always predictable in their location. Some species use roosts for short periods as migratory stop-over sites. Information regarding bat roost type (day, night, maternity) and size, bat species, reproductive status, and health, should be collected.

CDFW Comment: White-nose syndrome has killed millions of bats across North America and decimated entire colonies. In 2023, CDFW first confirmed definitive presence of the fungus in a bat roost in Humboldt County. In 2024, the fungus was also confirmed present in Sutter, Placer, Amador, and Inyo counties. The fungus has been detected on several bat species in California, including the little brown myotis, Yuma myotis, long-legged myotis, big brown bat, Mexican free-tailed bat, and Western red bat. Hibernating bats like little brown myotis, Yuma myotis, and cave myotis are especially vulnerable. These species are also the most likely to roost in associated dam buildings and structures. CDFW currently has a field program swabbing bats at multiple localities to monitor for the fungus spreading. The fungus is most easily detected when the bats first come out of hibernation, but lesions heal and fungal spores on their skin are lost when their metabolic rate rises with activity. The current key issues are geographically extensive swab sampling for fungus in early spring and keeping records of counts of maternity colonies. The likely consequence of establishment of the fungus in the Sierra Nevada is that bats may die unseen in unknown hibernation sites and the signal that mortality is occurring will be that bats don't return to warm season maternity roost sites.

CDFW requests that SCE notify CDFW if roosting bats are detected in early spring in the facilities so CDFW can conduct swab sampling.

CONCLUSION

CDFW appreciates the opportunity to comment on the PSP filed by SCE for the relicensing of the Lundy Hydroelectric Project. CDFW looks forward to further discussions with the Technical Working Group members.

If you have any questions pertaining to this letter, please contact Graham Meese, at (760) 996-7387 or Graham.Meese@Wildlife.ca.gov.

Sincerely,

DocuSigned by:
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November 4, 2024

Debbie-Anne Reese
Acting Secretary
Federal Energy Regulatory Commission
888 First Street N.E., Room 1A
Washington, D.C. 20426

Submitted electronically: FERC eFiling

Re: Lundy Hydroelectric Project, FERC Project No. 1390-069; Comments on Proposed Study Plans

Dear Acting Secretary Reese:

The Mono Lake Committee ("MLC") submits these comments in response to SCE's Proposed Study Plans ("PSP") for the Lundy Hydroelectric Project ("Project"), FERC Project No. 1390, submitted August 5, 2024.

MLC is a non-profit citizens' group dedicated to protecting and restoring Mono Lake and the Mono Basin ecosystem with a focus on education, science, and cooperative solutions. Supported by 16,000 members, the MLC has been active in the Mono Basin since 1978. MLC is an interested party in the Project, formally intervened in the previous relicensing, and is a party to the 2005 Settlement Agreement and the 2022 Amended Settlement Agreement.

MLC appreciates working with SCE and collaborating parties over the years to create and implement the existing License and agreements, which are a solid basis for the 2029 Project relicensing process now underway. Our PSP comments are as follows.

1. SCE should assess leakage or loss of water within the Mill Creek Return Ditch and evaluate existing gauging infrastructure.

Background: The United States Forest Service ("USFS") requested that SCE "complete and include ... information that quantifies potential leakage or loss of water within the MCRD [Mill Creek Return Ditch]," either as a stand-alone study or as part of an amended water quality study proposed by SCE. (Table 2.2-1, Comment 1.) In response, SCE stated that "SCE views the performance metrics of the MCRD as an issue that is entirely within the purview of the Settlement Parties, insofar as it describes how adjudicated water would be returned/delivered to water rights holders and is outside the jurisdiction of the FERC. (...) While the

Mill Creek Return Ditch (MCRD) is a project work under the license, the manner in which flows pass through MCRD, and particularly potential water losses within the MCRD, is a matter of managing state-adjudicated water rights." (Table 2.2-1, Comment 1.)

MLC Response: As stated in Scoping Document 2 for the Lundy Hydroelectric Project, "SCE has a non-consumptive water right (pass-through) for hydropower generation on Mill Creek." (Page 12). Therefore, all water passing through the Lundy Powerhouse should be returned to Mill Creek, regardless of state-adjudicated water rights. The MCRD is a project work because it is the only means of returning water to Mill Creek that has been diverted for Project purposes. Whether or not SCE chooses to deliver water rights to water rights holders from the Lundy Powerhouse is unrelated to the function of the MCRD, which is to return SCE's non-consumptive water right from the Powerhouse back to Mill Creek. Ensuring that conveyance infrastructure associated with the Project operates without excessive water loss, in line with reasonable use principles unrelated to state-adjudicated water rights, and avoiding preventable harm to biological resources downstream of the MCRD, falls under the jurisdiction of FERC. As a Settlement Party MLC supports the existing Settlement Agreement and amendments, however these studies inform issuance of a new license and thus are necessary.

Additionally, the gauging plan already submitted to and accepted by FERC requires gauging devices at the top and bottom of the MCRD. These devices have never adequately functioned in a manner that allows SCE or other interested parties to accurately determine the performance and efficiency of the MCRD over time. Making sure there is accurate gauging at the top and bottom of the MCRD, consistent with the Project gauging plan, is already a requirement of FERC to produce flow loss information that should be analyzed with more clarity as part of this hydro-relicensing process.

MLC's stakeholder comments stated support of the USFS recommendations on this topic. Given SCE's decision not to include this study as part of the PSP, we submit the following study plan:

(1) Describe the goals and objectives of each study proposal and the information to be obtained. (18 C.F.R. § 5.9(b)(1).)

Goals:

1) Understand how the MCRD performs under a variety of flow release conditions.
2) Validate gauging of the top and bottom of the MCRD as it relates to the Project gauging plan.

Objectives:

1) Develop a flow loss vs. flow conveyance relationship for the MCRD for the full range of operational flows that SCE expects to convey through the MCRD for the Project and seek to answer the following questions:
    a. How predictable/variable is loss in the MCRD for a given flow conveyed in the MCRD for a variety of volumetric flows?
    b. What is the expected efficiency of the MCRD as a conveyance facility across year-types and operational configurations?
    c. Are the gauges installed at the top and bottom of the MCRD measuring flows accurately?
2) Quantify flow losses in the MCRD associated with the following variables across different seasons and climatic conditions:
    a. Absorption & transpiration from plants

b. Infiltration of water into permeable substrates of the ditch
c. Evaporation in the ditch

3) Determine if losses in the MCRD exceed the performance standards outlined in the 2022 Settlement Agreement.
4) If losses in the MCRD exceed the performance standards outlined in the 2022 Settlement Agreement, determine the best strategies for improving the efficiency (i.e. decreasing losses) in the MCRD.

(2) Explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied. (18 C.F.R. § 5.9(b)(2).)

Understanding how the MCRD performs under a variety of flow release conditions will help:

1) Inform potential impacts to water quality and fishery resources downstream of the MCRD.
2) Identify for FERC if the MCRD operates without excessive water loss, consistent with state reasonable use standards, and consistent with avoidance of harm to biological resources.
3) Determine what kinds of maintenance work and/or operational restrictions could be implemented to improve ditch performance in the interest of water quality, reasonable use standards, and fishery resources.

(3) Explain any relevant public interest considerations in regard to the proposed study (18 C.F.R. § 5.9(b)(3).)

Excessive flow losses in the MCRD over time will reduce the amount of water returning to Mill Creek, leading to lower water levels and increased temperature fluctuations, both of which can harm aquatic species. Lower flows can also impair habitat connectivity, making it difficult for fish and other aquatic organisms to move freely, which is essential for breeding, foraging, and accessing suitable habitat. Additionally, flow losses can reduce the transport of nutrients and organic matter, which are critical for invertebrate communities that form the base of the aquatic food web.

(4) Describe existing information concerning the subject of the study proposal, and the need for additional information. (18 C.F.R. § 5.9(b)(4).)

While SCE has collected loss data for the MCRD (>70 measurements between 2018 and 2024), these measurements have not supported analysis of a full spectrum of flow regimes within a given year's operations. As a result, there are few conclusions that can be made about the MCRD performance. The data has a low R^2 value on a given year and across multiple years (60%–70%), likely due to sporadic range of data collected that bias certain flows during certain years. Some of the data suggest that the MCRD has incredibly low losses (2%), but other data suggest that the MCRD has incredibly high losses (50%). Inadequate gauging of the top and bottom of the MCRD has prevented SCE from clarifying these results. Clarity is needed to better understand whether the MCRD is operating in a manner consistent with reasonable use and whether the MCRD's operations are significantly and adversely impacting downstream biological resources.

On August 1, 2024, Craig Addley from Kleinschmidt Associates produced a Technical Memorandum to SCE regarding a Mill Creek Return Ditch Loss Survey. This document did an excellent job at producing the kinds of results MLC is requesting for this proposed study, but results were limited to only 2 flows in the MCRD. This document is a template that can be used for the study requested here. Additional flows

need to be analyzed at different times of the year to better understand how variable the performance of the MCRD is. The technical memorandum also demonstrated that gauging at the top and bottom of the MCRD is inaccurate. Gauging accuracy should be improved to conform to the gauging plan associated with the Project, which should be evidenced with the study being proposed herein.

(5) Explain any nexus between project operations and effects on the resource to be studied, and how the study results would inform the development of license requirements. (18 C.F.R. § 5.9(b)(5).)

If flows are not reasonably reaching Mill Creek via the MCRD, depending on season and year type, this could have a negative impact on water quality and fishery resources in Mill Creek downstream of the MCRD. Additionally, the lack of accurate gauging at the top and bottom of the MCRD is inconsistent with the gauging plan accepted by FERC. There is a clear nexus to 1) making sure that the Project has gauging consistent with the Project gauging plan, and 2) that Project conveyance infrastructure (i.e. the MCRD) operates in a manner consistent with concepts of reasonable use and in avoidance of preventable harm to biological resources related to Project operations.

Because the MCRD is a Project work, this study will inform whether license conditions related to SCE's operation of the MCRD are needed to protect water quality and biological resources. For example, if the MCRD performs in an unreasonable way or in a manner that harms biological resources, FERC could reasonably require that the MCRD be improved to mitigate downstream impacts (e.g. lining the ditch) or operated in a manner that mitigates negative outcomes (e.g. restricting flows to quantities that allow the MCRD to operate with minimal losses).

(6) Explain how any proposed study methodology is consistent with generally accepted practice in the scientific community. (18 C.F.R. § 5.9(b)(6).)

There are a variety of methods that are approved by the USGS for accurately measuring flow. MLC requests that the flow methodology be reasonable and accurate. However, it is important that the MCRD be measured at different times during the typical season of operation and at a full spectrum of flows expected to occur in the MCRD to understand conveyance loss relationships. Additional factors like year type, seasonal variability, and operational configurations should be captured as is reasonable, but should be inferable from a reasonably collected dataset . Lastly, this data should be accurate and have enough resolution to determine if gauges at the top and bottom of the MCRD are operating accurately and consistent with the gauging plan.

The Technical Memorandum to SCE regarding the Mill Creek Return Ditch Loss Survey (referenced in point #4 above) did an excellent job with regards to study methodology and best practices. This could be used as a model for further evaluating other flows in the MCRD and for demonstrating gauging accuracy at the top and bottom of the MCRD.

(7) Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs. (18 C.F.R. § 5.9(b)(7).)

It is likely that flow measurements could be taken before, during, and following normal operational adjustments in the MCRD. The effort involved would require regularly and consistently measuring flow in an accurate manner throughout the normal season that the MCRD is operational. If normal operations miss flows that could be valuable to measure, some additional effort could be made to step up and step

down MCRD flows in a more gradual way to allow for additional flow measurements. SCE should conduct measurements with existing Hydrography staff or with a consultant group like Kleinschmidt who produced the Technical Memorandum for SCE regarding the Mill Creek Return Ditch Loss Survey.

Gauges are already in place at the top and bottom of the MCRD consistent with the FERC approved gauging plan and thus this study would be a necessary assessment of accuracy as well as MCRD performance. If existing gauging was proven accurate, as part of or separately from this proposed study, automated gauging could be utilized to evaluate MCRD performance and in turn, save SCE costs on manual gauging.

2. SCE should gather information or conduct a study about how the seasonal timing and magnitude of high-season water releases could negatively impact Brown Trout populations in Mill Creek.

Background: MLC proposed a study to evaluate the ecological benefits of various timing and magnitudes of release of high season water stored in the reservoir to inform operational decisions made to plan for the release of high season water. (Table 2.2-1, Comment 6.) SCE responded: "Water rights in excess of 74.6 cfs (i.e., high season water) is held by LADWP and has no nexus to Project operations. SCE intends to continue to operate to maximize power generation consistent with established water rights and as directed by LADWP. See SCE's response to Comment 1 above. Fish population data (e.g., age class distribution and nutritional state metrics) will be collected in Study AQ-1 Fish Community Survey and used in the license application to evaluate potential Project effects on fish populations in Project affected reaches of Mill Creek. However, SCE does not see that a study to "evaluate ecological benefits of different timing and magnitude of release of water" is warranted. There is no evidence of an adverse effect from existing (and proposed) operations; therefore, Study Criterion 5 is not met, because FERC does not have the authority to require the applicant to study an issue which is unsupported by any evidence; see City of Centralia v. FERC, 213 F.3d 742, 749 (D.C. Cir. 2000)." (Table 2.2-1, Comment 6.)

MLC Response:

1. **SCE has discretion in timing and magnitude of high season water releases:** The assertion that high season water rights, held by LADWP, lack a nexus to Project operations overlooks the fact that SCE has substantial control over when and how these flows are released into Mill Creek. Although the rights to these flows exist above a threshold of 74.6 cfs, the release of the water is not tied to specific times of the year, nor is it prescribed in a way that limits SCE's flexibility. LADWP as right holder routinely defers to SCE on the timing and magnitude of the release of this water. This operational discretion places responsibility on SCE to release water at times and in quantities that minimize ecological disruption, particularly given that the seasonal timing of large flows and ramping rate of flow changes directly influence the health and sustainability of downstream habitats and organisms.

2. **Large releases of high season water in the fall and winter seasons will harm Brown Trout populations in Mill Creek:** The seasonal timing of large flows and rate of flow changes—specifically in relation to seasonal ecological cycles—will have a direct effect on the health of fish populations and overall ecosystem stability in Mill Creek. Sudden or unseasonal increases in flow, which SCE has discretion over with high season water, can destabilize critical habitats, lead to fish stranding, disrupt fish reproductive success, and alter invertebrate communities that are central to the aquatic food web.

   In the Mono Basin Stream Restoration and Monitoring Program: Synthesis of Instream Flow

Recommendations to the State Water Resources Control Board and the Los Angeles Department of Water and Power FINAL REPORT, stream restoration scientists identified on Lee Vining Creek (a Mono Lake tributary stream of similar characteristics located just south of Mill Creek) that "while no specific ecological objectives were identified that could be met solely by a winter flood, considerable impacts to trout may result from large floods, such as scouring or burying of brown trout redds and displacement of holding fish (including brown and rainbow trout, juveniles and adults)" (page 42-43). A large winter or fall release of high season water would negatively impact trout populations in Mill Creek much in the same way that large flows during similar periods would negatively affect trout in Lee Vining Creek. These concepts of large fall or winter floods having a negative effect on trout are generally accepted within the scientific community as demonstrated in the sources below:

- "S. D. George, B. P. Baldigo, A. J. Smith, G. R. Robinson (2015) Effects of extreme floods on trout populations and fish communities in a Catskill Mountain river. *Freshwater Biology*, **60**, 2511-2522.
- Strange E.M., Moyle P.B. & Foin T.C. (1992) Interactions between stochastic and deterministic processes in stream fish community assembly. *Environmental Biology of Fishes*, **36**, 1–15.
- Warren D.R., Ernst A.G. & Baldigo B.P. (2009) Influence of spring floods on year-class strength of fall- and spring-spawning salmonids in Catskill Mountain streams. *Transactions of the American Fisheries Society*, **138**, 200–210.

3. **Proposed study AQ-1 will not provide insights on the resource damages that are associated with releasing large quantities of high season water during the fall or winter months:** While SCE proposes to gather fish population data to assess Project effects, this approach does not provide a complete understanding of the ecological impacts of unseasonable variability in flow timing and magnitude, or the potential fisheries benefits of well-planned releases. Population data alone—focusing on metrics like age class distribution and nutritional state—does not capture the nuanced, seasonally specific impacts of large sudden flow rate changes, such as habitat stability during breeding cycles or food availability in critical growth periods. A targeted study on the timing and magnitude of flows would provide a more comprehensive picture, revealing seasonal and ecological implications that population data alone cannot.

4. **SCE's operational flexibility with high season water is a direct threat to the health and wellbeing of trout in Mill Creek:** The claim that "no evidence" exists of adverse effects under current operations does not justify dismissing further study. Many flow-related ecological impacts, especially those stemming from rapid and unseasonal flow changes and volumes, may be subtle, cumulative, or emerge over time. Without a dedicated study on flow timing and magnitude, these potential impacts remain unassessed, and an absence of formal evidence cannot be construed as an assurance that there is no adverse effect. It is undeniable that SCE: 1) has the operational flexibility to release large quantities of high season water into Mill Creek during the fall and winter months, and 2) doing so would pose well demonstrated harm to the Brown Trout population in Mill Creek.

5. **Not just power generation:** While SCE intends to maximize power generation consistent with established water rights and as directed by LADWP, it is expected that there could be situations where large volumes of high season water could be released directly into Mill Creek

from the Lundy Reservoir for a variety of reasons (e.g. sales agreement, reservoir spill mitigation, etc.). The seasonal timing of these large releases (i.e. winter release vs. summer release) have potentially significant ecological implications as outlined above.

In sum, SCE's flexibility in high season water releases necessitates a closer examination of how various release timings and magnitudes affect the ecological balance in Mill Creek. This examination may not require field time and may instead rely more heavily on a literature review of how large, unseasonable flow patterns can negatively impact downstream ecosystem processes. For example, releasing 60 cfs of high season water into Mill Creek during winter months would have a significant negative impact on the downstream Brown Trout population. Understanding the seasonal timing of the natural hydrograph and understanding how altering that hydrograph, particularly with large unseasonal releases of high season water, should be analyzed. This kind of information should be used to evaluate possibly detrimental operational configurations and provide guidelines for how high season water can be released without degrading ecological resources.

3. SCE's Proposed Study AQ-2 – Fish Stranding Study Technical Study Plan should be modified to address downstream impacts as well as up-ramping.

Background: In discussing stakeholder comments on its proposed Study of fish stranding, AQ-2, SCE stated: "[T]he Project has limited ability to influence areas outside of the FERC Project boundary, because operations are controlled by water rights requirements. Therefore, studying stream reaches below the Project is unlikely to result in any identifiable operational change that could be made that would not affect SCE's delivery of water to the water rights holders." (Table 2.2-2, Comment 6.)

MLC Response: The study goals and objectives of the AQ-2 Fish Stranding Study should not be limited only to the distance between Lundy Dam and MCRD for assessing stranding potential resulting from Project operations. Sudden flow fluctuations that produce changes in water surface elevation (both increasing and decreasing) resulting from Project operations have the potential to strand trout inhabiting Mill Creek not only between Lundy Dam and the MCRD, but also in lower reaches of Mill Creek below the confluence with the MCRD, extending all the way to Mono Lake. Despite SCE's statements, SCE's operational control, and not water rights requirements, dictate the timing of changes to flow releases, a significant factor that has significant impacts on biological resources, including potential fish stranding.

MLC's comments on the AQ-2 proposed study are broken up into two parts to address: (A) Project impacts downstream of the Project area, and (B) Project impacts caused by rapid increases of flow.

(A) SCE should study downstream impacts below the project area:

1. **Project operations are the primary determiner of flow rate changes:** While the Project may cite water rights requirements to justify ignoring downstream impacts, it is ultimately SCE's operational control that dictates the rate at which flow releases change. Rapid adjustments to flow, particularly during periods when releases shift significantly over short intervals, are uniquely within the Project's purview. This operational influence on rate of flow change directly impacts aquatic habitat stability downstream, and no other entity can exert the same immediate influence on these sudden flow shifts. Notably, there are no active stream diversions occurring in Mill Creek downstream of the Project, thus SCE is the sole regulator of impaired flows between the dam and Mono Lake.

2. **Rate of change is the core issue, not total flow:** The core ecological issue stems from the variability and abruptness of flow changes—known as "ramping"—rather than the absolute volume of water released. Rapid fluctuations in flow rates create conditions that increase the risk of fish stranding, particularly for juvenile fish and species with specific habitat requirements. These fluctuations have downstream implications outside of the Project boundary.

3. **Water rights do not determine flow change rate:** While the Project must adhere to legal water rights requirements in terms of allocated water volumes, these rights do not dictate how swiftly or gradually flow adjustments occur. Water rights address total volumes, daily flows, and allocation priorities, but they do not govern the operational discretion over the rate of releases within a 24-hour period. Therefore, the Project retains the responsibility—and has the flexibility—to adjust its operations to minimize ecologically harmful flow variations, independent of water rights mandates. It is important to understand how the flow adjustment recommendations from the 2022 Settlement Agreement perform both within and downstream of the Project area.

4. **Downstream manipulation by other parties (if it existed) should not justify ecological harm:** Even if other parties could potentially influence downstream conditions, this does not absolve the Project from mitigating its own impacts. The Project's operations should not exacerbate or cause fish stranding, regardless of hypothetical and undemonstrated additional downstream influences. Operations that contribute to ecological harm without addressing impacts on fish populations are irresponsible and unsustainable, given the Project's significant role in influencing downstream flow dynamics. It is critical to consider the Project's impact independently to protect aquatic ecosystems effectively. Notably (as stated in point 1), there are no active stream diversions that currently occur in Mill Creek downstream of the Project.

Despite adherence to water rights, the Project holds primary operational control over flow-rate changes within a 24-hour period of time, and it is these changes—rather than overall flow—that negatively affect downstream ecosystems. There is no evidence suggesting that SCE is not the primary entity that dictates stage changes downstream of the project area and common sense necessitates that SCE consider how flow rate changes affect Mill Creek downstream of the project area.

Section 6.1 Site Selection from the AQ-2 Study Plan states: "Sites will be identified during field reconnaissance based on: [1] Diversity of channel types, habitat types, and sensitivity of brown trout habitat to changes in flow; [2] Representative spatial distribution throughout the Study Area; [3] Representative distribution among focal habitats including potential brown trout spawning sites". There is a reach of lower Mill Creek (between 38.027844°, -119.132508° and 38.025057°, -119.133593°) that has a more gradual slope and multi-channel structure, which demonstrate unique channel morphology not observable within the currently defined Project boundary and likely contain valuable brown trout spawning sites. Adding one additional study site in this region would be an incremental cost increase proportional to the rest of the study, while failing to analyze this area in terms of flow-habitat relationships would fail to meaningfully analyze downstream fish stranding impacts in Mill Creek associated with rapid flow changes from the Project.

(B) <u>SCE should study up-ramping in addition to down-ramping:</u>

AQ-2 only suggests analyzing impacts of rapid decreases in streamflow (or "down-ramping"). Rapid

increases in streamflow (or "up-ramping") can have negative ecological impacts, many of which can be particularly harmful to fish and other aquatic species, and should therefore be studied as part of AQ-2. Here are some primary ecological concerns associated with increasing flows too quickly:

1. **Unnatural sudden increases in flow cause fish stranding and mortality:** Rapid flow increases can displace fish from their preferred habitats. When flows rise suddenly, fish—especially juveniles and species with limited mobility—may be pushed into shallow, high-velocity areas where they are more vulnerable to stranding or being swept downstream. When flows drop again, these stranded fish can be left in isolated pools, where they face risks of poor water quality, predation, and desiccation.

2. **Large sudden flows can degrade spawning grounds:** Many fish species, particularly those that rely on gravel beds for spawning like Brown Trout, are sensitive to changes in flow rates. Rapid flow increases can wash away gravel or deposit sediment in ways that degrade spawning habitats. This disruption can lead to a decline in reproductive success and a long-term reduction in population health.

3. **Large sudden flows destabilize habitat structures:** Healthy aquatic habitats rely on stable structures such as riffles, pools, and undercut banks. When flows increase suddenly, these structures can erode or collapse, altering the channel's physical form. This destabilization can degrade habitat quality, removing critical shelter and feeding areas for fish and other species.

4. **Large sudden flows increase sediment and turbidity:** Rapidly increasing flows can pick up sediment from stream banks and the channel bottom, leading to higher turbidity in the water. Increased sediment can clog fish gills, smother eggs, and reduce photosynthesis in aquatic plants. This can reduce oxygen levels and food sources, affecting both fish and invertebrate populations.

5. **Large sudden flows stress aquatic organisms:** Sudden flow increases can create high-stress conditions for fish and other organisms. These organisms are adapted to specific flow ranges, and abrupt deviations can induce physiological stress, impairing growth, reproduction, and immune responses. This stress can also reduce species' resilience to other environmental pressures, such as pollutants or temperature fluctuations.

6. **Large sudden flows alter food web dynamics:** Many aquatic species, including invertebrates and fish, are highly adapted to stable flow regimes. Rapid changes can disrupt food availability by displacing insects and detritus, which serve as food sources. This disruption can reduce food web stability, leading to declines in certain species or changes in community composition.

7. **Large sudden flows generated from Lundy operations <u>have</u> negatively impacted downstream reaches of Mill Creek below the Project boundary:** In July 2023, SCE had been utilizing the Farmer's Gate to release water out of Lundy Reservoir into Mill Creek to prevent a large spill event. However, an apparent debris jam was (unknown to SCE) impairing the amount of water being released from the Farmer's Gate. For the first week of July, flows released through the Farmers Gate were about 170 cubic feet per second (cfs), but on July 9, the debris partially clogging the Farmer's Gate apparently broke free and a sudden pulse exceeding 200 cfs surged down Mill Creek. This sudden pulse of water

mobilized excess material and debris with additional velocity, damaged roads, accelerated stream incision, altered the stream flow of Mill Creek, and very likely negatively impacted fish. Flows released from the Farmers Gate were not adjusted by SCE until the following Monday or Tuesday (July 10-11), during which time the reservoir was losing storage due to the release of large flows over consecutive days, indicating that outflow was exceeding the unimpaired flow entering the reservoir upstream. This sudden increase in flow through the Farmer's Gate was more negatively impactful on the ecosystem than had the reservoir simply spilled because the rate at which the flows increase in a spill is less severe than what happened with the Farmer's Gate in 2023.

SCE has operational control over how quickly it discharges water, and FERC can require SCE to ramp-up releases at slower rates to avoid ecological harm. Currently, there are no studies available that demonstrate the ecological impacts of rapid increases or decreases in flows caused by the Project on Mill Creek, both at the Project boundary and downstream. Because SCE operated the Project in the past with sudden flow changes in that degraded Mill Creek at and below the project boundary, it is crucial to conduct a study that prescribes flow rate changes that would not cause harm to the ecosystem moving forward. The studies outlined in our comments in point 2.2 regarding the release of high season water also include scientific evidence that suggests that sudden increases and decreases in flow produced by the Project are reasonably concerning regarding fish health.

The effort involved in adding this up-ramp component should not be too burdensome since SCE is already studying down-ramping. T he 2022 Settlement Agreement provides ramping guidelines for a flow release schedule on how quickly controlled flow releases should be increased. Those guidelines should be analyzed in this study similarly to how the Settlement Agreement is being used to provide guidelines on how quickly controlled flow releases should be decreased.

4. SCE should correct inaccurate maps in the PSP.

Multiple maps in the PSP (e.g. Figure 4.1-1) show a "Wilson Creek" flowing from the upper Jordan Basin, into the Upper Conway Ditch and upstream through the powerhouse. Water may flow to the Upper Conway Ditch from the Powerhouse and not vice versa. These maps should be corrected so as not to misrepresent the hydrology of the area.

Thank you for considering these comments. Please contact me if you have questions or would like additional information.

Sincerely,

Robbie Di Paolo
Restoration Field Technician
Mono Lake Committee
robbie@monolake.org
(760) 647-6595

CC: FERC Service List

November 4, 2024

Mr. Wayne Allen
Southern California Edison Company
1515 Walnut Grove Avenue

Rosemead, CA 91770
Sent via email: Wayne.Allen@sce.com

Debbie-Anne Reese, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426
Via e-filing

Lundy Hydroelectric Project
Federal Energy Regulatory Commission Project No. 1390
Mono County
Mill Creek

COMMENTS ON SOUTHERN CALIFORNIA EDISON COMPANY'S PROPOSED STUDY PLANS

Dear Mr. Allen and Secretary Reese:

Southern California Edison Company (SCE) owns and operates the Lundy Hydroelectric Project (Project), also referred to as Federal Energy Regulatory Commission (FERC) Project No. 1390. On February 23, 2024, SCE filed its Pre-Application Document (PAD) with FERC for relicensing of the Project. On April 17, 2024, FERC issued notice of SCE's PAD filing and Scoping Document 1 (SD1). On June 24, 2024, State Water Board staff submitted comments and study requests to FERC in response to SCE's PAD and FERC's SD1.

On August 5, 2024, SCE filed with FERC its Proposed Study Plans (PSP) which include proposed studies that SCE plans to implement during Project relicensing. The PSP has a comment period that ends on November 4, 2024.

State Water Board staff appreciate the opportunity to provide comments on SCE's PSP, and look forward to working with SCE and other interested parties during Project relicensing. Please see *Attachment A: Comments on Proposed Study Plans for the Lundy Hydroelectric Project* of this letter for comments.

If you have questions regarding this letter please contact Bryan Muro, Project Manager, by email at Bryan.Muro@waterboards.ca.gov or by phone at: (916) 327-8702. Written correspondence should be directed to:

State Water Resources Control Board
Division of Water Rights – Water Quality Certification Program
Attn: Bryan Muro
P.O. Box 2000
Sacramento, CA 95812-2000

Sincerely,

Bryan Muro – Water Resources Control Engineer
Water Quality Certification Program
Division of Water Rights

Attachments: Attachment A: Comments on Proposed Study Plans for the Lundy Hydroelectric Project

ec:

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ATTACHMENT A: COMMENTS ON PROPOSED STUDY PLANS FOR THE LUNDY HYDROELECTRIC PROJECT

State Water Resources Control Board (State Water Board) staff are providing the following comments on Southern California Edison Company's (SCE) Proposed Study Plans (PSP) for the Lundy Hydroelectric Project (Project):

1. *Water Quality Monitoring Study Lundy Lake and Mill Creek Water Quality Monitoring (WQ-1):* Section 8.1 *Study Schedule* states, "Sampling within one (1) calendar year is proposed for all study components".

   A single year of sampling is insufficient to characterize water quality. Interannual differences in water chemistry in the Sierra Nevada are largely controlled by water year type (Sadro et al., 2018[1]); thus, sampling across multiple years, and more importantly over a range of water year types, is necessary to adequately determine the range of water quality conditions within Project waters. State Water Board staff request an additional study season for water quality sampling at Lundy Lake and Mill Creek.

   Similarly, State Water Board staff request that, as possible, seasonal sampling be conducted at the end of winter stratification rather than during spring overturn or early summer stratification, and at the end of summer stratification rather than in mid-summer (assuming Lundy Lake is dimictic). Low-oxygen conditions are most likely to occur at the end of a period of extended stratification and as such sampling should be timed to capture those conditions.

2. *WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring*: In its June 2024 comment letter on the Pre-Application Document (PAD), State Water Board staff recommended SCE map the bathymetry of Lundy Lake to determine which areas may be of greatest concern for hypoxia or anoxia. SCE proposed to collect water quality data "near the location of maximum reservoir depth", but do not explain how this location will be determined without additional bathymetric data. In its response to PAD comments, SCE states that "SCE has not identified a need for bathymetry or updating storage as there is no evidence that sediment accumulation is affecting storage in the reservoir" – but this does not address its connection to WQ-1. As reiterated above, the relevance of bathymetric data for Lundy Lake is to determine locations of potential anoxia or hypoxia, where metals sampling proposed in WQ-1 would be most useful to collect.

3. *WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring*: Similar to Comment 1, the number of recreationalists within the Project area is likely variable by year. Bacterial sampling data is dependent on how many recreation users are present

[1] Sadro, S., Sickman, J.O., Melack, J.M. and Skeen, K., 2018. Effects of climate variability on snowmelt and implications for organic matter in a high-elevation lake. *Water Resources Research*, *54*(7), pp.4563-4578.

around the time of sampling. Because of this variability, State Water Board staff request two study seasons for bacterial sampling in all selected sites to accurately assess of the prevalence of *E. coli* within the Project area.

4. *WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring*: Methylmercury fish tissue sampling should run for two consecutive water-years to meet the goals and objectives described in the State Water Board's June 2024 PAD comment letter. Extensive mining operations for a variety of metals occurred upstream of Lundy Lake with no available data on how these mining operations have affected water quality. An additional study year will also help better understand Project impacts to the bioavailability and transport of those metals.

   SCE notes in its in response to comments, "SCE plans to conduct a 1-year study to characterize the risks of fish tissue mercury found in Lundy Lake. If results from the first-year warrant a follow-up, SCE and agencies can propose a study plan modification to include additional data collection." Two study seasons will provide data for potentially two different water-year types and will help State Water Board staff better assess Project impacts to water quality. State Water Board staff request an additional year of methylmercury fish tissue sampling at the selected sites or for modified language in *Section 6.3 Fish Tissue Mercury Sampling* of WQ-1 to state that an additional year of analysis will occur if conditions warrant, while also specifying what values may trigger a second study season.

   State Water Board staff request that SCE amend the WQ-1 proposed fish tissue protocol to include sampling that will address the Prey Fish Water Quality Objective as stated in the Statewide Mercury Provisions[2]. Please note that compliance with the Statewide Mercury Provisions will be a requirement of any future water quality certification.

5. *WQ-2 Lundy Lake and Mill Creek Water Temperature Monitoring:* As stated in Comment 1, to accurately characterize conditions in a snowmelt-dominated system, water temperature data must be collected across a range of water year types. WQ-2 states that "Sampling within one calendar year is proposed"; State Water Board staff request that this be updated to state that data collection will occur over two water year types.

   Additionally, Site 1 potentially could be located downstream of the confluence of Mill Creek and South Fork Mill Creek to better capture the actual inflow temperature to Lundy Lake.

[2] https://www.waterboards.ca.gov/water_issues/programs/mercury/docs/hg_prov_final.pdf

6. *Table 2.2-1: USFS Request for MCRD Water Quality and Quantity Quantification:* In its response to new study plan requests, SCE states that it did not include the United States Forest Service (Forest Service) request for a new or amended study to quantify potential leakage or loss of water from the Mill Creek Return Ditch (MCRD). SCE states that it views the performance metrics of the MCRD as an issue that is entirely within the purview of the Settlement Parties. State Water Board staff similarly requested that MCRD data be shared with relicensing stakeholders in Comment 8 of its PAD comment letter without requesting a specific study, but SCE did not respond to this request. The MCRD is a Project facility and flows through it are controlled by the Project. A future water quality certification issued by the State Water Board may include conditions on the MCRD and, as such, must be informed by the available information regarding the MCRD.

   SCE appears to acknowledge potential Project impacts of the MCRD in proposed WQ-2, but without information regarding flow in the MCRD, it will be difficult for stakeholders to determine Project effects, and for State Water Board staff to determine compliance with Lahontan Basin Plan water quality objectives. State Water Board staff again request that SCE share the MCRD performance data with relicensing stakeholders.

ATTACHMENT 2

SCE REVISED STUDY PLANS

WQ-1 – LUNDY LAKE AND MILL CREEK WATER QUALITY MONITORING

TECHNICAL STUDY PLAN

Lundy Hydroelectric Project
FERC Project No. 1390

December 2024

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1.0 POTENTIAL RESOURCE ISSUE

Lundy Hydroelectric Project (Lundy Project or Project) operations have the potential to alter water quality in the Project reservoir (Lundy Lake) and Project-affected stream reaches.

2.0 PROJECT NEXUS AND HOW THE RESULTS WILL BE USED

Project operations and Project-related recreation activities may alter water quality conditions in Lundy Lake and Mill Creek downstream of Lundy Dam which may affect aquatic species, public recreation, and other designated beneficial uses described in the Water Quality Control Plan for the Lahontan Region (Basin Plan). Data collected through the WQ-1 Lundy Lake and Mill Creek Water Quality Monitoring Study (Study) will be used to assess Project-related effects and cumulative effects on water quality, and will inform development of protection, mitigation, and enhancement measures in the Draft License Application (DLA), if needed.

3.0 STUDY GOALS AND OBJECTIVES

The goal of this study is to collect additional information necessary to characterize existing water quality conditions and determine effects of continued Project operations on water quality in Lundy Lake and Mill Creek downstream of Lundy Dam. These data will also be used for the cumulative effects analysis of Mill Creek between Lundy Lake and Mono Lake and to assess consistency with water quality objectives in the Basin Plan (LRWQCB, 2019), California statewide numeric mercury objectives (SWRCB, 2017) and Office of Environmental Health Hazard Assessment (OEHHA) screening values (OEHHA, 2022) in the DLA.

4.0 EXTENT OF STUDY AREA AND STUDY SITES

The Study Area will include Lundy Lake, Mill Creek from Lundy Dam to the Mill Creek Return Ditch outlet (Mill Creek Bypass Reach), Mill Creek Return Ditch (MCRD), Mill Creek downstream of the MCRD outlet, and comparison sites along stream reaches upstream of the Project (i.e., Mill Creek and South Fork Mill Creek). The water quality monitoring study is divided into three distinct study components that include (1) reservoir and stream water quality sampling, (2) bacteriological sampling, and (3) fish tissue mercury sampling. Exact locations of the sampling sites will be determined in the field based on sampling suitability (i.e., water that is well-mixed and deep enough for representative sampling) and accessibility. Established station locations will be re-occupied during subsequent monitoring efforts. Areas with unsafe access (e.g., very steep terrain or high streamflow) will be excluded from the Study Area. Proposed sampling locations are described below and shown on Figure 4.3-1.

4.1. RESERVOIR AND STREAM WATER QUALITY SAMPLING

Water quality sampling will occur at eight sites (one reservoir and seven stream sites):

- One in Lundy Lake

- Two in Mill Creek Bypass Reach
- One in Mill Creek Return Ditch
- One in Mill Creek downstream of Mill Creek Return Ditch outlet
- Two comparison sites along stream reaches upstream of Lundy Lake (i.e., Mill Creek and South Fork Mill Creek)
- One in Mill Creek between Highway 395 and Mono Lake[1]

4.2. BACTERIAL SAMPLING

Grab sampling for enumeration of indicator bacteria will be conducted at or near four Project recreation facilities (two reservoir sites and two stream sites): Lundy Lake boat launch, Lundy Dam Day Use Area, Lundy Campground, and Lundy day use area (Figure 4.3-1).

4.3. FISH TISSUE MERCURY SAMPLING

Fish from Lundy Lake will be collected during gill net sampling in Study AQ-1 Fish Community Survey.

[1] Location is not presented in Figure 4.3-1.

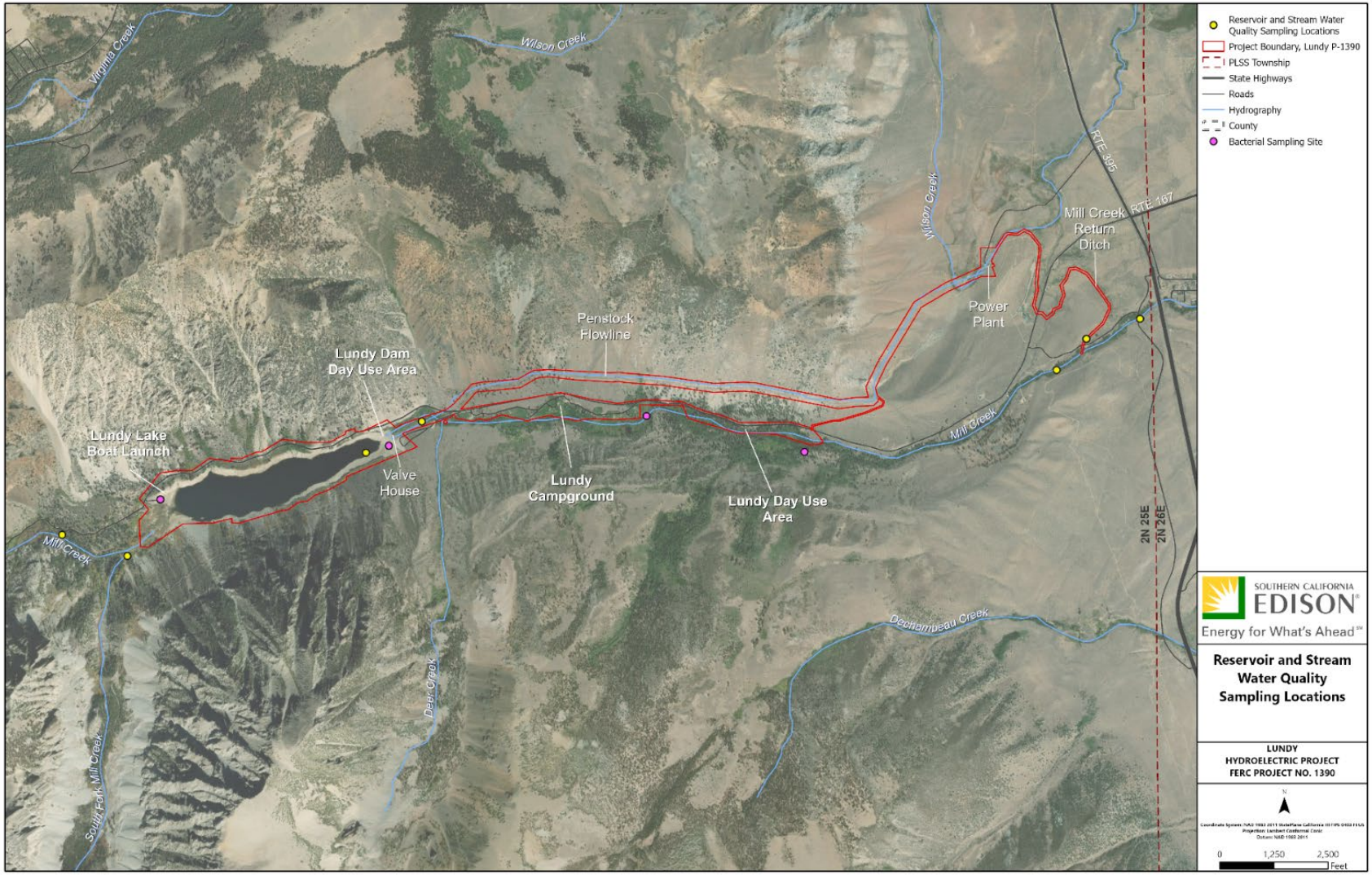

Figure 4.3-1. Water Quality Study Monitoring Sites.

5.0 EXISTING INFORMATION

Existing water quality data presented in Section 5.2, *Water Resources*, of the Pre-Application Document (PAD), filed in February 2024, is primarily limited to data obtained from the following sources:

- Water quality data (including pH, water temperature, specific conductance, nutrients, suspended sediment, chloride, and sulfate) downloaded from the California Environmental Data Exchange Network (CEDEN) that were collected from Mill Creek on two dates in 2012 (CEDEN, 2023).

- Seasonal water quality data (hardness, total Kjeldahl nitrogen, total reactive phosphorus, pH, sulfate, chloride, nitrate, zinc, total dissolved solids, conductivity, and total suspended solids) collected by California Department of Fish and Game (CDFG) from Mill Creek between April and October 1991 (CDFG, 1996).

- Bacterial sampling data (*Escherichia coli* [*E. coli*] and fecal coliform) downloaded from CEDEN that were collected from Mill Creek in 2012 and 2013 (CEDEN, 2023).

At the time of publication of the PAD, no data were available for Lundy Lake and historical water quality data for Mill Creek are limited in frequency and antiquated. Furthermore, the Mill Creek watershed has a history of mining, and no direct sampling for metals or mercury in fish tissue in Lundy Lake or Mill Creek has been conducted. Available data are insufficient to assess whether Project waters meet the Basin Plan water quality objectives for the most relevant parameters and are also insufficient to determine potential Project effects.

6.0 STUDY APPROACH

6.1. RESERVOIR AND STREAM WATER QUALITY SAMPLING

A total of eight sites will be sampled as part of the reservoir and stream water quality component of the Study (Figure 4.3-1). Three seasonal sampling events will be conducted to measure key indicators of water quality during spring, summer, and fall. Sampling will occur in the early spring to characterize seasonal runoff, in the mid-to-late summer to characterize low flow and maximum reservoir stratification, and in the fall to characterize reservoir turnover and pre-winter conditions. *In situ* measurements (temperature, dissolved oxygen, pH, specific conductivity, and turbidity) and grab samples will be collected for laboratory analysis at each monitoring station. Additionally, a vertical profile of *in situ* parameters will be collected at the reservoir site during each sampling event.

6.1.1. IN SITU WATER QUALITY

In situ water temperature, dissolved oxygen (concentration and percent saturation[2]), pH, specific conductivity, and turbidity will be measured at one reservoir and seven stream sites described in Section 4.1. A multi-parameter water quality meter (YSI EXO or similar)

[2] Raw dissolved oxygen readings will be corrected with temperature and local barometric pressure.

will be used to measure *in situ* data. Quality assurance and quality control (QA/QC) activities will include pre- and post-sampling calibration checks of the water quality meter, following the manufacturer instructions, and will be conducted each day of sampling or as appropriate for each sensor. Reservoir vertical profiles of *in situ* measurements will be collected at 1-meter intervals near the location of maximum reservoir depth. A pre-project topographic map and a depth finder will be used to locate the deepest area in Lundy Lake. Stream *in situ* measurements will be collected at a location that provides representative, homogeneous water quality conditions. Table 6.1-1 identifies *in situ* parameters, methods, and method detection limits that will be evaluated.

Table 6.1-1. In Situ Water Quality Methods

Parameter	Method	Method Detection Limit
Water temperature	USEPA 170.1	0.1°C
Dissolved oxygen	SM 4500-O	0.1 mg/L
Specific conductance	SM 2510 A	0.1 µmhos
pH	SM 4500-H	0.1 standard unit
Turbidity	SM 2130 B	0.1 NTU

°C = degrees Celsius; µmhos = micromhos; U S EPA = U.S. Environmental Protection Agency; mg/L = milligrams per liter; NTU = nephelometric turbidity unit; SM = Standard Methods

6.1.2. Analytical Water Quality

Analytical water quality samples will be collected at the one reservoir and seven stream sites described in Section 4.1. Grab samples will be collected simultaneously with *in situ* measurements described in Section 6.1.1. All water samples will be analyzed for general chemistry, nutrients and productivity, and metals listed in Table 6.1-2. Reservoir surface water samples will also include analysis for oil and grease (Table 6.1-2).

Reservoir water samples will be collected at two depths: 1) a subsurface grab sample collected at approximately 0.5-meter depth, and 2) a grab sample collected approximately 0.5 to 1 meter above the bottom sediment with a Van Dorn bottle or equivalent sampling device. Stream grab samples will be collected from just below the water surface from a well-mixed area of the stream. Clean ambient water sampling techniques as prescribed by U.S. Environmental Protection Agency (USEPA) Method 1669 will be used for trace metal collection, including handling and analysis of all metals in water samples (USEPA, 1996). To ensure sampling results are representative of site conditions, QA procedures will include collection of one field blank, one equipment blank, and one field duplicate during each water quality sampling event (spring, summer, and fall).

Each grab sample collected will be placed in a laboratory-supplied container, labeled, preserved, and stored on ice until delivery to a state-certified water quality laboratory. A certified laboratory will analyze the chemistry using the methods and target reporting limits included in Table 6.1-2. A chain-of-custody record will be maintained for each sample container.

Table 6.1-2. Analytical Parameters, Methods, and Reporting Limits for Water Samples

Parameter	Laboratory Method[1]	Target Reporting Limit or PQL[1]
General Chemistry and Minerals		
Calcium	USEPA 200.7	27 µg/L
Chloride	EPA 300.0	0.50 mg/L
Hardness (as calcium carbonate)	USEPA 200.7	1 mg/L
Magnesium	EPA 200.7	1,000 µg/L
Dissolved Organic Carbon	EPA 415.1 D	1.0 mg/L
Total Organic Carbon	SM 5310	1.0 mg/L
Potassium	EPA 200.7	1,000 µg/L
Sodium	EPA 200.7	1,000 µg/L
Sulfate	EPA 300.0	0.50 mg/L
Total alkalinity	USEPA 200.7	5 mg/L
Total dissolved solids	SM 2540 C	10 mg/L
Total suspended solids	SM 2540 D	5 mg/L
Nutrients and Productivity		
Ammonia as N	SM 4500-NH3F2011	0.1 mg/L
Nitrate-nitrite	USEPA 300.0	0.4 mg/L
Orthophosphate	SM 4500-PE	0.15 mg/L
Total Kjeldahl nitrogen as N	SM 4500-NH3F-2011	0.2 mg/L
Total phosphorous	SM 4500-PE	0.05 mg/L
Chlorophyll-*a*	SM 10200H	0.01 mg/L
Metals and Oil and Grease		
CAM 17 Metals (Title 22 Metals)[2]	USEPA 200.8	0.4–40 µg/L
Oil and grease[3]	USEPA 1664A	5.0 mg/L
Bacteria		
Escherichia coli	SM 9221 F	1.8 MPN/100 mL
Fecal Coliform	SM 9221 E	1.8 MPN/100 mL
Total coliform	SM 9223B	1.8 MPN/100 mL

µg/L= microgram per liter; USEPA = U.S. Environmental Protection Agency; mg/L = milligrams per liter; mL=milliliters, MPN = most probable number; PQL= practical quantification limit; SM = Standard Methods

Notes:

[1] Laboratory methods and reporting limit are preliminary until contracting with analytical laboratory is complete.

[2] CAM 17 metals include total and dissolved metals: arsenic, mercury, antimony, barium, beryllium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc.

[3] Oil and grease will be analyzed is reservoir surface water samples only.

6.2. BACTERIAL SAMPLING

Bacterial sampling will occur at all four recreation sites (two reservoir and two stream) described in Section 4.2 (Figure 4.3-1). After delivery to the analytical laboratory, water samples will be analyzed for *E. coli*, total coliform, and fecal coliform. Surface grab samples will be collected from the nearshore of Lundy Lake immediately adjacent to the recreation facilities and from the bank of Mill Creek downstream of the recreation facilities. Samples will be collected weekly, at a minimum, for 6 consecutive weeks during the summer surrounding a holiday weekend (e.g., Labor Day). All water samples will be analyzed for bacteria parameters listed in Table 6.1-2.

To minimize the potential for inadvertent sample contamination, grab samples will be collected in laboratory-supplied, sterilized bottles. A chain-of-custody record will be maintained for each sample container. Immediately after collection, samples will be placed on ice for transport to a certified analytical laboratory. Analysis will be completed following the methods listed, and target reporting limits provided in Table 6.1-2.

6.3. FISH TISSUE MERCURY SAMPLING

Fish sample collection will occur during reservoir fish surveys as part of Study AQ-1, *Fish Community Survey*. Target species expected to be present in Lundy Lake include trophic level[3] 3 (rainbow trout [*Oncorhynchus mykiss]* and brook trout [*Salvelinus fontinalis*]) and trophic level 4 (brown trout) [*Salmo trutta*] fish. The anticipated minimum total length of trophic level 3 fish will 150-millimeter and trophic level 4 fish will be 200-millimeter. Up to nine fish will be collected for each species to conform to OEHHA requirements for development of fish consumption advisories and for comparability to California statewide numeric mercury objectives (i.e., Sport Fish) (OEHHA, 2022; SWRCB, 2017). Fewer than nine fish for each species may be collected if the number of individuals captured during reservoir fish sampling is less than nine. If no trophic level 4 fish are captured, up to 10 prey fish (50 to 150 mm) may be captured for comparability to statewide numeric mercury objectives (i.e. Prey Fish[4]). Physical characteristics will be recorded for each individual fish, including the following: weight, total length, fork length, and presence of any physical abnormalities. Each fish will be individually tagged, wrapped in aluminum foil, placed in a labeled zipper-closure bag, and stored on dry ice at -20 degrees Celsius (°C) for the

[3] Freshwater trophic level classifications as described in SWRCB, 2017. Trophic level 3 fish consume mainly zooplankton, benthic invertebrates, and small, phytoplankton-dependent fish. Trophic level 4 fish consume trophic level 3 fish and other aquatic organisms.

[4] It is not necessary to measure the Prey Fish water quality objective if the Sport Fish Water Quality Objective applies to the same water body and is evaluated using trophic level 4 fish. However, if the Sport Fish Water Quality Objective is exceeded when applied to trophic level 3 fish, that is sufficient evidence to indicate that the Prey Fish Water Quality Objective is also exceeded without having to measure the latter objective (SWRCB,2017).

duration of the effort. After transmittal to an analytical laboratory, samples will be stored in an ultra-cold freezer at -20°C until processing.

Fish tissue samples will be analyzed as individual samples. Trophic level 3 and 4 fish tissue samples will be processed by removing skin from an area above the lateral line and then extracting a 9- to 13-gram tissue "plug". Prey fish[5] will be processed using whole fish tissue samples. Samples will be weighed for percent moisture analysis and analyzed for total mercury (Table 6.4-1), as a proxy for methylmercury in fish.

Table 6.4-1 Analytical Parameters, Methods, and Reporting Limits for Mercury in Fish Tissue Samples

Parameter	Laboratory Method	Target Reporting Limit
Total mercury[3]	EPA 7473	0.030 µg/g ww

µg/g ww = microgram per gram wet weight; EPA = U.S. Environmental Protection Agency
Notes:
[1] Laboratory methods and reporting limit are preliminary until contracting with analytical laboratory is complete.

6.4. INCIDENTAL OBSERVATIONS

Any incidental observations of special-status species or aquatic invasive species (e.g., Didymo [*Didymosphenia geminata*], American bullfrog [*Lithobates catesbeianus*], New Zealand mud snail [*Potamopyrgus antipodarum*], or bivalves) during Project studies will be noted (including location information) and reported as appropriate.

7.0 ANALYSIS AND REPORTING

A report will be prepared that will include results from all samples collected and analyzed. Tables and figures summarizing measured water quality parameters for the various sites will be developed. Any general patterns in measured water quality parameters by season and watershed position (i.e., distance downstream) will be described.

8.0 SCHEDULE

8.1. STUDY SCHEDULE

Sampling within one (1) calendar year is proposed for all study components (Table 8.1-1). A second year of reservoir and stream water quality, and bacterial sampling will be conducted in 2026 if the water year type[6] for that year differs from the first year of sampling (2025).

[5] Prey fish samples will be analyzed only if no trophic level 4 fish are captured, and trophic level 3 fish do not exceed the California statewide Sport Fish water quality objective (SWRCB, 2017).

[6] The water year will be determined using the adjacent Lee Vining Project [P-1388] forecast. A water year is considered "wet" when the annual precipitation was in the highest 30 percent of the previous years, back to 1966. A water year is "dry" when the precipitation is in the lowest 30 percent of the previous years, back to 1966. A "normal" water year is when it is neither wet nor dry.

Table 8.1-1. Study Schedule

Date	Activity
Spring 2025	Select study sites
Spring–Fall 2025	Conduct water quality field sampling
Winter 2025/2026	Compile study results and prepare draft report
February 2027	Distribute final report in Final License Application

9.0 LEVEL OF EFFORT AND COST

SCE estimates the cost to complete one year of monitoring for this Study, in 2024 dollars, is approximately $228,000.

10.0 REFERENCES

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WQ-2 – LUNDY LAKE AND MILL CREEK WATER TEMPERATURE MONITORING

TECHNICAL STUDY PLAN

Lundy Hydroelectric Project
FERC Project No. 1390

December 2024

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1.0 POTENTIAL RESOURCE ISSUE

Lundy Hydroelectric Project (Lundy Project or Project) operations have the potential to affect temperatures in the Project reservoir (Lundy Lake) and Project-affected stream reaches.

2.0 PROJECT NEXUS AND HOW THE RESULTS WILL BE USED

Lundy Dam impounds Mill Creek and forms Lundy Lake. A flowline and penstocks carry a maximum of 70 cubic feet per second (cfs) of flow from Lundy Lake to Lundy Powerhouse before water is distributed to water rights holders via the Wilson System or returned to Mill Creek via Mill Creek Return Ditch (MCRD). Project operations related to power generation have the potential to affect water temperatures in Lundy Lake and in Mill Creek downstream of Lundy Dam. Data collected during this WQ-2 Water Temperature Monitoring Study (Study) will be used to fill data gaps, determine whether the Water Quality Control Plan for the Lahontan Region (Basin Plan) water quality objectives are being met, assess Project-related effects and cumulative effects on water temperature, and inform the need for protection, mitigation, and enhancement measures in the Draft License Application (DLA).

3.0 STUDY GOALS AND OBJECTIVES

The goal of this Study is to collect stream water temperature data and reservoir profile temperature data[1] to characterize current water temperature conditions in Lundy Lake and Project-affected stream reaches of Mill Creek. These data will also be used for the cumulative effects analysis of Mill Creek between Lundy Lake and Mono Lake and to assess consistency with water temperature objectives included in the Basin Plan (LRWQCB, 2019). Mill Creek has a designated beneficial use of Cold Freshwater Habitat (COLD) under the Basin Plan (LRWQCB, 2019), which states that temperature must not be altered.

4.0 EXTENT OF STUDY AREA AND STUDY SITES

4.1. WATER TEMPERATURE MONITORING

Temperature monitoring will occur in the following stream reaches; one site will be sampled in each reach as shown on Figure 4.1-1:

- Mill Creek upstream of Lundy Lake and downstream of the confluence with South Fork Mill Creek
- Mill Creek downstream of Lundy Lake

[1] Project reservoir water temperature data will be collected as part of Study WQ-1, *Lundy Lake and Mill Creek Water Quality Monitoring.*

- Mill Creek downstream of the confluence with Deer Creek
- Mill Creek upstream of the confluence with MCRD
- Mill Creek downstream of the confluence with MCRD
- Mill Creek near Mono City[2]
- Mill Creek near Mono Lake
- Lundy Powerhouse Tailrace
- Mill Creek Return Ditch upstream of the confluence with Mill Creek

[2] Mill Creek near Mono City and Mono Lake locations are not presented in Figure 4.1-1.

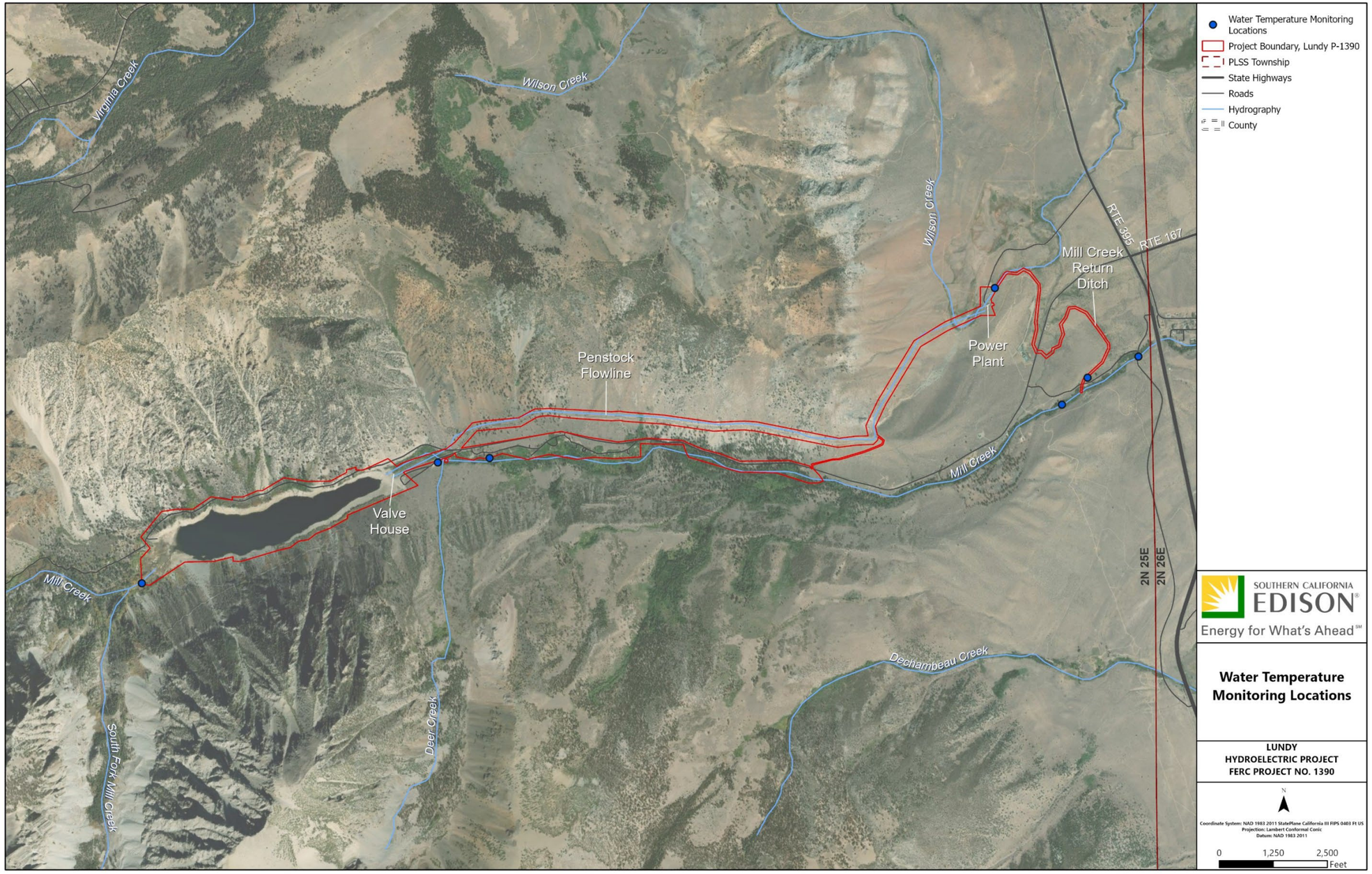

Figure 4.1-1. Water Temperature Study Monitoring Sites.

5.0 EXISTING INFORMATION

Existing water quality data presented in Section 5.2, *Water Resources*, of the Pre-Application Document (PAD), filed in February 2024, is limited to data obtained from the following sources:

- Water temperature data collected by the California Department of Fish and Wildlife (CDFW; previously California Department of Fish and Game [CDFG]) and subsequent water temperature modeling in 1990 and 1991 (CDFG, 1996).
- Individual historical water temperature recordings in Mill Creek on December 11, 1967, and August 22, 1985 (LADWP, 1987).

At the time of the PAD publication, no data were available for Lundy Lake; historical water temperature data is antiquated and insufficient for characterizing current temperature conditions in Lundy Lake or Project-affected stream reaches of Mill Creek. Available data are also insufficient to assess whether Project waters meet Basin Plan water quality objectives.

6.0 STUDY APPROACH

Continuous water temperature data loggers (e.g., Onset HOBO U22-001) will be installed at sites described in Section 4.0, *Extent of Study Area and Study Sites,* using methods adapted from standard protocols (Heck et al., 2018). Duplicate loggers will be installed for added data security in the event of equipment loss, malfunction, or vandalism. If a nearby weather station is not available, one air temperature logger will be deployed in the Study Area for data quality assurance and quality control. Data loggers will be deployed between spring 2025 and spring 2026, unless stream conditions (e.g., high discharge, snow, access) are unsafe for installation or removal. Coordinates of each installed logger will be recorded using a global positioning system unit. The data loggers will collect water temperature at 15-minute intervals and data analysis will summarize daily means, maxima, and minima for each site. Quality control calibrations will be performed on each unit per the manufacturer's recommendations before and after deployment. Data loggers will be placed inside protective housings and installed at a location that provides representative, homogeneous thermal conditions for each site. Data will be downloaded from data loggers at minimum once during the spring, summer, and fall, with more frequent downloads as allowed by weather, access, and safety.

6.1. INCIDENTAL OBSERVATIONS

Any incidental observations of special-status species or aquatic invasive species (e.g., Didymo [*Didymosphenia geminata*], American bullfrog [*Lithobates catesbeianus*], New Zealand mud snail [*Potamopyrgus antipodarum*], or bivalves) during Project studies will be noted (including location information) and reported as appropriate.

7.0 ANALYSIS AND REPORTING

A report will be prepared that will include results from all samples collected and analyzed. Tables and/or figures summarizing measured water temperature for the various sites will be developed. Any general patterns in measured water temperature by season and watershed position (i.e., distance downstream) will be discussed.

8.0 STUDY SCHEDULE

Sampling within one calendar year is proposed for this study (Table 8.1-1). A second year of water temperature monitoring will be conducted in 2026 if the water year type[3] for that year differs from the first year of sampling (2025).

8.1. STUDY SCHEDULE

Table 8.1-1. Study Schedule

Date	Activity
Spring 2025	Select study sites
Spring 2025–Spring 2026	Conduct water temperature monitoring
Winter 2025/2026	Compile study results and prepare draft report
February 2027	Distribute final report in Final License Application

9.0 LEVEL OF EFFORT AND COST

SCE estimates the cost to complete one year of monitoring for this Study, in 2024 dollars, is approximately $68,000.

10.0 REFERENCES

CDFG (California Department of Fish and Game). 1996. *Mill Creek Stream Evaluation,* Report 96-1, Volume 1, 163 pp. July.

Heck, M. P., L. D. Schultz, D. Hockman-Wert, E. C. Dinger, and J. B. Dunham. 2018. *Monitoring stream temperatures—A guide for non-specialists: U.S. Geological Survey Techniques and Methods*. Book 3, Chapter A25. Available online: https://doi.org/10.3133/tm3A25.

LADWP (Los Angeles Department of Water and Power). 1987. *Aqueduct Division Hydrology Section. Mono Basin Geology and Hydrology*. March 1987.

[3] The water year will be determined using the adjacent Lee Vining Project [P-1388] forecast. A water year is considered “wet” when the annual precipitation was in the highest 30 percent of the previous years, back to 1966. A water year is “dry” when the precipitation is in the lowest 30 percent of the previous years, back to 1966. A “normal” water year is when it is neither wet nor dry.

LRWQCB (Lahontan Regional Water Quality Control Board). 2019. *Water Quality Control Plan for the Lahontan Region*. Plan effective March 31, 1995, including amendments effective through September 22, 2021. State of California Regional Water Quality Control Board, Lahontan Region. Accessed: May 2025. Available online: https://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.html.

AQ-1 – FISH COMMUNITY SURVEY

TECHNICAL STUDY PLAN

Lundy Hydroelectric Project
FERC Project No. 1390

December 2024

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1.0 POTENTIAL RESOURCE ISSUE

Lundy Hydroelectric Project (Lundy Project or Project) operations have the potential to affect recreational fisheries within the Project reservoir (Lundy Lake) and Project-affected stream reaches.

2.0 PROJECT NEXUS AND HOW THE RESULTS WILL BE USED

Project operations have the potential to affect environmental conditions, including water quality and quantity, within Lundy Lake and Project-affected stream reaches of Mill Creek. Changes in these environmental conditions can affect the abundance, distribution, and age-class structure of the recreational fish populations within Lundy Lake and Project-affected stream reaches of Mill Creek. Information obtained from this AQ-1 Fish Community Survey Study (Study), in combination with existing information, will be used to evaluate potential effects of Project operations on recreational fisheries and development of protection, mitigation, and enhancement measures in the Draft License Application (DLA), if needed.

3.0 STUDY GOALS AND OBJECTIVES

The goal of this Study is to supplement the existing information to characterize abundance, distribution, and structure of recreational fish populations within Lundy Lake and Project-affected stream reaches of Mill Creek. Objectives of the Study are to: (1) obtain current information on existing recreational fish populations within Lundy Lake and Project-affected stream reaches of Mill Creek, and (2) conduct a literature review to understand how large flow releases in the fall and winter might affect brown trout populations in Mill Creek.

4.0 EXTENT OF STUDY AREA AND STUDY SITES

The Study Area includes Lundy Lake and Mill Creek from Lundy Dam downstream to Highway 395. Fish population sampling in Lundy Lake will be conducted at three gill netting locations, including both littoral and deep-water habitats, and three shoreline boat electrofishing sites. Three stream sites will be surveyed within the following reaches:

- Two sites in the bypass reach between Lundy Dam and Mill Creek Return Ditch.
- One site between Mill Creek Return Ditch and Highway 395.

5.0 EXISTING INFORMATION

Historically, the Mill Creek watershed and other tributaries to Mono Lake were fishless (FERC, 1992; Moyle, 2002). Currently, non-native introduced trout species, including brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*), and rainbow trout (*Oncorhynchus mykiss*), are found throughout Lundy Lake and Mill Creek downstream of Lundy Dam. The California Department of Fish and Wildlife (CDFW) conducts annual

stocking of sterile rainbow trout within Lundy Lake and Mill Creek to support a put-and-take fishery (CDFW, 2024).

Existing data on the abundance and age-class distribution of fish populations within Lundy Lake and Mill Creek downstream of Lundy Dam are presented in Section 5.3, Fish and Aquatic Resources, of the Pre-Application Document (PAD), filed in February 2024. Available fisheries information for Lundy Lake and Project-affected stream reaches is insufficient to determine potential effects of Project operations on recreational fisheries.

6.0 STUDY APPROACH

6.1. STREAM FISH SURVEYS

To assess fish species distribution and relative abundance in stream reaches, multi-pass electrofishing will be conducted using procedures described by Reynolds (1996). Backpack electrofishers (i.e., using a Smith-Root Model LR-24 backpack electrofisher) will be used for surveys provided that environmental conditions allow electrofishing to be performed safely and effectively.

Prior to sampling, a reconnaissance survey will be conducted to select survey sites that are conducive for backpack electrofishing and contain representative habitat types in the sample reaches identified in Section 3. The upstream and downstream extent of each electrofishing site will be marked using a handheld global positioning system (GPS) device.

Sites will be approximately 300-feet long and separated into two segments for improved sampling efficiency. Block nets will be used to prevent migration into and out of the sample segment during sampling and to facilitate an accurate assessment of the sample population. The electrofishing crew will consist of one to two backpack electrofishers and approximately two netters, depending on the size of the wetted stream channel. Water conductivity of each site will be measured with a water quality sonde prior to sampling to help determine the appropriate power output (i.e., voltage) for fish capture. The electrofishing crew will sample at the downstream block net and proceed slowly and deliberately upstream, moving from the center of the channel to the stream margins, and making simultaneous and parallel passes through the sampling area. As fish are captured (netted), they will be placed in buckets outfitted with aerators and periodically transferred to a live-car or live-well and held until the completion of the pass. Upon completion of each pass, the following data will be recorded for each individual captured: species identification, total length (millimeters [mm]), fork length (mm), weight (grams), and, if applicable, notes on the general condition of the fish, abnormalities, or parasites and potential for hatchery origin (using visual markings and fin erosion). Any visual abnormalities in fish condition will be documented during the survey. After processing, fish will be placed in a recovery bucket with aerated fresh river water and will be regularly transferred to a live-car (1/8-inch mesh net) in the creek outside the study site. After completion of all the survey passes, all fish will be released back into the area of capture. At each study site, scale samples will be collected from up to 20 fish of each game species (e.g., rainbow trout, brown trout, brook trout) across a variety of sizes and ages.

Habitat characteristics and water quality parameters will be measured at all sites at the time of sampling, including (but not limited to): stream name, reach, site name, segment, time of day, environmental conditions (e.g., weather, air temperature), stream length, average stream width, stream habitat characteristics (e.g., cover, substrate, and habitat composition [e.g., riffle, pool, run]), streamflow, water quality (i.e., water temperature, dissolved oxygen, pH, conductivity, and specific conductivity), GPS coordinates, and electrofishing duration. Photographs will be taken to document the specific location of the upstream and downstream block nets and representative condition of the site.

To minimize the potential to spread invasive species (e.g., New Zealand mud snail [*Potamopyrgus antipodarum*], quagga or zebra mussels [*Dreissena* spp.]) appropriate and up to date decontamination protocols will be followed prior to each aquatic-based field effort or when moving between watersheds.

6.2. RESERVOIR FISH SURVEYS

Reservoir fish surveys will be conducted using gill netting and shoreline boat electrofishing (dependent on access) to assess fish species composition, relative abundance, and age-distribution within Lundy Lake. Sampling will occur once during summer or fall. Decontamination procedures described above will be followed.

Fish data collected at each site will include species identification, total length (mm), fork length (mm), weight (grams), and any notes on general condition or visual abnormalities in fish condition will be documented during the survey. Scale samples will be collected from up to 20 fish of each game species (e.g., trout species) across a variety of sizes at a variety of locations. Gear type, GPS coordinates of each sample location, and water chemistry (i.e., water temperature, dissolved oxygen, pH, conductivity, and specific conductivity) will be collected during the survey.

6.2.1. GILL NETTING

Lundy Lake will be sampled using variable-mesh gill nets at three locations across the length of the reservoir. Variable-mesh gill nets consist of multiple panels of various mesh sizes so that a gradient of sizes is represented across the net. One variable-mesh “adult” gill net (1- to 4-inch mesh, 80 to 125-feet long) and one variable-mesh “juvenile” gill net (less than 1-inch mesh, 30-feet long) will be deployed at each of the three locations, including littoral and deep-water habitats. The nets will be placed along the gradient of the reservoir bottom, extending from the shoreline, and sloping toward the deepest part of the reservoir.

The time of deployment, location, minimum and maximum water depths, and net type will be recorded at each gill net location. Water chemistry data (i.e., water temperature, dissolved oxygen, pH, conductivity, and specific conductivity) will be collected (where feasible) approximately 5-feet below the water’s surface at each gill net location prior to deployment.

To reduce the potential for mortality and provide information on fish composition, the gill nets will be set for two 4- to 8-hour net-set periods.[1] These periods will include one day and one night period (over approximately 24 hours) to facilitate good coverage and to separate diel periods. Captured and processed fish will be allowed to recover in a live-car and will be released after the sampling is complete or in an area away from the sampling location.

6.2.2. SHORELINE BOAT ELECTROFISHING

Nighttime boat electrofishing using standard methods (Reynolds, 1996) will be conducted to supplement gill netting once at three suitable (i.e., less than 12-feet deep) sampling locations distributed across the length of Lundy Lake. Electrofishing stations will be approximately 300 feet in length and will target a diversity of nearshore habitats. Sampling locations will be documented using GPS. Electrofisher "time on" will be recorded for each sampling location and a consistent pace and effort will be employed at all sites. Fish and environmental data will be collected using the same methods as described in Section 6.2, *Gill Netting*. Captured and processed fish will be allowed to recover in a live-car and will be released in the reservoir after sampling is complete.

6.2.3. LITERATURE REVIEW

A literature review will be conducted to synthesize available information on how large (i.e., greater than 60 cfs) releases in the fall or winter could affect brown trout populations in Mill Creek. Sources of information that will be considered in this review include, but may not be limited to, the following:

1. The Mono Basin Stream Restoration and Monitoring Program: Synthesis of Instream Flow Recommendations to the State Water Resources Control Board and the Los Angeles Department of Water and Power Final Report.

2. S. D. George, B. P. Baldigo, A. J. Smith, G. R. Robinson (2015) Effects of extreme floods on trout populations and fish communities in a Catskill Mountain River. Freshwater Biology, 60, 2511-2522.

3. Strange E.M., Moyle P.B. & Foin T.C. (1992) Interactions between stochastic and deterministic processes in stream fish community assembly. Environmental Biology of Fishes, 36, 1–15.

4. Warren D.R., Ernst A.G. & Baldigo B.P. (2009) Influence of spring floods on year class strength of fall- and spring-spawning salmonids in Catskill Mountain streams. Transactions of the American Fisheries Society, 138, 200–210.

[1] Gill net set times may be decreased at the discretion of the field crew to prevent excessive fish mortality.

6.3. SCE WILL CONSULT WITH STAKEHOLDERS TO IDENTIFY ANY OTHER RELATED SOURCES OF INFORMATION THAT MAY BE READILY AVAILABLE. INCIDENTAL OBSERVATIONS

Any incidental observations of special-status species or aquatic invasive species (e.g., Didymo [*Didymosphenia geminata*], American bullfrog [*Lithobates catesbeianus*], New Zealand mud snail, or bivalves) during Project studies will be noted (including location information) and reported as appropriate.

6.4. ANALYSIS

6.4.1. STREAM FISH SURVEYS

Data collected during the stream fish surveys will be entered into an Excel database for data reduction, tabulation, and summary and (where possible) will be compared with data collected during previously conducted studies.

Species composition and size distribution of fish will be evaluated at all survey sites. Length-frequency histograms will be developed for each trout species captured and used to estimate size and age-class distribution. Breaks and modalities within the length-frequency histograms will be evaluated and compared to the subsample of aged scales and relevant literature on trout growth to estimate the age-class distribution of each species.

Trout densities (number per acre), biomass (pounds per acre), and 95 percent confidence intervals will be computed for each electrofished site using the Zippin estimator within the multiple-pass regression analysis software developed by Van Deventer and Platts (1989).

To assess trout condition, the weight-to-length relationship of individual fish will be assessed as a method of identifying the nutritional state or health of the fish related to size and growth. Fulton's condition factor (k) (Ricker, 1975), a measure of this nutritional state, will be calculated for each fish using the following formula:

$$k = \frac{W \times 10^5}{TL^3}$$

where:

W = wet weight (grams) and *TL* = total length (millimeters)

Mean fish condition will be calculated from individual condition values for each species.

6.4.2. RESERVOIR FIELD SURVEYS

Data will be entered into an Excel spreadsheet for reduction, tabulation, and summary. Capture data will be summarized by species composition for the entire lake and all gear types, as well as by site and gear type. Length-frequency histograms will be developed for each trout species captured and used to estimate size and age-class distribution. Breaks and modalities within the histograms will be evaluated and compared with the

subsample of aged scales collected at each study site and relevant literature on trout growth to estimate the age-class distribution of each species. Relative abundance will be determined by calculating catch-per-unit-effort (fish per hour) by gear type and site.

7.0 REPORTING

A report will be prepared that will include a summary of results from data collected and analyzed during this study, and a summary of literature review outcomes. The report will be appended to the Final License Application.

8.0 SCHEDULE

8.1. STUDY SCHEDULE

The Study will begin with site selection during 2025 (Table 8.1-1). The final study report will be provided with the Final License Application in February 2027.

Table 8.1-1 Study Schedule

Date	Activity
Spring–Summer 2025	Select study sites, initiate literature review
Summer–Fall 2025	Conduct field surveys
Winter 2025/2026	Compile study results and prepare report
February 2027	Distribute final report in Final License Application

9.0 LEVEL OF EFFORT AND COST

SCE estimates the cost to complete this Study, in 2024 dollars, is approximately $153,000.

10.0 REFERENCES

CDFW (California Department of Fish and Wildlife). 2024. What is a triploid fish? Prepared by CDFW, Sacramento, California. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=94602&inline.

FERC (Federal Energy Regulatory Commission). 1992. Final Environmental Assessment for Hydropower License. Lundy. FERC Project No. 1390–001. February 1992.

Moyle, P. B. 2002. Inland Fishes of California. University of California Press. Berkeley, CA.

Reynolds, J. B. 1996. Electrofishing. Pages 221–254 in B. R. Murphy and D. W. Willis, editors. Fisheries Techniques. Second Edition. American Fisheries Society, Bethesda, Maryland.

Ricker, W. E. 1975. Computation and Interpretation of Biological Statistics of Fish Populations. Fisheries Research Board of Canada Bulletin 191.

Van Deventer, J. S. and W. S. Platts. 1989. Microcomputer Software System for Generating Population Statistics from Electrofishing Data—User's Guide for MicroFish 3.0. U.S. Department of Agriculture, Forest Service, General Technical Report INT-254.

AQ-2 – FISH STRANDING STUDY

TECHNICAL STUDY PLAN

Lundy Hydroelectric Project
FERC Project No. 1390

December 2024

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1.0 POTENTIAL RESOURCE ISSUE

Lundy Hydroelectric Project (Lundy Project or Project) operations have the potential to strand fish in Mill Creek (between Lundy Dam and Mill Creek Return Ditch [MCRD]) in areas with high stranding risk.

2.0 PROJECT NEXUS AND HOW THE RESULTS WILL BE USED

Flow fluctuations (changes in water surface elevation) resulting from Lundy Project operations have the potential to strand trout inhabiting Mill Creek between Lundy Dam and MCRD. Southern California Edison (SCE) and resource agencies will use the information obtained from this AQ-2 Fish Stranding Study (Study), in combination with existing information, to evaluate potential effects of Project operations on the risk of stranding for local fish communities, assess cumulative effects within the Mono Lake Subbasin, and develop protection, mitigation, and enhancement measures in the Draft License Application (DLA).

3.0 STUDY GOALS AND OBJECTIVES

The goal of this Study is to identify areas of high stranding risk for fish in Mill Creek between Lundy Dam and MCRD and assess stranding potential resulting from Project operations. The objectives of this Study are to:

- Compile and summarize hydrologic gage data for use in other resource assessments.
- Characterize flow fluctuations resulting from Project operations and evaluate associated risk of fish stranding in Mill Creek between Lundy Dam and MCRD.
- Establish monitoring locations representative of the variety of channel geomorphic conditions present in Mill Creek between Lundy Dam and MCRD and assess how operational changes in flow (i.e., controlled releases and down-ramping events) affect surface water elevation in selected sites.

4.0 EXTENT OF STUDY AREA AND STUDY SITES

The Study Area includes a 3.3-mile section of Mill Creek from Lundy Dam downstream to MCRD confluence (the bypass reach). Monitoring will occur in up to seven sites dispersed between the upstream and downstream ends of the Study Area. One additional site will be established downstream of the MCRD to assess stranding risk in lower Mill Creek.

5.0 EXISTING INFORMATION

The risk of stranding is determined by multiple factors, including the life history of the species present, the magnitude and rate of surface water elevation change, and channel bed and bank configuration. The fish community in the Study Area was sampled periodically between 1986 and 1996 (EA, 1986, 1988; Sada & Knapp, 1993; CDFG, 1996). Non-native brown trout (*Salmo trutta*) were the most prevalent species below the dam (CDFG, 1996). Rainbow trout (*Oncorhynchus mykiss)* were also found in Mill Creek

below the dam, albeit in much fewer numbers. Sterile rainbow trout accounted for most contemporary stocking efforts (2017–2022; CDFW, unpublished data).

Brown trout are the only self-sustaining trout species occurring in the Study Area. Brown trout spawn in the fall and winter, which aligns with the period of lowest average flows in the Study Area. Embryonic development occurs between approximately December and March (Moyle, 2002), before flows in the Study Area increase substantially, making eggs and alevin[1] potentially susceptible to dewatering. Fry emerge between March and April and are potentially vulnerable to stranding during flow fluctuations as they occupy shallow, low velocity habitats near stream margins and have limited swimming ability (Moyle, 2002; Crew et al., 2017). Juvenile brown trout occur in streams year-round and generally use shallower habitat with lower water velocity than non-spawning adults (CDFG, 1996). Adult rainbow trout, like the hatchery reared individuals that are stocked in the Study Area, typically occupy deep pockets behind rocks and near pool inlets (Moyle, 2002). During high flows, individuals often use in-stream structure for flow refuge, making them susceptible to stranding when flows recede.

Fish stranding may occur because of both natural and anthropogenic processes that cause habitat to dewater and restrict fish movement (Nagrodski et al., 2012). Habitat conditions that pose high stranding risk include areas with a wetted history of more than 10 days, shoreline habitat with slopes less than 6 percent, topographic depressions that create isolated pools, heavily structured littoral zones (e.g., with coarse substrate or vegetation), cold water temperatures, and abrupt surface water elevation changes (Crew et al., 2017).

The Lundy Project is operated in accordance with 1914 adjudicated Mill Creek Water Rights and the 2007 Order Amending License and Dismissing Requests for Rehearing (refer to Section 4.0 of the Pre-Application Document [PAD]). Instream flow releases from Lundy Dam into Mill Creek are managed to maintain a minimum of 4 cubic feet per second (cfs) at U.S. Geological Survey (USGS) Gage No. 10287069 in accordance with the 2007 Settlement Agreement (FERC, 1992; 2007). Historical flows from 1968 to 1991 ranged from 0 to 224 cfs, with an average of 4.5 cfs in the bypass reach (CDFG, 1996) with peak flows generally occurring in the late spring and early summer. SCE controls flow releases from Lundy Dam once spill conditions cease. The maximum controlled release through the dam is approximately 150 cfs. Temporary guidelines for increasing and decreasing controlled releases to the bypass reach are outlined in Appendix 2, Paragraph 7 of the 2022 Settlement Agreement (SCE, 2022).

6.0 STUDY APPROACH

The approach for this Study will comprise three steps: 1) site selection, 2) water surface elevation monitoring, and 3) evaluation of stranding risk.

[1] Alevin is a newly spawned salmon or trout still carrying the yolk (Moyle 2002).

6.1. SITE SELECTION

Available information (e.g., historical instream flow-habitat relationships, 10-meter digital elevation model [DEM], hydrology, aerial photography) will be used to evaluate stream channel and habitat characteristics in Mill Creek and inform site selection. Sites will be identified during field reconnaissance based on:

- Diversity of channel types, habitat types, and sensitivity of brown trout habitat to changes in flow;
- Representative spatial distribution throughout the Study Area;
- Representative distribution among focal habitats including potential brown trout spawning sites.

6.2. WATER SURFACE ELEVATION MONITORING

Water surface elevation monitoring will be conducted in two phases during spring or early-summer; the first phase will include transect and stage recorder placement, and the second phase will include data collection during target flow releases. To install transects and co-located stage recorders (HOBO water Level Logger U20L-04) at each site, releases into Mill Creek must be controlled at a safely wadable flow (approximately 5 cfs or less). Down-ramping may be required depending on the water year type and flow conditions in Mill Creek at the time of Study implementation. In wet water year types, Lundy Dam fills with early spring runoff before spilling over the dam crest.

Once stable, safely wadable flows of approximately 5 cfs or less are achieved, transects will be established by a team of two and will intersect areas at the site that may have high stranding potential. In single, confined channel segments, transects will generally run perpendicular to flow and the channel long profile. In complex channel segments, a transect may comprise multiple straight subsections (or legs) to best characterize stranding conditions at the site. Markers will be installed as needed to ensure sites can be re-occupied. Once equipment is installed, flows will increase consistent with Appendix 2, Section 7 of the 2022 Settlement Agreement.

During the second phase of monitoring, SCE will release over a 7-day period, 7 target flows that span the range of flows in SCE's control, depending on if flows are safely wadable (Table 6.2-1). Ramping will follow guidelines outlined in Appendix 2, Section 7 of the 2022 Settlement Agreement. A crew of two will measure stream discharge at locations near the upstream and downstream ends of the Study Area during each target flow. Stage recorders will continuously document changes in water surface elevation at each monitoring transect over the range of target release flows. Water surface elevation or water depth may be recorded in areas along transects that become isolated or disconnected from conditions at the stage recorder and incidental observations of fish stranding or other animals (e.g., amphibians) will be noted. Additionally, potential barriers to fish movement in the vicinity of transects will be visually identified and recorded. Photographs will be taken to document wetted channel conditions at the different target flow releases.

Table 6.2-1. Example Target Flow Release Schedule based on 2022 Settlement Agreement Ramping Guidelines

Day	Flow Release Type	Time Period	Approximate Starting Flow (cfs)[1]	Approximate Ending Flow (cfs)
Day 1	**Target**	08:00-19:00		**150**
	Down-ramp	20:00	150	130
	Down-ramp	21:00	130	110
	Down-ramp	22:00	110	100
Day 2	**Target**	08:00-19:00		**100**
	Down-ramp	20:00	100	80
	Down-ramp	21:00	80	65
Day 3	**Target**	08:00-19:00		**65**
	Down-ramp	20:00	65	45
	Down-ramp	21:00	45	40
Day 4	**Target**	08:00-19:00		**40**
	Down-ramp	20:00	40	25
Day 5	**Target**	08:00-19:00		**25**
	Down-ramp	20:00	25	12
Day 6	**Target**	08:00-19:00		**12**
	Down-ramp	20:00	12	5
Day 7	**Target**	08:00-19:00		**5**

[1] Flows are dependent on whether access can be achieved safely and are within SCE operational constraints.

6.3. INCIDENTAL OBSERVATIONS

Any incidental observations of special-status species or aquatic invasive species (e.g., Didymo [*Didymosphenia geminata*], American bullfrog [*Lithobates catesbeianus*], New Zealand mud snail [*Potamopyrgus antipodarum*], or bivalves) during Project studies will be noted (including location information) and reported as appropriate.

7.0 ANALYSIS AND REPORTING

Data collected during the Study will be evaluated to assess stranding risk. The range of instream flows released from Lundy Dam will be characterized using discharge data from the USGS Gage No. 10287069 and supplemented by stream discharge data recorded near the upstream and downstream ends of the Study Area. A stage-discharge relationship will be established to characterize travel time, attenuation, and accretion or loss through the reach. Relationships will be developed between target flows and the length or proportion of channel cross sections that become dewatered or disconnected between each target flow. If a site selected to evaluate stranding risk includes suitable spawning habitat, the potential risk to spawning and incubation habitat will be estimated. Site photos and observational descriptions will be used to characterize stranding risk in

the vicinity of each Study Area. A report will be prepared that will include a summary of results from data collected and analyzed during this study. Any general patterns in stranding risk will be discussed. The report will be appended to the Final License Application.

8.0 SCHEDULE

8.1. STUDY SCHEDULE

The Study will begin with field reconnaissance and site selection during 2025 (Table 8.1-1). The final study report will be provided with the Final License Application in February 2027.

Table 8.1-1 Study Schedule

Date	Activity
Spring 2025	Field reconnaissance and study site selection
Spring/Summer 2025	Install monitoring equipment (flow dependent)
Spring/Summer 2025	Conduct field surveys (flow dependent)
Winter 2025/2026	Compile study results and prepare report
February 2027	Distribute final report in Final License Application

9.0 LEVEL OF EFFORT AND COST

SCE estimates the cost to complete this Study, in 2024 dollars, is approximately $206,000.

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TERR-1 – BOTANICAL RESOURCES

TECHNICAL STUDY PLAN

Lundy Hydroelectric Project
FERC Project No. 1390

December 2024

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1.0 POTENTIAL RESOURCE ISSUE

Special-status botanical resources, including sensitive natural communities, federally and/or state-listed species, U.S. Forest Service (USFS) "Species of Conservation Concern", or other special-status plant species, are either known to or have potential to occur in the Lundy Hydroelectric Project (Lundy Project or Project) Area and may be affected by Project operations and maintenance. This includes the following listed species:

- Whitebark pine (*Pinus albicaulis*) (Federally Threatened)
- Mono milk-vetch (*Astragalus monoensis*) (State Rare)

Invasive plant populations are either known to or have potential to occur in the Project Area. Introduction and/or spread of invasive plant populations may occur due to Project operations and maintenance activities.

2.0 PROJECT NEXUS AND HOW THE RESULTS WILL BE USED

Project operations and maintenance activities could result in direct and/or indirect effects on sensitive natural communities (including riparian areas) and special-status plants, including USFS Species of Conservation Concern. If special-status botanical resources are found to be present within the Study Area (as defined in Section 4.0), the data will be examined to determine the effects of Project operations and maintenance activities in the context of the most recent USFS Management Plan, the federal and State Endangered Species Acts, the Native Plant Protection Act, the National Environmental Policy Act, and the California Environmental Quality Act.

Project operations and maintenance activities could result in the spread or introduction of invasive plant species. The presence of new invasive species or increase in population sizes of existing invasive species could negatively affect native biological resources.

3.0 STUDY GOALS AND OBJECTIVES

The goal of this TERR-1 Botanical Resources Study Plan (Study) is to obtain additional information to supplement the existing information regarding botanical resources in the Study Area by:

- Ground-truthing the existing USFS vegetation map (USFS, 2020a), including identification of any sensitive natural communities;
- Documenting the presence of species listed, or proposed for listing, by the federal and/or State Endangered Species Acts;
- Documenting the presence of other special-status plant species, including US Fish and Wildlife Services (USFWS) Species of Conservation Concern and species with a California Rare Plant Rank of 1 or 2; and

- Documenting non-native, invasive plants identified in the Inyo National Forest (INF) Invasive Plant Inventory Database (NRM – TESP/IS, 2018) and on the California Invasive Plant Council Inventory (Cal-IPC, 2023).

4.0 EXTENT OF STUDY AREA AND STUDY SITES

The Study Area will be used to ground-truth the USFS-mapped vegetation communities and document the presence of special-status plant species and the presence of invasive plant species.

4.1 BOTANICAL RESOURCE STUDY AREA

The Study Area is shown on Figure 4.1-1 and includes the following sites:

- Lundy Lake Boat Launch
- Lundy Dam and Day Use Area
- Lundy Campground
- Day Use Areas downstream of Lundy Campground
- Lundy Lake Road from the boat launch to the downstream end of the Lundy Day Use Areas
- Penstock Flowline
- Lundy Powerhouse
- Mill Creek Return Ditch

The effects of proposed license activities would be localized to the Federal Energy Regulatory Commission (FERC) boundary. The Study Area will encompass areas that may be hydrologically influenced by proposed activities or that may be subject to proposed activities related to Project operations and maintenance.

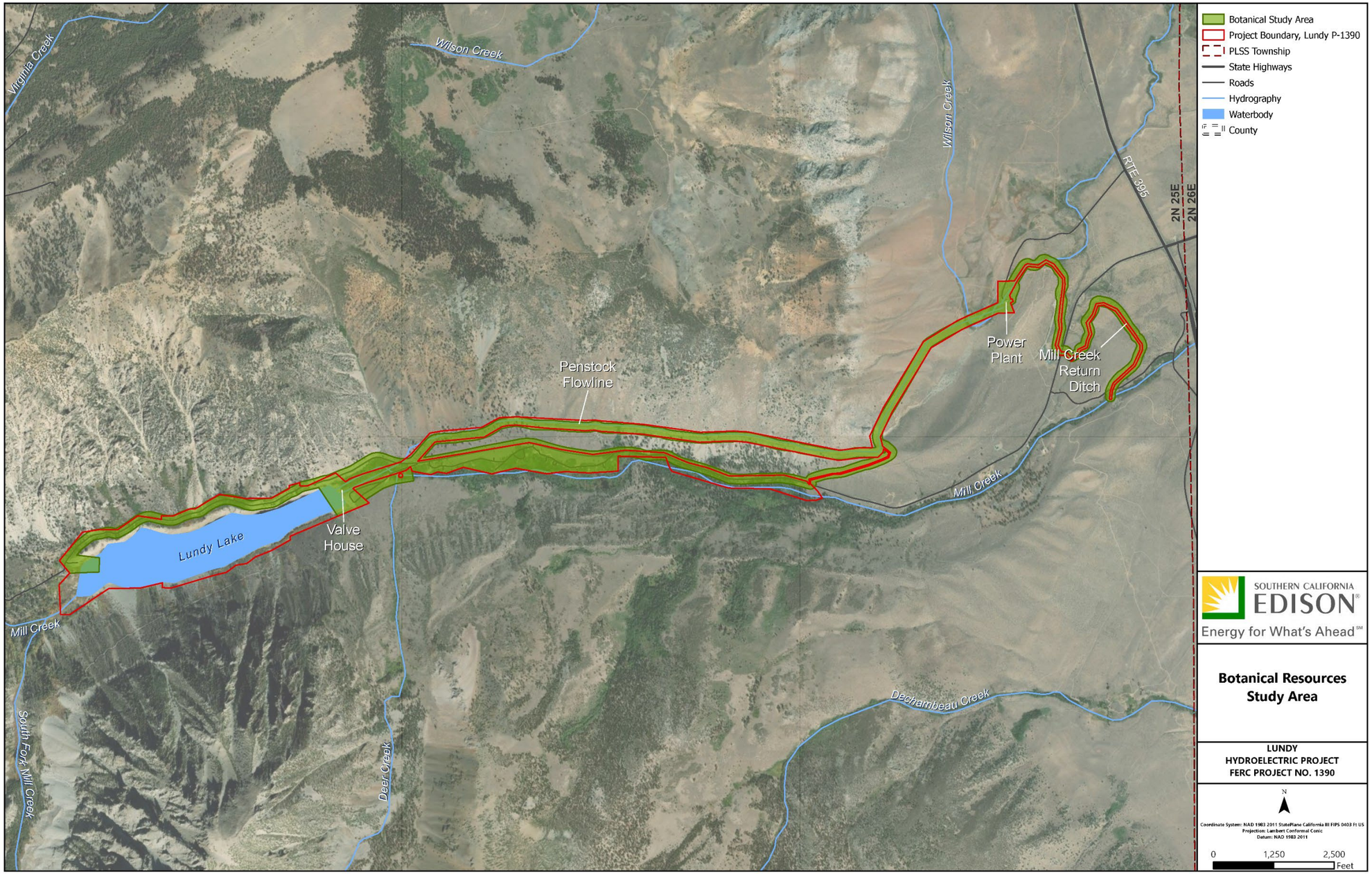

Figure 4.1-1. Botanical Resource Study Area

5.0 EXISITING INFORMATION

Information on vegetation communities and plant species, including riparian conditions monitored as part of the current license, is provided by the previously conducted field surveys and license-required monitoring studies (Read, 2021). Keys and descriptions are from the USFS using the Calveg classification system (USFS, 2009). This is the preferred key by the INF and is used in this document for consistency with the Land Management Plan for the INF (USFS, 2018). In this system, differences between vegetation alliance types (also referred to as communities) are based on canopy cover as determined from aerial photography and satellite imagery.

Special-status plant occurrences within the Project Area have been documented by past studies (Psomas, 2009, 2017), the *Environmental Assessment of Potential Cumulative Impacts Associated with Hydropower Development in the Mono Lake Basin, California* (FERC Nos. 1388, 1389, 1390, 3259, and 3272; FERC, 1990), USFS records of rare plants (NRM – TESP/IS, 2018), whitebark pine range geospatial data (USFS, 2020b), the California Natural Diversity Database (CNDDB; CDFW, 2023b; U.S. Geological Survey Lundy, Dunderberg Peak, Twin Lakes, Big Alkali, Bodie, Negit Island, Lee Vining, Mount Dana, Tioga Pass quadrangles), the *Persistence Analysis for Species of Conservation Concern Inyo National Forest* (INF, 2019), and the *California Native Plant Society's Inventory of Rare, Threatened, and Endangered Plants* (CNPS, 2023; U.S. Geological Survey Lundy, Dunderberg Peak, Twin Lakes, Big Alkali, Bodie, Negit Island, Lee Vining, Mount Dana, Tioga Pass quadrangles), and the Consortium of California Herbaria (CCH, 2023). Since those studies were undertaken, new occurrences have been recorded to the CNDDB and new species have been added to the federal and state special-status species lists; and others have been deemed sensitive by various government and non-governmental organizations.

Information on invasive plant occurrences has been provided by the USFS, including mapped infestations and treatment strategy for all currently known invasive plant species in the INF Invasive Plant Inventory Database (NRM – TESP/IS, 2018).

Past riparian monitoring surveys (Read, 2021) documented vegetation conditions along established belt transects. Data on herbaceous species was collected in 1-meter square quadrats within each transect. Data on tree and shrub parameters was collected within the belts. False color infrared aerial photography was also flown in conjunction with the riparian monitoring study.

6.0 STUDY APPROACH

6.1 LITERATURE REVIEW

A literature review will be performed to determine if any additional special-status botanical resources have been identified as having potential to occur within the Project Area. This literature review will also verify the protective status of any of the previously identified special-status plants and will review any new literature on the ecology and life history of

these resources. The literature review will be used to define potentially suitable habitat for special-status plants.

6.2 FIELD SURVEYS

Field surveys include vegetation mapping, surveys for special-status plant species, and surveys for invasive plant species.

6.2.1 VEGETATION MAPPING

Vegetation mapping will include the following:

- A review of the existing USFS vegetation communities will be conducted to determine if any suitable habitat for special-status botanical resources has been identified within the Project Area. Vegetation alliances/associations will be cross-referenced to defined habitats for special-status plants.

- Vegetation previously mapped by the USFS will be verified or adjusted if conditions on the ground are not consistent with previously identified resources. Mapping will be performed at a scale appropriate to determining Project-level effects and distinguishing vegetated from unvegetated areas. Classification will follow the USFS vegetation names. These will be cross walked to A Manual of California Vegetation (CNPS, 2024, as amended), which is used by the California Department of Fish and Wildlife (CDFW) for determining whether a vegetation alliance/association is considered to be a sensitive natural community (CDFW, 2023a, as amended).

- Information will be collected on each vegetation community, including geographic location; dominant, co-dominant, or characteristic plant species; and understory species.

6.2.2 SPECIAL-STATUS PLANT SURVEYS

Special-status plant surveys will include the following:

- Surveys will follow the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW, 2018). Two years of surveys will be conducted to sample during variations in annual precipitation and air temperature. Surveys will be floristic in nature and performed at appropriate times of the year to maximize the opportunity of observing special-status plants, as determined by the literature review and in consultation with the relevant stakeholders. Two survey visits each year will be conducted to encompass the blooming/fruiting period for multiple special-status plant species.

- Prior to the start of surveys, aerial photographs of each portion of the Study Area will be prepared for field use. The field map will be uploaded onto a tablet or cell phone loaded with a mapping program (e.g., Avenza maps or ArcGIS Field Maps) to facilitate navigation and data collection. The field maps will include known occurrences of

special-status botanical resources and areas of potentially suitable habitat for special-status botanical resources.

- Biologists will perform pedestrian surveys to identify and map existing conditions and document any observed plants. Plant species will be identified in the field or collected for future identification. Botanists will have the appropriate permits for collecting voucher specimens. Plants will be identified to the taxonomic level necessary to determine whether or not they are a special-status species. Plants will be identified using taxonomic keys, descriptions, and illustrations from a variety of sources, including the Jepson eFlora (Jepson Flora Project, 2024, as amended), Wilson et al. (2014), Hurd et al. (1998), Wiese (2013), and Breckling and Breckling (2020). Nomenclature of plant taxa will conform to the Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2024, as amended) for special-status species and the Jepson eFlora (Jepson Flora Project, 2024, as amended) for all other taxa. Field surveys will focus on the following:

  - Observations of special-status plant species (i.e., listed species, USFS Species of Conservation Concern, or species with a California Rare Plant Rank [CRPR] of 1 or 2) identified in the Study Area will be documented either using a hand-held global positioning system (GPS) unit, a tablet/cell phone loaded with the field map, or on a hard-copy map. The extent of the population within the Study Area boundary will be delineated. Discrete individuals/populations will be mapped as point or polygon. Data will be collected for each observed population, including the number and phenology of individuals (estimated for large populations), microsite characteristics such as slope, aspect, soil texture, surrounding habitat, and associated species. Clonal species will be mapped according to square footage. Survey Forms will be submitted to the CDFW for species with a CRPR of 1 or 2.

6.2.3 Invasive Species Surveys

Invasive species surveys will include the following:

- Surveys will be conducted concurrently with special-status plant surveys and will follow the methods described above.

- The USFS identified select invasive species of concern to be mapped within the Study Area. This includes all species on the INF Invasive Plant Inventory Database with a treatment strategy of 1–eradicate or 2–control and select species with a treatment strategy of 3–contain. Select species of local concern are also included. Table 6.2-1 provides a list of these select invasive species of concern.

- Observations of select invasive plant species identified in the Study Area will be documented either using a hand-held GPS unit, a tablet/cell phone loaded with the field map, or on a hard-copy map. The extent of the population within the Study Area boundary will be delineated. Discrete individuals/populations will be mapped as point or polygon and the number of individuals will be counted (estimated for large populations). Widely distributed species dispersed throughout a study site will be

documented as present/absent and the number of individuals will be estimated. Other non-native plant species observed will be documented as present but not mapped.

Table 6.2-1. Invasive Species to be Mapped in the Study Area

Scientific Name	Common Name	USFS Treatment Strategy	Cal-IPC Rank
Ailanthus altissima	tree of heaven	1 – Eradicate	Moderate
Bassia hyssopifolia	five-hook bassia	3 – Contain	Limited
Bromus rubens	red brome	3 – Contain	High
Bromus tectorum	cheat grass	3 – Contain	High
Centaurea diffusa	diffuse knapweed	1 – Eradicate	Moderate
Centaurea solstitialis	yellow star-thistle	1 – Eradicate	High
Centaurea stoebe ssp. *micranthos*	spotted knapweed	1 – Eradicate	High
Cirsium arvense	Canada thistle	1 – Eradicate	Moderate
Cirsium vulgare	bull thistle	3 – Contain	Moderate
Convolvulus arvensis	bindweed	3 – Contain	None
Dipsacus fullonum	wild teasel	2 – Control	Moderate
Elaeagnus angustifolia	Russian olive	2 – Control	Moderate
Halogeton glomeratus	saltlover	2 – Control	Moderate
Holcus lanatus	common velvet grass	3 – Contain	Moderate
Lepidium appelianum	white-top	1 – Eradicate	None
Lepidium chalepense	lens-podded hoary cress	1 – Eradicate	Moderate
Lepidium draba	heart-podded hoary cress	1 – Eradicate	Moderate
Lepidium latifolium	perennial pepperweed	1 – Eradicate	High
Linaria dalmatica ssp. *dalmatica*	dalmatian toadflax	1 – Eradicate	Moderate
Linaria vulgaris	butter-and-eggs	1 – Eradicate	Moderate
Rhaponticum repens	Russian knapweed	1 – Eradicate	Moderate
Robinia pseudoacacia	black locust	3 – Contain	Limited
Rubus armeniacus	Himalayan blackberry	2 – Control	High
Salsola tragus	Russian thistle	3 – Contain	Limited
Saponaria officinalis	bouncingbet	2 – Control	Limited
Spartium junceum	Spanish broom	1 – Eradicate	High
Tamarix ramosissima	saltcedar	2 – Control	High
Tribulus terrestris	puncturevine	2 – Control	Limited

Scientific Name	Common Name	USFS Treatment Strategy	Cal-IPC Rank
Ulmus pumila	Siberian elm	2 – Control	None
Verbascum thapsus	woolly mullein	4 – Limited or None	Limited

Sources: NRM – TESP/IS, 2018; Cal-IPC, 2023.

Cal-IPC = California Invasive Plant Council; USFS = U.S. Forest Service

7.0 REPORTING

Draft results will be prepared documenting:

- Methods used to perform the surveys
- Results of the literature review
- Results of the field surveys, including an updated vegetation map, a plant compendium of observed plant species, maps of special-status and invasive plant species locations, and additional information on plant populations (e.g., population size, habitat characteristics)
- Other incidental observations made during site visits (e.g., special-status wildlife observations)
- California Native Species Field Survey Form(s) completed for any special-status species with a CRPR of 1 or 2 observed during the field surveys. Each observation record will be submitted to the CDFW

8.0 SCHEDULE

8.1 STUDY SCHEDULE

The anticipated Study schedule is provided in Table 8.1-1.

Table 8.1-1. Study Schedule

Date	Activity
Spring 2025	Conduct desktop analysis and literature review
Spring-Summer 2025	Conduct first season of field surveys
Winter 2025	Compile study results and prepare draft report
Spring-Summer 2026	Conduct second season of field surveys
Fall 2026	Compile study results and incorporate into draft report
February 2027	Distribute final report in Final License Application

9.0 LEVEL OF EFFORT AND COST

SCE estimates the cost to complete this Study, in 2024 dollars, is approximately $208,000.

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TERR-2 – GENERAL WILDLIFE RESOURCES SURVEY

TECHNICAL STUDY PLAN

Lundy Hydroelectric Project
FERC Project No. 1390

December 2024

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1.0 POTENTIAL RESOURCE ISSUE

Terrestrial Wildlife species that could be affected by the Lundy Hydroelectric Project (Lundy Project or Project) operation and maintenance (O&M) activities include U.S. Forest Service (USFS) At-Risk Species, USFS Species of Conservation Concern (USFS Inyo National Forest [INF], 2019; 2020), and other wildlife species including:

- Bald and Golden Eagles
  - Nesting migratory bird species and U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern
- Game species
  - Mule deer *(Odocoileus hemionus*)
  - Upland game birds
  - Other game mammals
- Species listed as Candidate, Endangered, or Threatened by the federal or state Endangered Species Acts
  - Crotch's bumblebee (*Bombus crotchii*)
  - Willow flycatcher (Empidonax traillii)
  - Monarch butterfly (*Danaus plexippus*)
  - Foothill yellow-legged frog (*Rana boylii*)
  - Sierra Nevada yellow-legged frog (*Rana sierrae*)
  - Northwestern pond turtle (*Actinemys marmorata*)
  - Wolverine (*Gulo gulo*)
  - Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*)
  - Sierra Nevada red fox (*Vulpes vulpes necator*)
  - Greater sage grouse (*Centrocercus urophasianus*)
  - Pygmy rabbit (*Brachylagus idahoensis*)
  - Western yellow-billed cuckoo (*Coccyzus americanus*)
- Species with overlapping Critical Habitat

  - Sierra Nevada bighorn sheep
  - Greater sage grouse
- Other wildlife species
  - North American beaver (*Castor canadensis*) (per verbal request from State Water Resources Control Board during Project site visit)

2.0 PROJECT NEXUS AND HOW THE RESULTS WILL BE USED

The efforts outlined in this TERR-2 General Wildlife Resources Survey Technical Study (Study) would determine the existing conditions associated with terrestrial biological resources, determine the wildlife species present, and the wildlife species with a high potential to occur within areas subject to the Lundy Project routine O&M activities. If U.S. Forest Service At-Risk Species, Species of Conservation Concern, or other special-status wildlife species are present, the data will be examined to determine the potential effects of the Project on wildlife in the context of the most recent *Land Management Plan for the Inyo National Forest* (USFS, 2019), the federal and state Endangered Species Acts, and the National Environmental Policy Act.

3.0 STUDY GOALS AND OBJECTIVES

The goal of this Study is to develop the information necessary to supplement the existing information to address the above identified issues. Study objectives include:

- Document the occurrence of any common, U.S. Forest Service At-Risk Species, Species of Conservation Concern, and other special-status wildlife species or associated suitable habitat within and adjacent to Project Areas that may be affected by routine O&M activities.
- Document the occurrence of any rare, threatened, and/or endangered wildlife species or associated suitable habitat in the area during general wildlife surveys within and adjacent to Project Areas that may be affected by routine O&M activities.

4.0 EXTENT OF STUDY AREA AND STUDY SITES

4.1. WILDLIFE STUDY AREA

The Study Area is shown on Figure 4.1-1. It is comprised of the following Project Areas, including a 100-foot buffer:

- Lundy Dam and associated infrastructure to intersection of Lundy Dam Road and Lundy Lake Road
- Connector Road between Lundy Lake Road and Lundy Flowline Road
- Lundy Powerhouse and Switchyard

- Lundy Penstock and Flowline Road
- Lundy Return Ditch
- Lundy Lake Road from intersection with Lundy Return Ditch to Resort
- Lundy Pipeline and Penstock alignment
- Lundy Lake and Mill Creek Delta
- Mill Creek between Lundy Return Ditch and State Route 395

Prior to finalizing the Study Area boundaries, a desktop review will be conducted to identify areas that may support potentially suitable habitat for special-status wildlife.

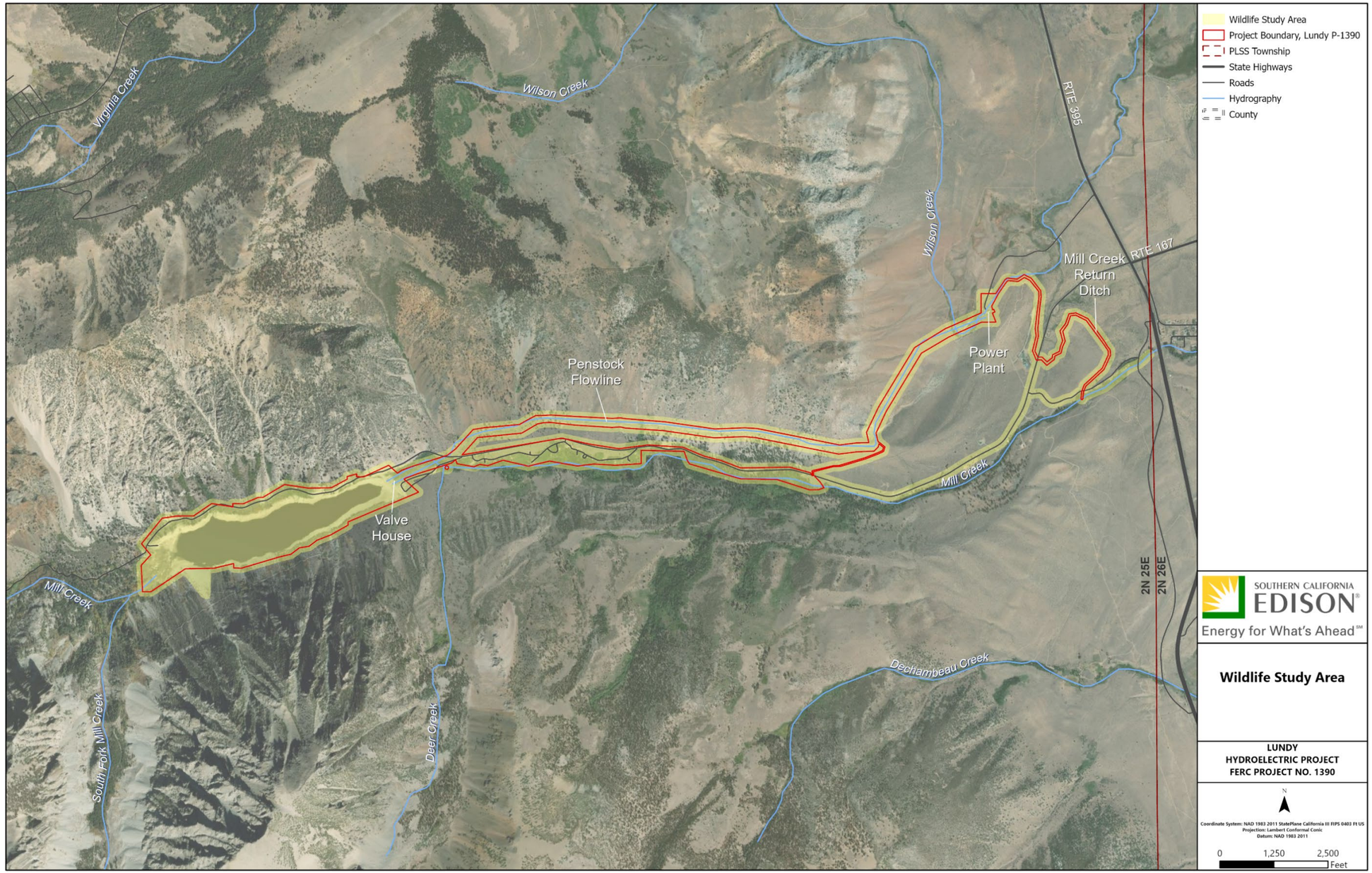

Figure 4.1-1. Wildlife Study Area

5.0 EXISTING INFORMATION

Wildlife occurrences within the vicinity of the Lundy Project have been documented in the California Natural Diversity Database (CDFW, 2023), USFWS Information for Planning and Consultation System (USFWS, 2023), the *Persistence Analysis for Species of Conservation Concern Inyo National Forest* (USFS, 2019), unpublished *At-Risk Aquatic and Terrestrial Species on Inyo National Forest* (INF, 2020), the *Final Environmental Assessment for Lundy Hydropower License* (FERC, 1992, past Project-specific studies in the area (Psomas, 2008a, 2008b, 2008c, 2009a, 2009b, 2010, 2017; .), and a review of the current licensee's resource management plans including the final Avian Mortality Monitoring Plan (SCE, 2009), and the Threatened, Endangered and Sensitive Species Management Plan (Psomas, 1999). Since the previous license application was completed, new species have been added to the federal and state Endangered Species Act lists, and others have been deemed special-status by various government agencies.

6.0 STUDY APPROACH

6.1. GENERAL WILDLIFE SURVEYS

6.1.1. FIELD SURVEYS

- Surveys will be performed at appropriate times of the year (e.g., breeding season) to maximize the opportunity to observe special-status wildlife species as determined by the literature review.

- Three field surveys will be performed: one survey during late spring/early summer, one mid-summer and one late summer/early fall. Surveys will be at a minimum three full field days and two nights each.

- Prior to the start of the surveys, aerial images of each facility at a 1-inch to 200-foot scale will be prepared for field use and known wildlife occurrences and areas of potentially suitable habitat for special-status wildlife will be reviewed.

- Biologists will perform pedestrian surveys within the terrestrial wildlife Study Area to document any wildlife observations. Pedestrian surveys will be performed with binoculars to directly observe wildlife.

- Birds and raptors will be identified by direct visual observation and call identification.

- A habitat assessment for willow flycatcher will be performed within the terrestrial wildlife study area.

- Active searches for reptiles and amphibians will be conducted. Methods will include lifting, overturning, and carefully replacing objects such as rocks, boards, and debris.

- Mammals will be identified by visual recognition or evidence of diagnostic sign, including scat, footprints, chew patterns, scratch-outs, dust bowls, burrows, and trails.

- Nocturnal spotlighting and road surveys will be performed to identify additional wildlife not likely to be observed during day-light hours. For these surveys, the Project roads will be driven at slow speeds and a spotlight will be used to search for wildlife. During nocturnal surveys species will be identified to the lowest taxonomic level possible.

- All Project facilities will be inspected for evidence of bat roosting. SCE will notify CDFW in the event roosting bats are detected at Project facilities so that CDFW can conduct swab sampling for white-nose syndrome.

- Project facilities that are determined to have the potential to support bat roosts will be catalogued in the wildlife report including type of facility and type of roost.

- Acoustic surveys for bats will be performed in likely flight corridors within select portions of the FERC Project area and at relevant Project facilities showing evidence of bat roosting.

- Observations of active or abandoned raptor nests will be recorded using a global positioning system (GPS) enabled device and mapped onto the field map.

- All wildlife species observed, and their general location will be recorded in field notes.

- Should evidence of listed or candidate species be found within the FERC Boundary (other than as migrants or fly-overs) a second year of surveys will be scheduled to focus on investigating the intensity of habitat use within the FERC boundary by those species.

- Should evidence of bat maternity roosting be found in a Project facility a second year of surveys will be scheduled.

6.1.2. TRAIL CAMERAS

- Biologists will install up to four trail cameras at locations most likely to capture wildlife that may not be observable during pedestrian surveys. Camera locations will be discussed in advance with CDFW, and final placement determined in the field. Permission from landowners will be obtained, as necessary.

- Cameras will be deployed for a minimum of five (5) months. Weather permitting, memory card and battery status' will be checked at least every three (3) months to ensure proper functioning. Camera placement will be reassessed after reviewing the second round of data.

7.0 REPORTING

A report will be prepared documenting the findings of this Study. The report will include locations and descriptions of all special status wildlife species observed and an analysis of the potential of special status species to occur if not observed based on the observed habitat. The report will include a compendium of all wildlife observed and wildlife documented by trail cameras in relation to Project facilities. The report will also address

the *Land Management Plan for the Inyo National Forest* (USFS, 2019) Desired Conditions, Goals, Standards, and Guidelines for Wildlife. All special status species observed during the surveys will be reported to the California Natural Diversity Database.

8.0 SCHEDULE

8.1. STUDY SCHEDULE

The Study will begin with field surveys during 2025 (Table 8.1-1). The final study report will be provided with the Final License Application in February 2027.

Table 8.1-1. Study Schedule

Date	Activity
Spring-Fall 2025	Conduct field surveys
Winter 2025/2026	Compile study results and prepare draft report
TBD	Distribute draft report to stakeholders
TBD	Stakeholder review and comments on draft report
TBD	Resolve comments and prepare final report
February 2027	Distribute final report in Final License Application

9.0 LEVEL OF EFFORT AND COST

SCE estimates the cost to complete this Study, in 2024 dollars, is approximately $167,500.

10.0 REFERENCES

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REC-1 – RECREATION USE AND NEEDS STUDY PLAN

TECHNICAL STUDY PLAN

Lundy Hydroelectric Project
FERC Project No. 1390

December 2024

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1.0 POTENTIAL RESOURCE ISSUE

Lundy Hydroelectric Project (Lundy Project) operations have the potential to affect recreation use and access within the Lundy Project boundary.

2.0 PROJECT NEXUS AND HOW THE RESULTS WILL BE USED

Lundy Project operations may affect recreation use and access within the Lundy Project boundary. Data collected through this REC-1 Recreational Use and Needs Study (Study) will be used to assess the effects of continued Lundy Project operations on recreation use and access and will inform development of protection, mitigation, and enhancement measures in the Draft License Application (DLA), if needed.

A portion of the Lundy Project is located within the Inyo National Forest (INF). The INF has Federal Power Act Section 4(e) conditioning authority to prescribe conditions that may mitigate the impact of hydropower projects on INF system lands and thus could require mitigation for recreation induced by the presence of the Project.

3.0 STUDY GOALS AND OBJECTIVES

The goals and objectives of the Recreation Use and Needs Study are to:

Goal 1 – Characterize the existing use of the FERC-approved recreation sites at the Lundy Project.

Goal 1 Objectives:

- Estimate the recreation use at the FERC-approved recreation sites included in the Lundy Project boundary by day type (i.e., weekday, weekend, or peak weekend) and activity.
- Evaluate visitor feedback regarding the perception and experience of visitors at the FERC-approved recreation sites.

Goal 2 – Identify current and future needs related to the FERC-approved recreation sites included at the Lundy Project.

Goal 2 Objectives:

- Evaluate whether the capacity of the existing FERC-approved recreation sites meets current needs.
- Estimate future recreation use of the FERC-approved recreation sites.
- Estimate potential future recreation needs and the ability of the existing FERC-approved recreation sites to meet the future needs over the term of a new license.

4.0 EXTENT OF STUDY AREA AND STUDY SITES

4.1. RECREATION SITES STUDY AREA

Recreation sites that will be included in this study are listed in Table 4.1-1 and shown in Figure 4.1-1.

Table 4.1-1. Existing FERC-approved Recreation Sites within the Lundy Project Boundary

Recreation Site Name
Lundy Lake Boat Launch
Lundy Dam Day Use Area
Lundy Campground
Lundy Day Use Area 1
Lundy Day Use Area 2
Lundy Day Use Area 3
Lundy Day Use Area 4

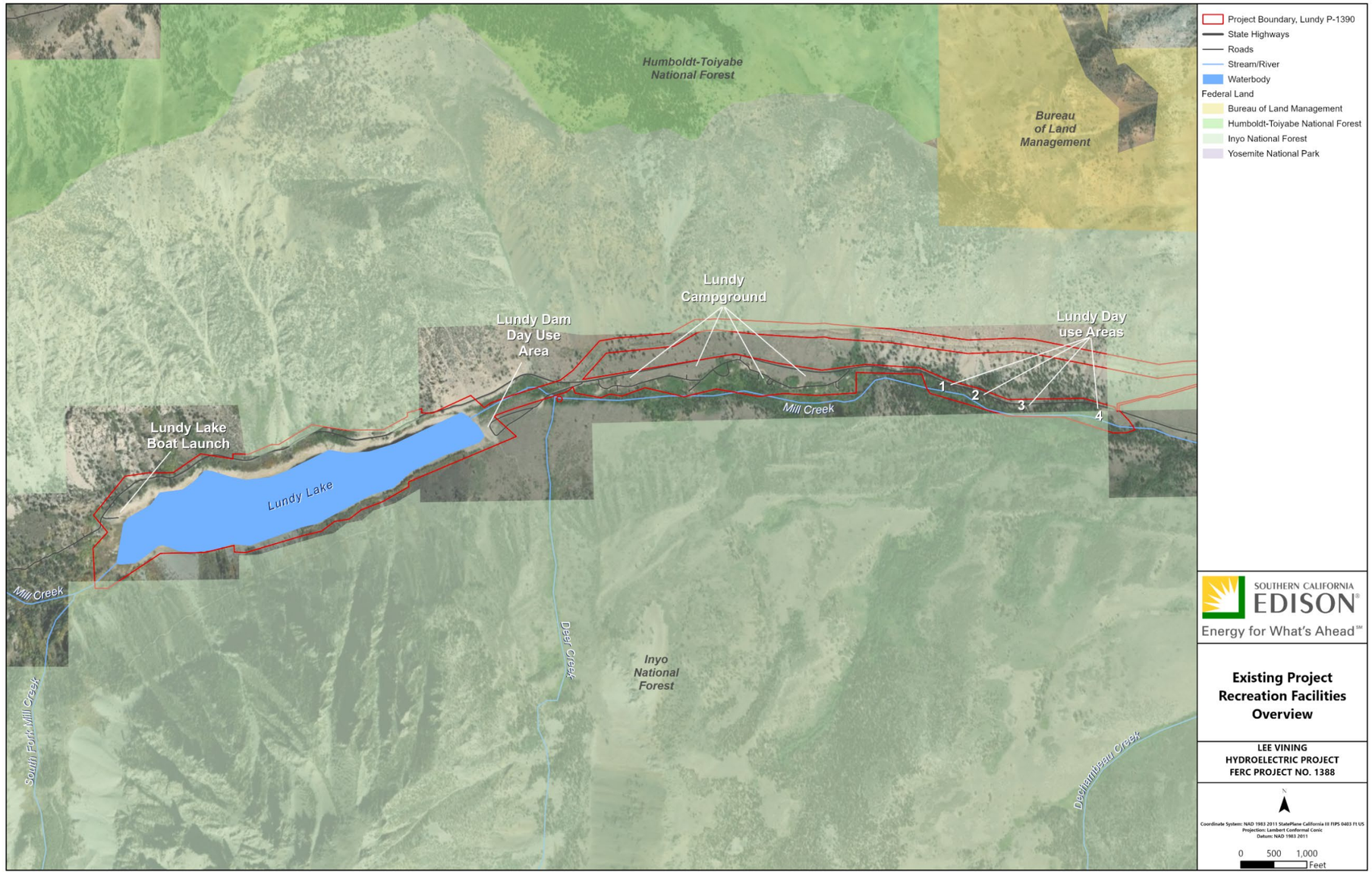

Figure 4.1-1. Existing FERC-approved Recreation Sites within the Lundy Project Boundary

5.0 EXISTING INFORMATION

Existing recreation presented in Section 5.8, Recreation Resources, of the Pre-Application Document (PAD), filed in February 2024, includes information pertaining to existing recreation within the Lundy Project boundary, recreation available near the Lundy Project, and Lundy Project recreation use information from the 2015 FERC Form 80 (SCE, 2015).

At the time of the PAD publication, current recreation uses, and access information was not available. Available data regarding recreation use are insufficient to assess whether Lundy Project recreation sites are meeting the current needs or whether they are sufficient to meet the future needs of the Lundy Project for a new license term.

6.0 STUDY APPROACH

6.1. METHODOLOGY

A variety of data collection techniques will be used to obtain the information necessary to meet the study goals and objectives listed in Section 2.0. Data collection will entail spot counts and recreation use visitor intercept surveys, which will be collected at each site as shown in Table 6.1-1.

Table 6.1-1. Data Collection Methods at Lundy Recreation Sites

Recreation Site Name	Spot Count	Recreation Use Visitor Intercept Surveys
Lundy Lake Boat Launch	X	X
Lundy Dam Day Use Area	X	X
Lundy Lake Campground	X	X
Lundy Day Use Area 1	X	X
Lundy Day Use Area 2	X	X
Lundy Day Use Area 3	X	X
Lundy Day Use Area 4	X	X

Existing data will be used to inform current recreation use as well as projected future recreation needs at the FERC-approved recreation sites. Existing data will include U.S. Census Bureau data, Statewide Comprehensive Outdoor Recreation Plan (SCORP), Mono County existing data collected at Lundy Lake Campground, and other relevant, available data and literature.

Table 6.1-2 summarizes the study objectives, information needed to meet those objectives, and sources of information. Section 6.2 and Section 6.3 provide details on the primary data collection methods.

Table 6.1-2. Recreation Use and Needs Study Plan Objectives and Efforts

Objectives	Information Needed	Source
Goal 1 – Characterize the existing use of the FERC-approved recreation sites at the Lundy Project.		
Objective 1.1: Estimate the recreation use at the FERC-approved recreation sites included in the Lundy Project boundary by day type (i.e., weekday, weekend, or peak weekend) and activity	• Estimate number of vehicles per day • Estimate number of people/vehicles • Estimate length of stay • Proportion of visitors engaged in each available activity	• Spot count data • Recreation Use Visitor Intercept Surveys • Existing data
Objective 1.2: Evaluate visitor feedback regarding the perception and experience of visitors at the FERC-approved recreation sites	• Percent of visitors perceiving crowded facilities • Percent of visitors satisfied with recreational facilities • Average quality rating of facilities and amenities • Average value rating of overall recreation site	• Recreation Use Visitor Intercept Surveys
Goal 2 – Identify current and future needs related to the FERC-approved recreation sites included at the Lundy Project.		
Objective 2.1: Evaluate whether the capacity of the existing FERC-approved recreation sites meets current needs	• User perceptions of crowding and needed improvements compared to existing data • Parking capacity compared to utilization	• Recreation Facilities Condition Assessment (REC-2) • Results of Goal 1 analysis • Existing data
Objective 2.2: Estimate future recreation use of the FERC-approved recreation sites	• Current recreational use assessment • Population projections for the Project Area • Recreational use trends	• Results of Goal 1 analysis • U.S. Census Bureau data • SCORP or other readily available literature • Existing data
Objective 2.3: Estimate potential future recreation needs and the ability of the existing FERC-approved recreation sites to meet the future needs over the term of a new license	• Inventory Assessment • Condition Assessment • Parking capacity at recreation sites vs. projected needs density • Future needs identified by additional sources	• Recreation Facilities Condition Assessment (REC-2) • Results of Goal 1 analysis

6.2. SPOT COUNTS

Spot counts will provide an estimate of the number of recreationists, parked vehicles, and boats/trailers at discrete times at each parking area within each recreation site[1] (Figure 6.2-1 through Figure 6.2-6). Field technicians conducting the spot counts will also record the activities that individuals are participating in, with attention paid to the use of recreation facilities/amenities provided at each site. Results will be documented on Recreation Use Spot Count forms (Appendix A).

Spot counts at the parking areas of the FERC-approved recreation sites will be conducted on two days per month (one weekday and one weekend day) from April 15, 2025 to November 15, 2025, and one day of each holiday weekend for a total of 20 days throughout the study period. For the purposes of this study, the holidays include the three days of the holiday weekend[2] Memorial Day: May 24 to 26, 2025; Juneteenth: June 20 to 22, 2025; Fourth of July: July 4 to 6, 2025; and Labor Day: August 30, 2025 to September 1, 2025.

Sampling dates and times will be randomly selected for the parking areas at the FERC-approved recreation sites. SCE has developed a circuit to allow visits to each parking area associated with all FERC-approved recreation sites, on each sampling day, and the visits will start at a different location and a different time of day, during each circuit, to support random sampling.

[1] Spot counts at Lundy Lake Campground will be modified to count the number of campsites occupied. This data will be used to supplement data provided by Mono County for actual campground use.

[2] For the purposes of this study, the holiday weekend is defined as the Friday, Saturday, Sunday or Saturday, Sunday, Monday closest to the holiday.

Figure 6.2-1. Parking Area Associated with Lundy Lake Boat Launch

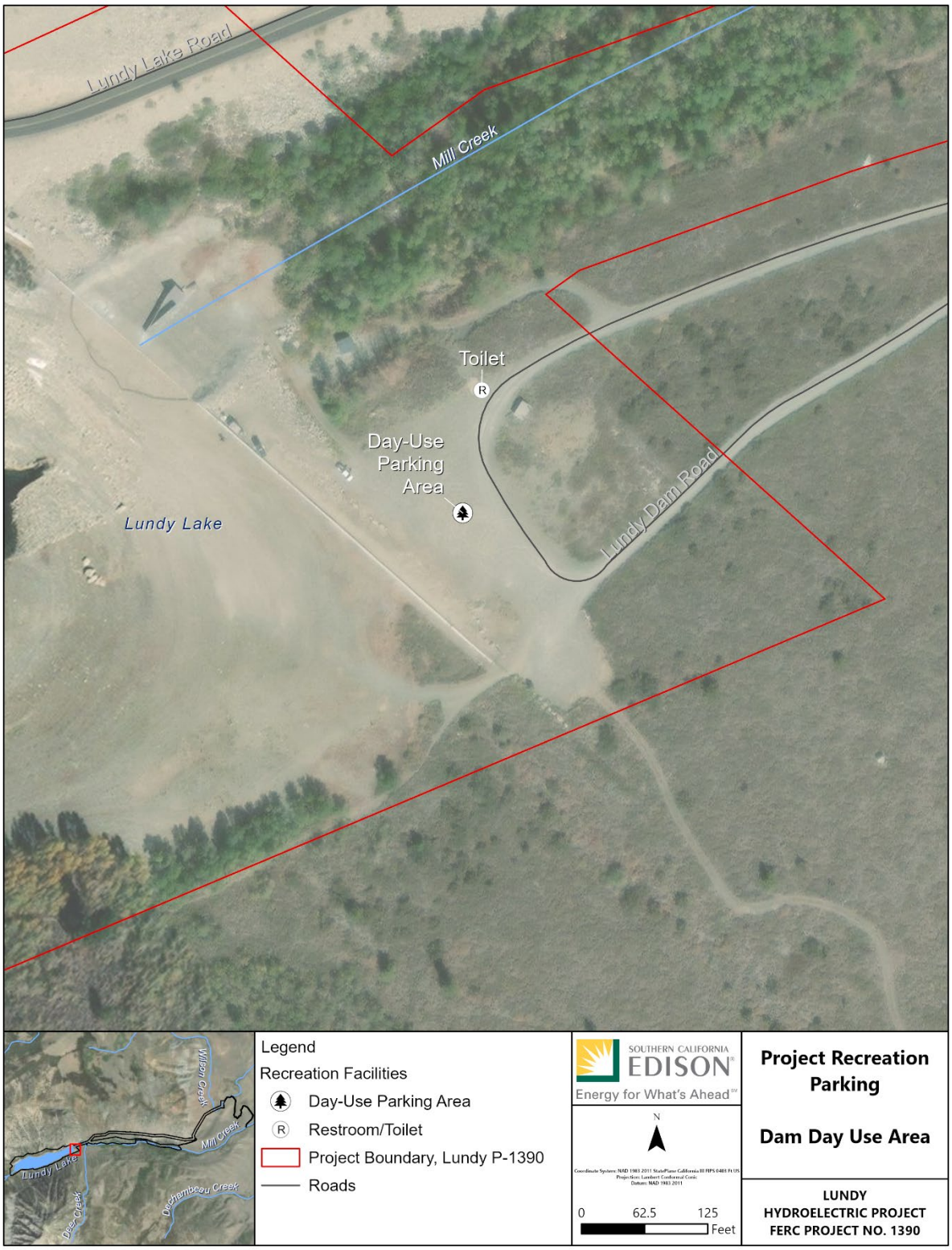

Figure 6.2-2. Parking Area Associated with Lundy Dam Day Use Area

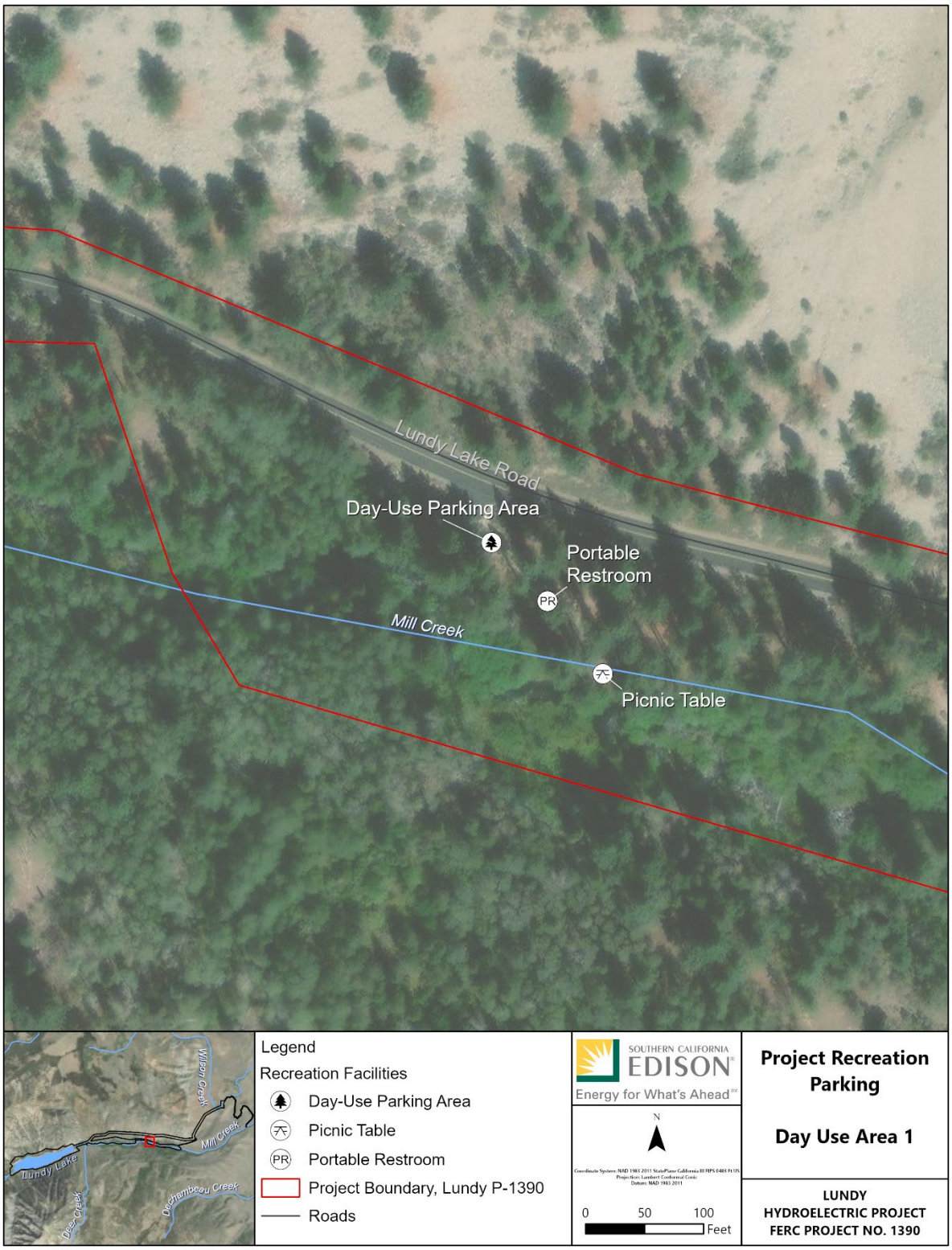

Figure 6.2-3. Parking Area Associated with Lundy Day Use Site 1

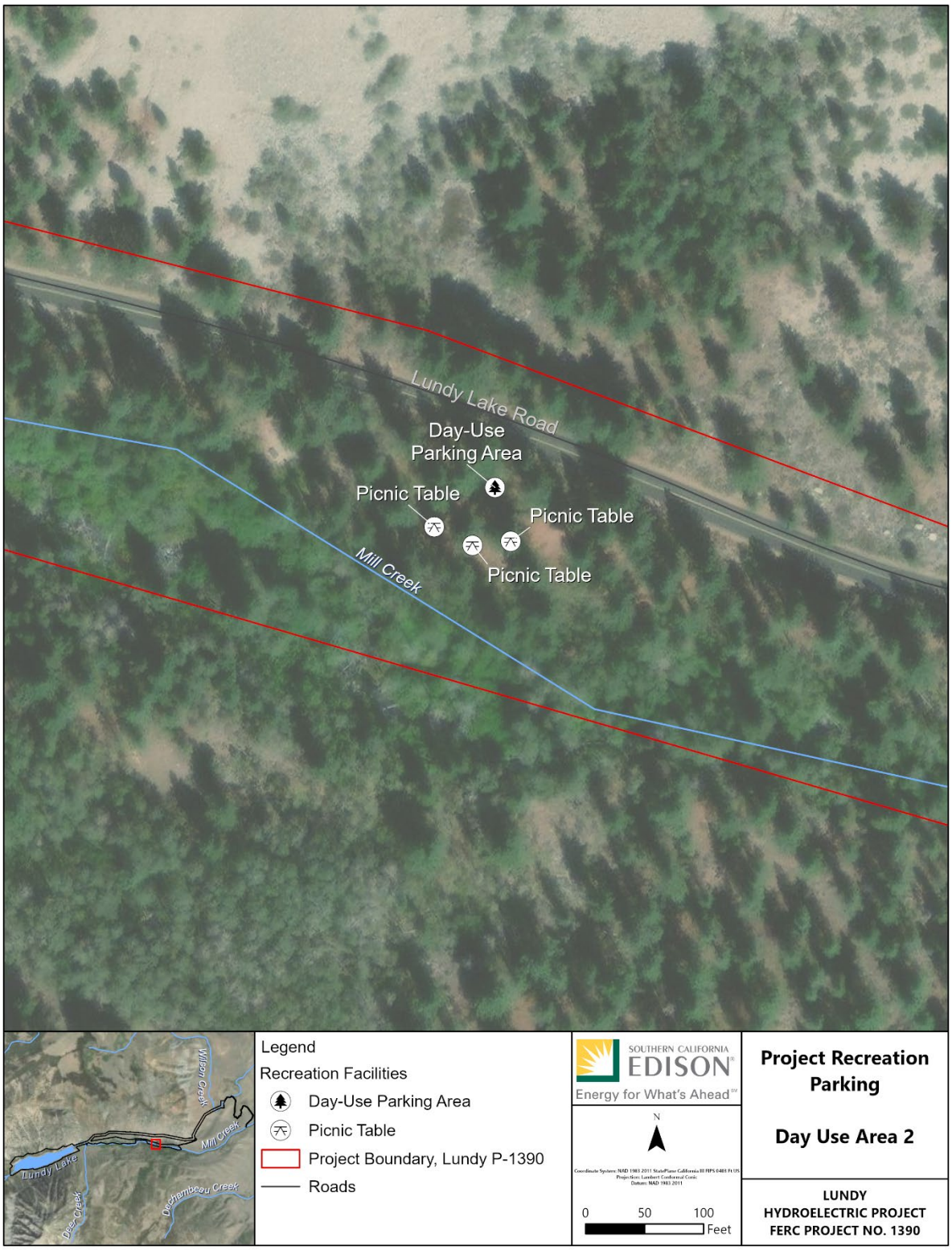

Figure 6.2-4. Parking Area Associated with Lundy Day Use Site 2

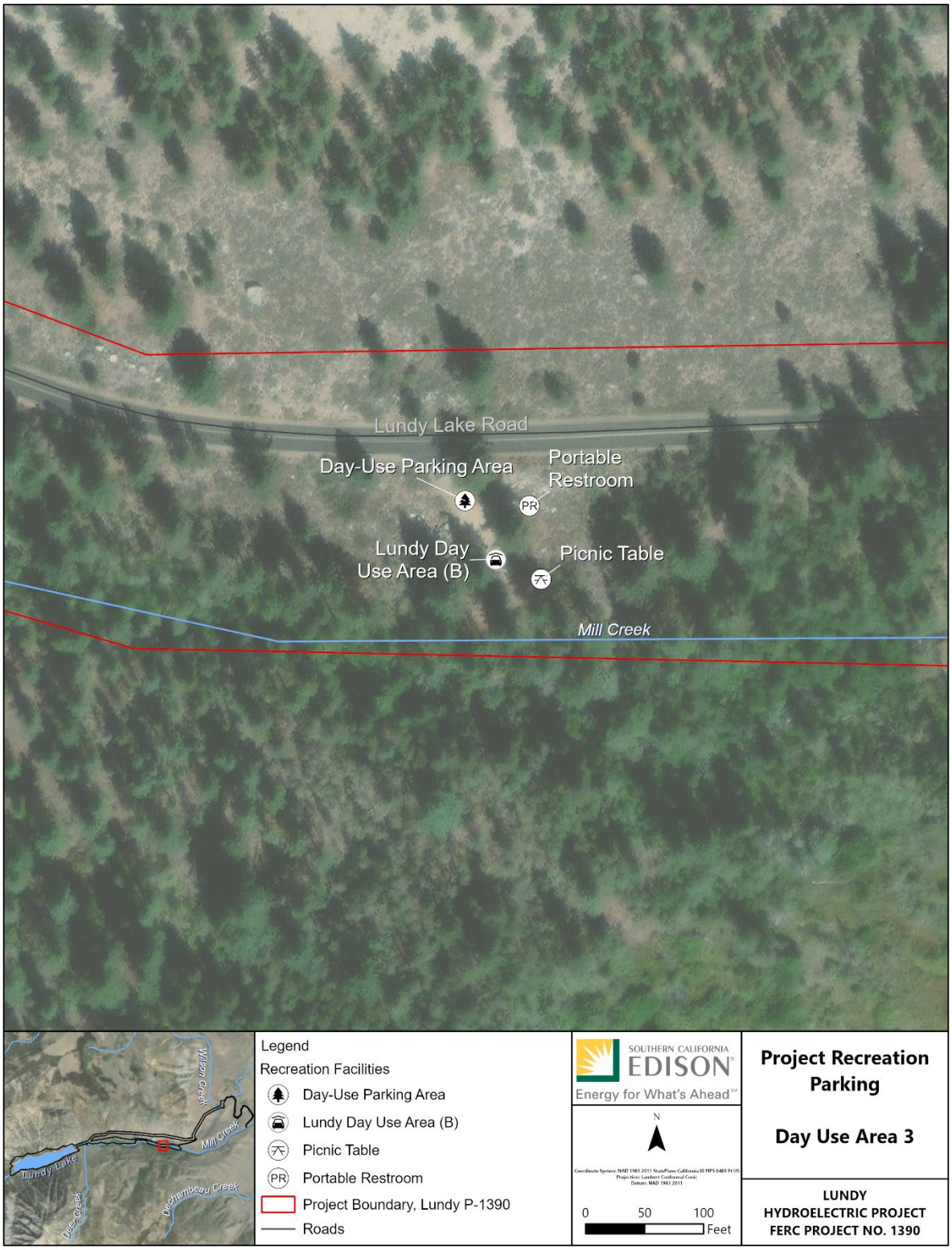

Figure 6.2-5. Parking Area Associated with Lundy Day Use Site 3

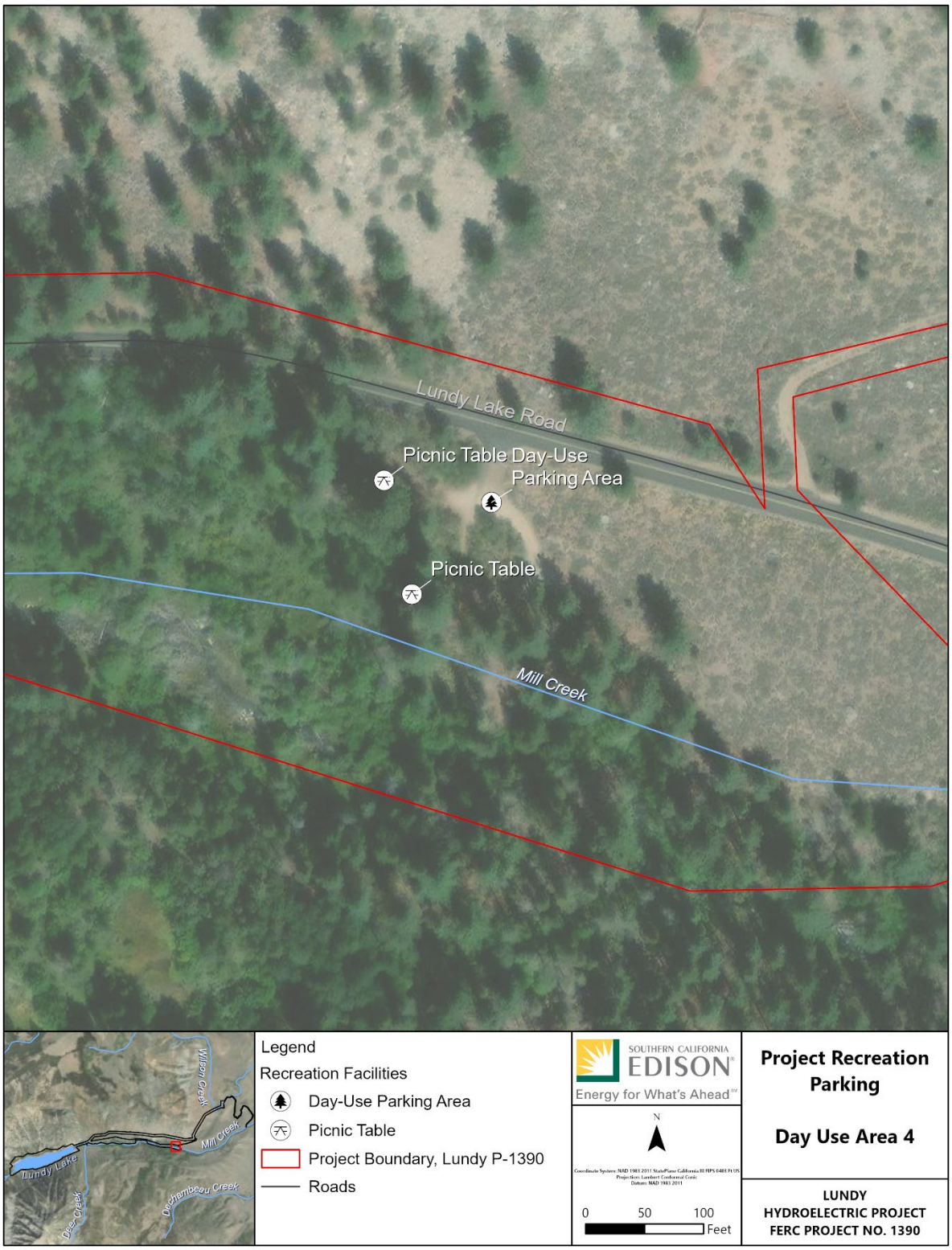

Figure 6.2-6. Parking Area Associated with Lundy Day Use Site 4

6.3. RECREATION USE VISITOR INTERCEPT SURVEYS

SCE proposes to conduct recreation use visitor intercept surveys at the FERC-approved recreation sites. A draft Recreation Use Visitor Intercept Survey form is provided in Appendix B. The full set of questions is designed to collect information on group sizes, recreation activities, length of visit, crowdedness, user satisfaction, and site conditions. Field technicians will visit each recreation site on two days per month (one weekday and one weekend day) from April 15, 2025 to November 15, 2025, and one day of each holiday weekend for a total of 20 days throughout the study period. For the purposes of this study, the holidays include the three days of the holiday weekend[3] Memorial Day: May 24 to 26, 2025; Juneteenth: June 20 to 22, 2025; Fourth of July: July 4 to 6, 2025; and Labor Day: August 30, 2025 to September 1, 2025. Recreation use visitor intercept survey days will be conducted on the same days as spot counts, previously described in Section 6.2. Field technicians will be at each FERC-approved recreation site for approximately one-hour conducting the recreation use visitor intercept surveys. Two field technicians will be administering surveys on each survey day.

7.0 ANALYSIS AND REPORTING

The following sections provide a description of the approach for estimating the existing and future recreational use, recreation site capacity and use density percentages, and future recreation needs at the FERC-approved recreation sites. A report will be prepared documenting the analysis results. The report will include a summary of all collected information and discussion of the analysis described in the following text. The report will address all applicable desired conditions, goals, standards, and guidelines of the *Land Management Plan for the Inyo National Forest* (USFS, 2019).

Goal 1 – Characterize the existing use of the FERC-approved recreation sites at the Lundy Project.

Estimates of recreation use by site and activity will be reported in “recreation days” for FERC-approved recreation sites. FERC defines a recreation day as one visit by a person to a development for the purposes of recreation during any 24-hour period. The weekday, weekend, and peak weekend average recreation days will be estimated for the FERC-approved recreation sites by multiplying the estimated number of vehicles per day by the estimated number of people per vehicle. The recreation days by activity will be found by multiplying the total recreation days by the estimated proportion of visitors engaged in each activity. Parking utilization will be estimated by the average number of vehicles per day multiplied by the average visit length (as a fraction of the day).

Data from the Recreation Use Visitor Intercept Survey will be used to summarize the perception of visitors on crowding and adequacy of facilities and amenities, and reservoir levels at the FERC-approved recreation sites. Additional facilities and amenities recommended by visitors will also be summarized.

[3] For the purposes of this Study Plan, the holiday weekend is defined as the Friday, Saturday, Sunday or Saturday, Sunday, Monday closest to the holiday.

Goal 2 – Identify current and future needs related to the FERC-approved recreation sites included at the Lundy Project.

Current needs will be evaluated by comparing parking utilization (estimated above) to available parking capacity (estimated during the Recreation Facilities Condition Assessment [REC-2]). User perceptions of crowding and needed facilities or amenities will be evaluated in the context of existing data.

Estimated projections of future recreation use at the Lundy Project will be developed using the average annual increase in population growth over the past 10 years, as reported by the U.S. Census Bureau for Mono County. The estimates will be augmented with discussion of trends reported in the SCORP. Estimated projections will be provided in 5-year intervals for the anticipated term of the license up to 50 years into the future (through year 2079).

While it is acknowledged that future changes in the supply of recreation resources, either in their quantity, accessibility, and/or quality may influence future demand and use, the demand analysis undertaken for this study does not attempt to predict what these future changes might consist of or how they might specifically affect levels of use at the FERC-approved recreation sites at the Lundy Project. Therefore, the demand analysis results should be viewed as a general guide of potential future recreation pressure, developed for planning purposes only.

The need for recreation and site development or modification of existing FERC-approved recreation sites will be assessed based on the inventory, condition assessment results, parking capacity, and use density assessment results, and recreation use visitor intercept survey results. The needs assessment will focus on the existing condition and user opinions of the FERC-approved recreation sites, the presence of Americans with Disabilities Act accessible facilities and amenities at the FERC-approved recreation sites, and the ability of sites to meet current and anticipated future recreation demand. Considerations will be given to site opportunities and constraints, as well as support amenities such as signage and maintenance.

8.0 SCHEDULE

8.1. STUDY SCHEDULE

The Recreation Use and Needs Study will begin with field data collection during 2025 (Table 8.1-1). An interim report on study progress will be provided with the Initial Study Report in January 2026. The final study report will be provided with the Updated Study Report in January 2027.

Table 8.1-1. Study Schedule

Date	Activity
April – November 2025	Conduct study

Date	Activity
Winter 2025/2026	Compile study results and prepare draft report
January 2026	Interim Study Report on study progress
January 2027	Updated Study Report Final Study Report
February 2027	Distribute final report in Final License Application

9.0 LEVEL OF EFFORT AND COST

SCE estimates the cost to complete this Study, in 2024 dollars, is approximately $280,000.

10.0 REFERENCES

SCE (Southern California Edison). 2015. *Licensed Hydropower Development Recreation Report, FERC Form 80.* March 26, 2015.

USFS (United States Forest Service). 2019. *Land Management Plan for the Inyo National Forest. Fresno, Inyo, Madera, Mono and Tulare Counties, California. Esmeralda and Mineral Counties, Nevada. R5-MB-323a. Pacific Southwest Region*. September. Accessed: June 2023. Available online: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd664404.pdf.

APPENDIX A

Spot Count Form

Lundy Project				Date:										
Staff Person:				Weather:										
				# of people participating in:									List Other Activities Observed	Comments
Site Name:	Time	# of vehicles	# of vehicles with boat trailers	Boating	Fishing	Walk/ Hike/ Run	Picnic	Camping	Sightseeing/ birding/ photography	Biking	Non-Recreation Activities (SCE staff)	other		

APPENDIX B

Recreation Use Visitor Intercept Survey

Recreation Use Survey

Clerk: _____ Site:_____ Date:_____ Time: am/pm _____

Weather: ☐ Sunny ☐ Partly Cloudy ☐ Cloudy ☐ Light Rain ☐ Heavy Rain

1. *What is your home country, state, county? _____*
2. *Including yourself, how many people are in your party today? _____ people in party*
3. *How many vehicles did your party use to arrive at this site today? _____*
4. *Please provide the number of people in each age group within your party.*

   Under 18 ¨ 18–24 ¨ 25–34 ¨ 35–44 ¨ 45–54 ¨ 55–64 ¨ 65+

5. *What is the total length of time you will spend at this recreation site?*

*_____ Number of hours ---------**OR** _____ Number of days (If staying overnight)*

6. *Please indicate which of the following recreational activities you are participating in on this trip (Mark all that apply):*

❑	*Bicycling*	❑	*Personal Watercraft Use*	❑	*Day Hiking*
❑	*Camping*	❑	*Photography*	❑	*Overnight Backpacking*
❑	*Picnicking*	❑	*Viewing Scenery*	❑	*Fishing*
❑	*Relaxing*	❑	*Viewing Wildlife*	❑	*Scenic Driving*
❑	*Other:_____*				

7. *Of the activities listed above, please indicate which is the **primary** activity of this trip (Choose only one):_____*

8. *Please help us understand capacity at this site by answering the following questions (circle one response for each item):*

8a. Please rate the crowdedness at this site today.	*1 Low*	*2 Somewhat Low*	*3 Neutral*	*4 Somewhat High*	*5 High*	*NA*
8b. Was it more or less crowded than you thought it would be?	*1 Less*	*2 Slightly Less*	*3 Neutral*	*4 Slightly More*	*5 More*	*NA*

9. *Have you ever changed your use of this site due to crowding? ❑ Yes ❑ No*

If yes, how have you changed your use of this area?

❑ Visit the area during the off-season ❑ Visit earlier in the morning

❑ Visit the area during weekdays ❑ Visit a different site in the area

❑ Visit the area on days to avoid holidays

❑ Other, please specify _____

10. *We are interested in your opinion about the **number of existing recreation facilities*** at the Lundy Project. *(Please indicate a response for* any *of the following facilities you have used during your visit)*

	1 Too Low	***2 Somewhat Low***	***3 Just Right***	***4 Somewhat High***	***5 Too High***	***6 Don't Know***
Publicly Available Recreation Sites	❑	❑	❑	❑	❑	*N/A*
Restrooms	❑	❑	❑	❑	❑	*N/A*
Parking	❑	❑	❑	❑	❑	*N/A*
Picnic or Day Use Areas	❑	❑	❑	❑	❑	*N/A*
Boat Launches	❑	❑	❑	❑	❑	*N/A*
Campsites	❑	❑	❑	❑	❑	*N/A*
Signage	❑	❑	❑	❑	❑	*N/A*

11. *We are interested in your opinion about the **condition of existing recreation facilities*** at the Lundy Project. *(Please indicate a response for **any** of the following facilities you have used during your visit)*

	1 Poor	***2 Fair***	***3 Neutral***	***4 Good***	***5 Excellent***	***6 Don't Know***
Publicly Available Recreation Sites	❑	❑	❑	❑	❑	*N/A*
Restrooms	❑	❑	❑	❑	❑	*N/A*
Parking	❑	❑	❑	❑	❑	*N/A*
Picnic or Day Use Areas	❑	❑	❑	❑	❑	*N/A*
Boat Launches	❑	❑	❑	❑	❑	*N/A*

	1 Poor	***2 Fair***	***3 Neutral***	***4 Good***	***5 Excellent***	***6 Don't Know***
Campsites	❑	❑	❑	❑	❑	*N/A*
Signage	❑	❑	❑	❑	❑	*N/A*

12. *Was* your visit to this site today affected by the level of Lundy Lake? Y or N (question for sites with reservoir access)

    If yes, was the level:

    Too low

    Too high

    Other:_____

13. *Do you have any additional comments about public recreation opportunities and facilities at the Lundy Project?*

REC-2 – RECREATION FACILITIES CONDITION ASSESSMENT

TECHNICAL STUDY PLAN

Lundy Hydroelectric Project
FERC Project No. 1390

December 2024

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1.0 POTENTIAL RESOURCE ISSUE

Lundy Hydroelectric Project (Lundy Project) operations have the potential to affect recreation facilities and public access within the Lundy Project boundary.

2.0 PROJECT NEXUS AND HOW THE RESULTS WILL BE USED

Lundy Project operations may affect recreation facilities and public access within the Lundy Project boundary. Data collected through this Study will be used to assess the effects of continued Lundy Project operations on recreation facilities and public access and will inform development of protection, mitigation, and enhancement measures in the Draft License Application (DLA), if needed.

A portion of the Lundy Project is located within the Inyo National Forest (INF). The INF has Federal Power Act Section 4(e) conditioning authority to prescribe conditions that may mitigate the impact of hydropower projects on INF system lands and thus could require mitigation for recreation induced by the presence of the Project.

3.0 STUDY GOALS AND OBJECTIVES

The goal of the Study is to conduct an inventory of existing FERC-approved Lundy Project recreation sites, including locations, facilities/amenities, general condition, ownership, and management responsibilities. In order to accomplish this goal, the following objectives will be implemented.

- Field verify, map, and document FERC-approved Lundy Project recreation facilities and amenities.
- Document the general condition of FERC-approved recreation facilities and amenities, including the potential for universal accessibility, where feasible.
- Identify who owns, operates, and maintains each of the FERC-approved recreation sites.

4.0 EXTENT OF STUDY AREA AND STUDY SITES

4.1. RECREATION SITE STUDY

Recreation sites that will be included in this study are listed in Table 4.1-1 and shown in Figure 4.1-1.

Table 4.1-1. Existing FERC-approved Recreation Sites within the Lundy Project Boundary

Site Number	Recreation Site Name
1	Lundy Lake Boat Launch
2	Lundy Dam Day Use Area
3	Lundy Campground
4	Lundy Day Use Area 1
5	Lundy Day Use Area 2
6	Lundy Day Use Area 3
7	Lundy Day Use Area 4

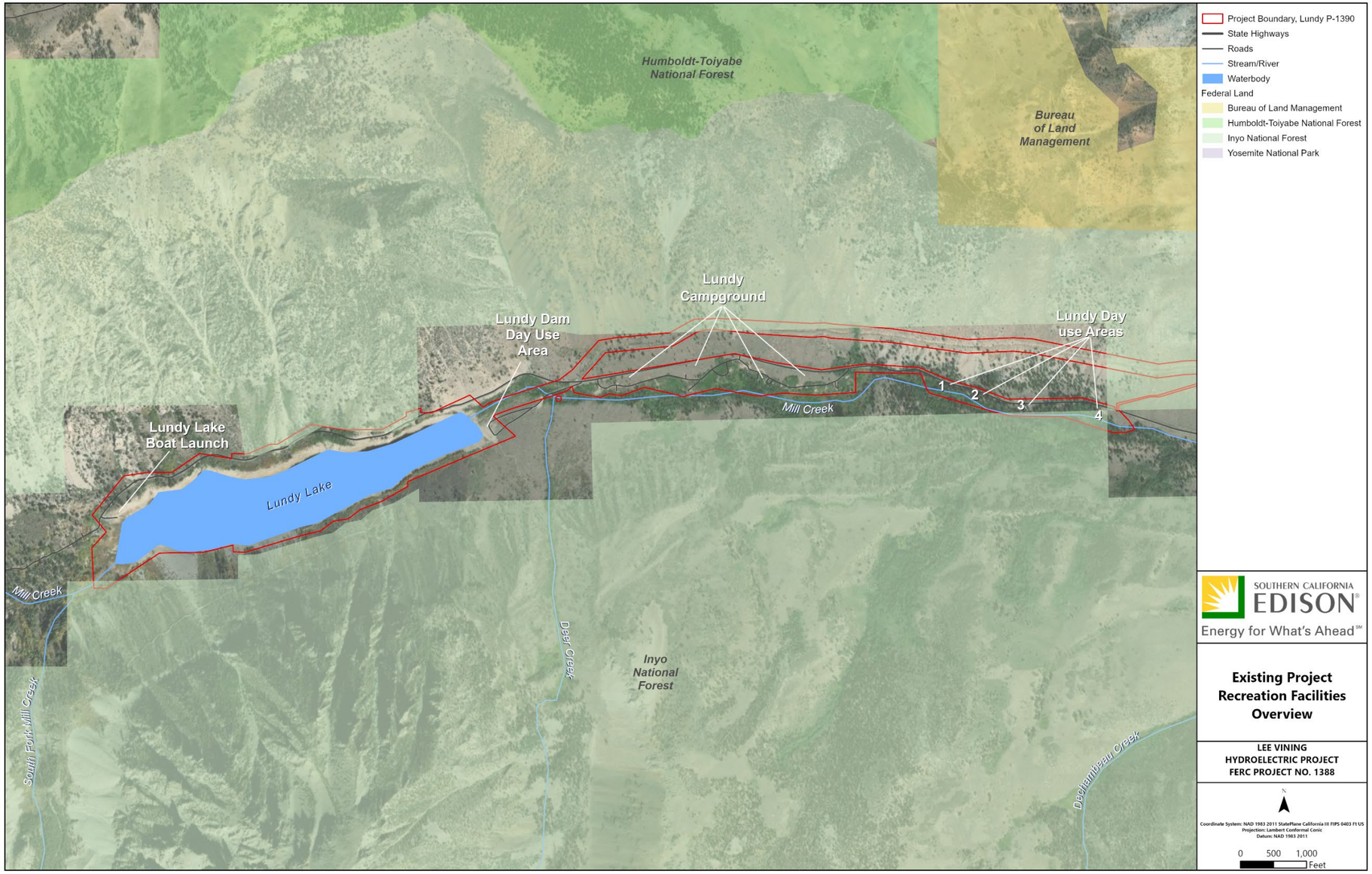

Figure 4.1-1. Existing FERC-approved Recreation Sites within the Lundy Project Boundary

5.0 EXISTING INFORMATION

Information presented in Section 5.8, Recreation Resources, of the Pre-Application Document (PAD), filed in February 2024, includes existing information pertaining to existing recreation sites within the Lundy Project boundary and recreation available near the Lundy Project.

At the time of the PAD publication, current recreation facility and amenity condition information was not available. Available data regarding recreation condition is outdated and are insufficient to assess whether Lundy Project recreation sites are meeting the current needs or whether they are sufficient to meet the future needs of the Lundy Project for a new license term.

6.0 STUDY APPROACH

6.1. METHODOLOGY

SCE will perform a field inventory to document the existing recreation facilities and amenities at the Lundy Project FERC-approved recreation sites (Table 4.1-1). Field technicians will visit each recreation site and collect data on the recreation facilities and amenities using a handheld device. Data collected during the inventory will include the following:

- The location of the facilities in relation to the Lundy Project boundary,
- The type and number of recreation amenities provided at each site and facility,
- The condition of the recreation facility/amenities,
- The entities responsible for the operation and maintenance of each recreation facility,
- Hours/seasons of operation, and
- Site photographs.

Additionally, field investigations at each recreation site will document site areas, if any, that have characteristics of erosion, slumping, or other forms of instability. The Recreation Facilities Condition Assessment form that will be used is provided in Appendix A. The conditions of the facilities/amenities will be assessed as follows:

- **N** = Needs replacement (Facility/amenity is non-functional or has broken or missing components)
- **R** = Needs report (Facility/amenity has structural damage or is in an obvious state of disrepair)
- **M** = Needs maintenance (Facility/amenity needs maintenance, such as cleaning or painting)

- **G** = Good condition (Facility/amenity is functional and well maintained)

7.0 REPORTING

A report will be prepared documenting the findings of this Study. The report will include an inventory and assessment of the Study site facilities and amenities (see Section 4.0), including applicable maps and illustrations. The report will discuss findings in relation to the desired conditions, goals, standards, and guidelines of the Land Management Plan for the Inyo National Forest (USFS, 2019).

8.0 STUDY SCHEDULE

8.1. STUDY SCHEDULE

The Study will be conducted in 2025 (Table 8.1-1). The work described herein is a one-year study proposal, planned for the first year of relicensing studies, in 2025. A draft report will be provided with the Initial Study Report in January 2026. The final study report will be provided with the DLA in October 2026.

Table 8.1-1. Schedule

Date	Activity
Summer 2025	Conduct field assessment
Fall/Winter 2025	Compile study results and prepare draft report
January 2026	File draft study report with initial study report
2026	Resolve comments and prepare final report
October 2026	Distribute final report with Draft License Application

9.0 LEVEL OF EFFORT AND COST

SCE estimates the cost to complete this Study, in 2024 dollars, is approximately $68,000.

10.0 REFERENCES

USFS (United States Forest Service). 2019. Land Management Plan for the Inyo National Forest. Fresno, Inyo, Madera, Mono and Tulare Counties, California. Esmeralda and Mineral Counties, Nevada. R5-MB-323a. Pacific Southwest Region. September. Accessed: June 2023 Available online: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd664404.pdf

APPENDIX A

RECREATION FACILITIES CONDITION ASSESSMENT FORM

LUNDY PROJECT
RECREATION SITE INVENTORY FORM

Observed by:_____ Date/Time: _____

Site Name:_____ GPS Coordinates:_____

Facility Type:

☐ Campground ☐ Day Use Area ☐ Picnic Area
☐ Trailhead ☐ Boat Launching Area ☐ Informal Site

Road Access: Condition Description (N-replace, R-repair, M-maintain, G-good)
:_____

☐ Paved access # lanes _____
☐ Unpaved access # lanes _____

Parking Lots: Condition Description (N-replace, R-repair, M-maintain, G-good):
_____

Type	# Paved	# Estimated Gravel	Space Delineation
Universal Access Spaces	_____	_____	☐ Painted ☐ Curbs ☐ Signage
Regular Spaces	_____	_____	☐ Painted ☐ Curbs ☐ Signage
Vehicle & Trailer Spaces	_____	_____	☐ Painted ☐ Curbs ☐ Signage

Operations:

☐ Staffed ☐ Unstaffed ☐ Seasonal (From _____To_____)
☐ Fee: (Site $_____; Parking $_____) ☐ Year Round

Operating Hours_____ Owner/Manager_____
Project Facility: _____ Within FERC Project boundary?_____

Day Use Site Amenities (total # of all amenities per site; provide additional specifications on next page):

#	Type	Condition (N-replace, R-repair, M-maintain, G-good)	Universal Access
_____	Picnic Shelter	_____	_____
_____	Overlook	_____	_____
_____	Picnic Tables	_____	_____
_____	Pedestrian Trail	_____	_____
_____	Boating Prep Area	_____	_____
_____	Trash Receptacles	_____	_____
_____	Grills	_____	_____
_____	Fishing Pier/Platform	_____	_____
_____	Firepit/ring	_____	_____
_____	Fishing Prep Area	_____	_____
_____	Safety Signage	_____	_____
_____	Restrooms	_____	_____
_____	Information Kiosk	_____	_____
_____	Informational Signage	_____	_____
_____	Benches	_____	_____
_____	Dumping Station	_____	_____
_____	Potable Water	_____	_____
_____	Playground	_____	_____

Other (specify)_____
_____

Boat Launch Facilities: Condition Description (N-replace, R-repair, M-maintain, G-good):
_____

☐ Hard surface ☐ Unimproved (informal) ☐ Gravel ☐ Carry In
☐ Universal Access ☐ Boat Prep Area _____ # of Lanes

Courtesy/Fishing Docks: Condition Description (N-replace, R-repair, M-maintain, G-good):
_____

☐ Courtesy Dock ☐ Fishing Dock Dimensions:_____ ☐ Universal Access
☐ Courtesy Dock ☐ Fishing Dock Dimensions:_____ ☐ Universal Access

Trails (within the recreation area): Condition Description (N-replace, R-repair, M-maintain, G-good): _____

Type:_____ Length (ft):_____ Condition: _____ ☐ Universal Access
Type:_____ Length (ft):_____ Condition: _____ ☐ Universal Access
Type:_____ Length (ft):_____ Condition: _____ ☐ Universal Access

Interpretive/Site Information: Condition Description (N-replace, R-repair, M-maintain, G-good): _____

_____ No. of Displays

☐ Boating Safety ☐ Invasive Species ☐ Fishing Regulations ☐ Fish Type

☐ Regional Events ☐ Other (specify)_____

Signage: Condition Description (N-replace, R-repair, M-maintain, G-good):

_____

☐ Part 8 ☐ Directional ☐ Informational ☐ Other

Sanitation Facilities: Condition Description (N-replace, R-repair, M-maintain, G-good):

_____

	# Flush	(# UA*)	# Portable	(# ADA)	Showers	(#UA)
Unisex	_____	(_____)	_____	(_____)	_____	(_____)
Women	_____	(_____)	_____	(_____)	_____	(_____)
Men	_____	(_____)	_____	(_____)	_____	(_____)

**UA = Universal Access*

Campground/Campsite: Condition Description (N-replace, R-repair, M-maintain, G-good):

_____

	Tent-improved	**Tent-Primitive**	**Group Sites**	**Camps/Cabins**	**RV Sites**
# of sites					
On site parking					
Waterfront					
Universal Access					

Observed Vegetation and Erosion Impacts:

_____ Cut trees for fires
_____ Trampled vegetation
_____ Mowed areas
_____ Trees damaged by people
_____ Trees damaged by environment
_____ Areas of noticeable erosion
_____ None

Description of Observations/Evidence of Vegetation Impacts:

_____
_____

Description of Observations/Evidence of Erosion:

_____
_____

Evidence of use at site: _____
(C) Compaction, (E) Erosion, (G) Garbage, (GD) Ground disturbance, (HW) Human waste, (UI) Unauthorized improvements, (V) Vandalism, (VR) Vegetation removal, (O) Other (Specify)

Evidence of Overcrowding: _____
(A) Anecdotal information, (FA) facility/amenity @ capacity, (I) improper parking, (S) Signage, (SD) Site degradation, (U) Unauthorized sites, (W) Waiting lines, (O) Other (Specify)

Notes (including general condition, any restrictions/alerts, such as boating use, invasive species, etc.):

_____
_____
_____
_____
_____

Photo number from _____ to _____

Sketch of Site and Facilities:

CUL-1 – CULTURAL RESOURCES – ARCHAEOLOGY

TECHNICAL STUDY PLAN

Lundy Hydroelectric Project
FERC Project No. 1390

December 2024

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1.0 POTENTIAL RESOURCE ISSUE

Southern California Edison (SCE) identified the need to conduct cultural resource studies including archaeological, built environment, and Traditional Cultural Properties, as well as non-American Indian TCPs and TCRs, resource studies. The CUL-1 Cultural Resources, Archaeology Technical Study (Study) will consider archaeological sites and non-American Indian TCPs and TCRs. American Indian TCPs and TCRs will be considered within the TRI-1, Tribal Resource Technical Study Plan. Built Environment Resources will be considered in the CUL-2 Cultural Resources – Built Environment Technical Study Plan.

Several terms used throughout this Study plan warrant definition at the outset.

- ***Area of Potential Effect*** - as defined in the Code of Federal Regulations (CFR), Title 36, Section 800.16(d) (36 CFR § 800.16(d)), as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations to the character of use of historic properties, if any such properties exist."

- ***Historic Property(ies)*** - as defined in the Code of Federal Regulations (CFR), Title 36, Section 800.16(l)(1) (36 CFR § 800.16(l)(1)), are precontact or historic archaeological sites, buildings, structures, objects, or districts included in or eligible for inclusion in the National Register of Historic Places (NRHP). Historic properties are identified through a process of evaluation against specific NRHP criteria in 36 CFR § 60.4.

- ***A District*** **-** is a geographic area containing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan and physical development. Examples of districts include (but are not limited to) precontact archaeological site complexes, hydroelectric projects, residential areas, commercial zones, mining complexes, transportation networks, rural villages, canal systems, irrigation systems, or large ranches (NPS, 1997).

- ***Cultural Resource(s)*** - for the purpose of this document, is used to discuss any precontact or historic-period district, site, building, structure, object, landscape, TCP, or TCR, regardless of its National Register eligibility.

There may be any number of cultural resources in the vicinity of the Lundy Project. Some of these resources may be eligible for the NRHP (i.e., historic properties).

2.0 PROJECT NEXUS AND HOW THE RESULTS WILL BE USED

The Federal Energy Regulatory Commission's (FERC) decision to issue a new license is considered an "undertaking" pursuant to 36 CFR 800.16(y). The National Historic Preservation Act (NHPA) requires federal agencies to take into account the effect of undertakings on historic properties and allow the Advisory Council on Historic Preservation an opportunity to comment.

Continued Project Operation and Maintenance and other activities, including public recreation activities, may have an adverse effect on historic properties. The effect may be direct (e.g., result of ground-disturbing activities), indirect (e.g., public access to Project areas), or cumulative (e.g., caused by a Project activity or public access in combination with other past, present, and reasonably foreseeable future projects). This study focuses on these potential Project effects to historic properties.

For historic properties, appropriate study areas are defined by Regulations under 36 CFR § 800 as the Area of Potential Effects (APE). The APE for the Project is further defined in Section 4.0, *Extent of Proposed Study Area, and Study Sites*, of this Study Plan. The following will be assessed during the archaeological surveys:

- Are the impacts due to the presence of the Project? Impacts to NRHP-eligible resources or resources with associated Tribal values may include but are not limited to ground disturbance due to driving or excavation; erosion from higher flows; changes to a landscape viewshed.
- Are the impacts direct, indirect, and/or cumulative?
- If impacts are a result of the presence of the Project, how will they be addressed?

Data collected during this study will inform the following:

- Cultural Resource Technical Report (CUL-1) for archaeological resources;
- Cultural Resource Evaluation Report for archaeological resources, if needed;
- Historic Properties Management Plan (HPMP) addressing archaeological, built environment and Tribal resources.

3.0 STUDY GOALS AND OBJECTIVES

The Study goals and objectives include the following:

- Meet FERC compliance requirements under its Regulations (18 CFR Part 5) and Section 106 of the NHPA, as amended, by determining if Project-related activities and public access will have an adverse effect on historic properties.
- Identify all archaeological resources within the APE, determine which are historic properties, and develop the HPMP based on those results.
- Ensure that future Project facilities and operations are consistent with the Desired Conditions described in the *Land Management Plan for the Inyo National Forest* (USFS, 2019).

4.0 EXTENT OF STUDY AREA AND STUDY SITES

4.1. CULTURAL STUDY AREA

The Study will focus upon the FERC Project Boundary, the proposed APE, and a larger proposed Study Area comprising a 0.5-mile radius around the proposed APE (Figure 4.1-1).

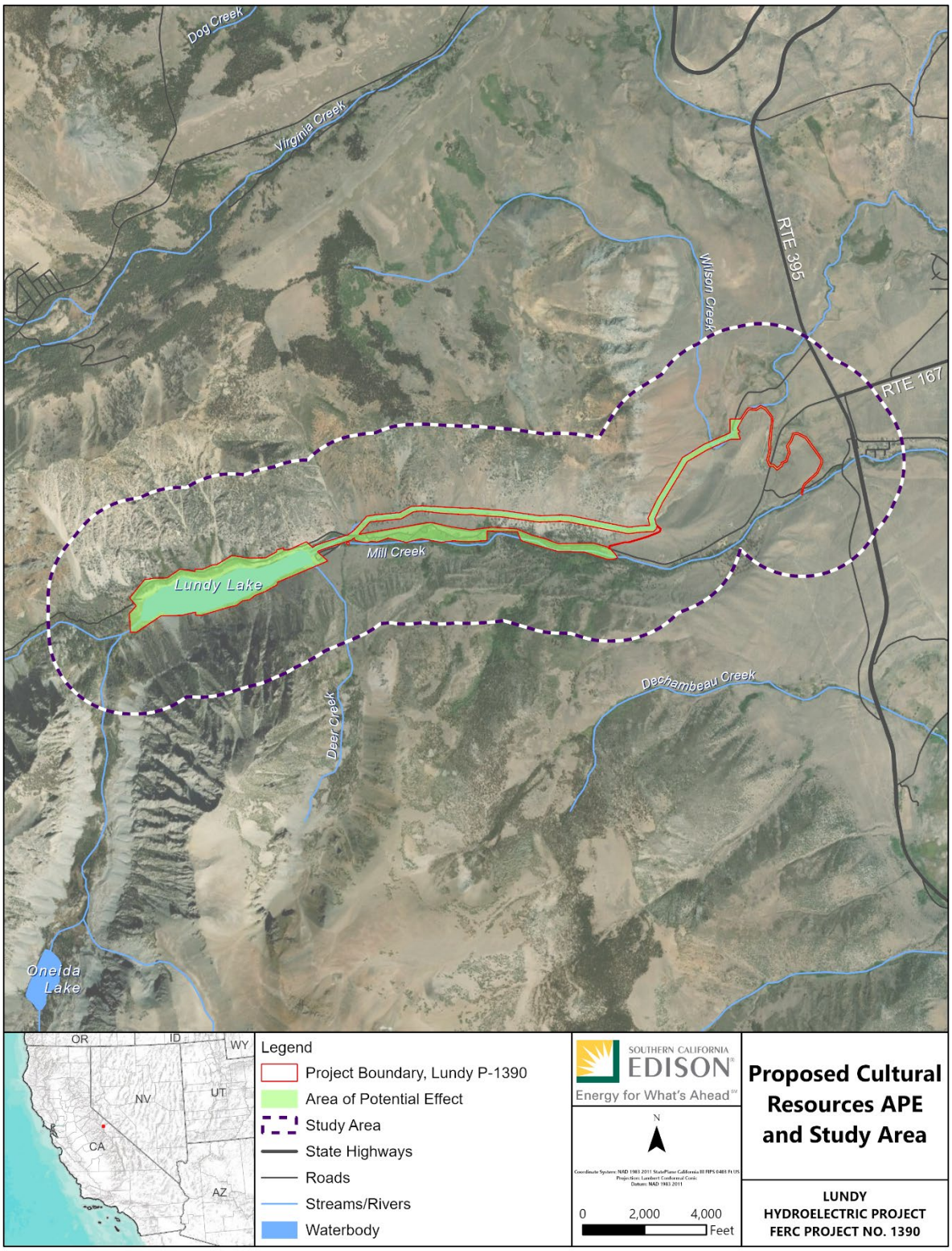

Figure 4.1-1. Proposed Cultural Resources APE and Study Area

5.0 EXISTING INFORMATION

5.1. SUMMARY OF RECORD SEARCHES ARCHIVAL RESEARCH

The cultural resource section of the Pre-Application Document (PAD), filed in February 2024, was developed using information obtained from the SCE archives, Inyo National Forest, and the California Historical Resources Information System (CHRIS) Eastern Information Center (EIC) at the University of California Riverside, and is summarized in the following text.

5.1.1. PREVIOUS CULTURAL RESOURCE STUDIES

Thirty-four previous cultural resource investigations were identified within the proposed Study Area (Table 5.1-1). Of these, 21 were conducted within the proposed APE or overlap the proposed APE and Study Area. Among the investigations are the ones conducted during the last relicensing (White, 1983; 1985, 1990; York, 1990). Most of the remainder are comprised of surveys in support of SCE pole replacements and other maintenance activities. Maps of the previous studies are located in Appendix H (Confidential) of the PAD.

Table 5.1-1. Previous Cultural Resource Studies Located within the Proposed Study Area and APE

IC Number	SCE Document ID	USFS Number	Author(s)	Year	Report Title	In APE or Study Area	Involved Resources
MN-00258	-	-	Crist, Michael K.	1981	A Cultural Resource Reconnaissance of the Paoha Hydroelectric Project, Mono County, California	APE	P-26-002236
-	1160002	--	White, D.R.M	1983	Historic and Archaeological Preservation Plan for Eastern Sierra Hydroelectric Projects in Mono and Inyo Counties, California: Lundy (FERC 1390), Lee Vining Creek (FERC 1388), Rush Creek (FERC 1389), and Bishop Creek (FERC 1394)	APE	-
MN-00802	1160170	R1987050400441	White, David R. M.	1985	Results of the 1984 Field Season, Cultural Resources Survey for the Historic and Archaeological Preservation Plan for Eastern Sierra Hydroelectric Projects in Mono and Inyo Counties: Lundy, Lee Vining, Rush Creek, and Bishop Creek	APE	P-26-002400, P-26-002401, P-26-002402, P-26-002403, P-26-002404, P-26-002405, P-26-002406, P-26-002407, P-26-002411, P-26-003814, P-26-003815, P-26-003817
MN-00402	-	-	Burton, Jeffrey F.	1987	Cultural Resources of Conway Ranch, Mono Basin, California	APE	-
-	1164502	R1989050400507	USFS	1989	Hazardous Tree Removal Project	Study Area	-
MN-00461	-	-	Grantham, Steven, and Terry Jones	1990	Archaeological Survey Report for the Addition of Passing Lanes to Portions of Highway 395 in Mono County, California	Study Area	P-26-000422, P-26-000459, P-26-002467

IC Number	SCE Document ID	USFS Number	Author(s)	Year	Report Title	In APE or Study Area	Involved Resources
MN-00420	1160288	-	York, Andrew	1990	An Evaluation of Twenty-One Archaeological Sites on the Lee Vining Creek, Rush Creek, and Lundy Hydroelectric Projects, Mono and Inyo Counties, California	APE	P-26-002411
-	1160297	-	White, David R. M.	1990	Management Plan for Historic and Archaeological Resources Associated with the Lundy Hydroelectric Project (FERC Project No. 1390), Mono County, California	APE	
MN-00527	1160314	-	White, David R. M.	1992	Results of Archaeological Survey for Groundwater and Riparian Vegetation Studies in Connection with the Lundy and Bishop Creek Hydroelectric Projects, Mono and Inyo Counties, California	APE	-
MN-00754	1161856	CA-170-00-14	Schmidt, James J.	2000	Letter Report: Southern California Edison Company Tufa 16kV Survey	Study Area	-
MN-01475	1160489	-	Taylor, Thomas T.	2000	Archaeological Survey Report Recreation Improvements at Lundy Lake/Mill Creek FERC Project No. 1390, Mono County, California	APE	-
MN-01437	1160498	-	Duke, Curt, and Terri Fulton	2003	Archaeological Survey Report Tufa Circuit, Southern California Edison, Mono County, California	APE	P-26-002454, P-26-004073, P-26-004074, P-26-004077
MN-01313	-	R2004050401050	Faust, Nicholas	2004	Mono City Fuels Reduction - South	Study Area	-
-	-	R2004050401073	USFS	2004	OHV Routes Inventory and Designation Survey	Study Area	-
MN-00872	-	CA-170-07-02	Holt, Michael	2006	Cultural Resources Inventory Report: Mono County Water Diversion Project	Study Area	-

IC Number	SCE Document ID	USFS Number	Author(s)	Year	Report Title	In APE or Study Area	Involved Resources
MN-00910	1161551	-	Jones, Kari L., and Thomas L. Jackson	2007	Cultural Resources Inventory for the Proposed Southern California Edison Lee Vining to Conway Summit Communications Line Project	APE	P-26-002236, P-26-004835, P-26-004836, P-26-004841
MN-01044	1161522	-	Pollock, Katherine H.	2007	Archaeological Assessment Report for the Lundy Hydroelectric Project Flowline Road Improvements and Standpipe Replacement, Inyo National Forest, Mono County, California	APE	-
MN-01020	1161933	R2010050401450	Catacora, Andrea	2008	Letter Report: Negative Cultural Resources Inventory Letter Report for Work Order 4770-0346 and 4703-0401	Study Area	-
-	-	R2011050401662	Chambers Group	2011	Digital 395 Chambers Group Survey	Study Area	P-26-006580
-	1164498	-	Wetherbee, M., A. Elzinga, and E. Nicolay	2017	Cultural Resources Monitoring and Survey Report for Southern California Edison's Emergency Replacement of 28 Distribution Poles Located within the Inyo National Forest, Inyo and Mono County, California	Study Area	-
-	-	-	Rice, Sarah, and Jerome King	2019	Archaeological Survey Report for US Highway 395 Shoulder Widening at Sonora Junction and Conway Ranch, Mono County, California	Study Area	P-26-008664
-	1165355	-	Urbana Preservation & Planning	2019	Historical Resources Analysis Report / Historic Property Survey Report Southern California Edison Company Eastern Sierras Transmission System Mono and Inyo Counties, California	Study Area	-
-	-	-	Blake, Jennifer	2020	Archaeological Survey Report for the Proposed Cemetery Road Capital Maintenance Project, Mono County, California.	Study Area	P-26-008935

IC Number	SCE Document ID	USFS Number	Author(s)	Year	Report Title	In APE or Study Area	Involved Resources
-	1165370	-	Marks, Brian S., and Ronnie Johnson	2020	Cultural Resources Assessment: Tufa 16 kV Pole 2307823E (TD1522884) Preventive Maintenance Project, Mono County, California	Study Area	P-26-004077
-	1165369	-	Marks, Brian S., Katie Bonham, and Ronnie Johnson	2020	Cultural Resources Assessment: Tufa 16 kV Pole 2307824E (801774830) Replacement Project, Mono County, California	Study Area	-
-	1165343	-	Williams, Audry	2020	Historic era Built Environment Survey Report for Southern California Edison Company's Distribution Circuits on the Inyo National Forest, Inyo and Mono Counties, California	APE	-
-	-	-	Williams, Audry	2020	Cultural Resource Survey for Southern California Edison Company's Lundy Facilities Maintenance and Repairs Project, Zone 3	APE	Lundy Return Ditch Historic
-	-	-	Williams, Audry	2020	Cultural Resource Survey for Southern California Edison Company's Lundy Facilities Maintenance and Repairs Project, Zone 4	APE	Lundy Return Ditch Multi-component
-	1165589	-	Wilson, Z.	2020	Archaeological Survey Report for Southern California Edison's Deteriorated Pole Project (Unassigned Work Orders), Bureau of Land Management, Bishop Field Office, Inyo and Mono Counties, California	Study Area	-
-	1165161	-	Wisely, Justin, Erin McKendry, and Ronnie Johnson	2020	Cultural Resources Assessment: Tufa 16 kV Pole 4388210E (TD1487562) Replacement Project, Mono County, California	Study Area	-

IC Number	SCE Document ID	USFS Number	Author(s)	Year	Report Title	In APE or Study Area	Involved Resources
-	1165900	-	Gilbert, R., A. Lopez-Johnson, and M. Wiseman	2021	2021 Q1 HRMP Quarterly Compliance Report, USFS Pacific Southwest Region, Master Permits and Easements for the Operation & Maintenance of Southern California Edison's Electric Facilities on the INF, Inyo and Mono Counties, CA	Study Area	INF_TD1656168_Site_001, INF_TD1656168_Site_002
-	1165902	-	Gilbert, R., M. Wiseman, and A. Lopez-Johnson	2021	2021 Q3 HRMP Quarterly Compliance Report, USFS Pacific Southwest Region, Master Permits and Easements for the Operation & Maintenance of Southern California Edison's Electric Facilities on the INF, Inyo and Mono Counties, CA	Study Area	-
-	1165700	-	Johnson, Ronnie, and Vanessa Ortiz	2021	Cultural Resources Assessment: Tufa 16 kV Four Pole (TD1671284 & TD1767060) Infrastructure Replacement and Grid Resiliency Project, Mono County, California	Study Area	-
-	-	-	Environmental Intelligence	2022	INF Whole Circuit Survey	Study Area	LV-Site-203, LV-Site-207

Source: Records Search Results

Notes: INF=Inyo National Forest; kV=kilovolt; USFS=US Forest Service

5.1.2. Previously Identified Archaeological Sites

Archival research conducted to date indicates that there are seven precontact, three multi-component (precontact and historic-period), and 23 historic-period archaeological sites previously recorded within the proposed Study Area. Of these, one precontact site, one multi-component site, and 11 historic-period archaeological sites are located within the proposed Project APE. The types of sites and their NRHP eligibility are listed in Table 5.1-2. Precontact sites primarily include lithic scatters and bedrock milling stations. Historic-period sites include historic debris, the remains of buildings or structures, ditches, and roads, as well as a cemetery. Eight of the sites within the proposed APE were determined not eligible for listing on the NRHP, one was determined as eligible (P-26-002411/CA-MNO-2411H; White, 1990), and one does not appear to have been evaluated. The locations of these sites are depicted on maps located in Confidential Appendix H of the PAD.

Table 5.1-2. Previously Recorded Archaeological Sites Located within the Proposed Study Area and APE

Primary Number	Trinomial	USFS Number (or other designation)	Site Type	Composition of Site	NRHP Eligibility	In APE or Study Area	Property Owner
-	-	INF_TD1656168_ Site_001	Historic	Refuse scatter	Unknown	Study Area	BLM
-	-	INF_TD1656168_ Site_002	Historic	Refuse scatter	Unknown	Study Area	BLM
-	-	Lundy Return Ditch Historic	Historic	Refuse scatter	Unknown	APE	Private
-	-	Lundy Return Ditch Multi-component	Multi-component	Lithic scatter/Refuse scatter	Unknown	APE	INF
-	-	LV-Site-203	Historic	Refuse scatter	Unknown	Study Area	BLM, INF
-	-	LV-Site-207	Historic	Refuse scatter	Unknown	Study Area	INF
P-26-000422	CA-MNO-422/H	05045101788	Multi-component	Lithic scatter/BRM/Refuse scatter	Unknown	Study Area	INF
P-26-000443	CA-MNO-443	-	Precontact	Lithic scatter	Unknown	Study Area	INF, Private
P-26-000459	CA-MNO-459	05045101366	Precontact	Lithic scatter/BRM	Unknown	Study Area	INF
P-26-002236	CA-MNO-2236H	05045300211	Historic	Foundation/Refuse scatter	Unknown	Study Area	LADWP, BLM, Private
P-26-002400	CA-MNO-2400H	05045100680	Historic	Cairn/Refuse scatter	Not eligible (FERC831003B)	APE	INF
P-26-002401	CA-MNO-2401H	05045100681	Historic	Road	Not eligible (FERC831003B)	APE	INF, Private
P-26-002402	CA-MNO-2402H	05045100682	Historic	Structure	Not eligible (FERC831003B)	APE	INF
P-26-002403	CA-MNO-2403H	05045100683	Historic	Structure	Not eligible (FERC831003B)	APE	Private

Primary Number	Trinomial	USFS Number (or other designation)	Site Type	Composition of Site	NRHP Eligibility	In APE or Study Area	Property Owner
P-26-002404	CA-MNO-2404H	05045100684	Historic	Rock wall/Refuse scatter	Not eligible (FERC831003B)	APE	Private
P-26-002405	CA-MNO-2405H	05045100685	Historic	Structure/Refuse scatter	Not eligible (FERC831003B)	APE	Private
P-26-002406	CA-MNO-2406H	05045100686	Historic	Road	Not eligible (FERC831003B)	APE	Private
P-26-002407	CA-MNO-2407H	05045100688	Historic	Cemetery	Not eligible (FERC831003B)	APE	Private
P-26-002411	CA-MNO-2411H	05045100694	Historic	Structure (Jordan Powerhouse)/Refuse scatter	Eligible (FERC831003B)	APE	BLM, Private
P-26-002454	CA-MNO-2454	05045101413	Precontact	Lithic scatter/BRM	Unknown	Study Area	INF
P-26-002467	CA-MNO-2467	-	Precontact	Lithic scatter	Unknown	Study Area	BLM, Private
P-26-003814	-	05045100687	Precontact	Lithic scatter	Not eligible (FERC831003B)	APE	INF
P-26-003815	CA-MNO-3815	05045100689	Precontact	Lithic scatter	Not eligible (FERC831003B)	Study Area	INF
P-26-003817	-	05045100695	Historic	Painted boulder (Frog Rock)	Not eligible (FERC831003B)	Study Area	INF
P-26-004073	CA-MNO-3670	-	Precontact	Lithic scatter	Unknown	Study Area	BLM, Private
P-26-004074	CA-MNO-3671/H	-	Multi-component	Lithic scatter/Ditch	Unknown	Study Area	INF, Private
P-26-004077	-	-	Historic	Lundy Return Ditch	Unknown	APE	BLM, INF, Private
P-26-004835	CA-MNO-4301H	-	Historic	Refuse scatter	Unknown	Study Area	Private
P-26-004836	-	-	Historic	Ditch	Unknown	Study Area	LADWP, INF, Private

Primary Number	Trinomial	USFS Number (or other designation)	Site Type	Composition of Site	NRHP Eligibility	In APE or Study Area	Property Owner
P-26-004841	-	-	Historic	Refuse scatter	Unknown	Study Area	BLM
P-26-006580	CA-MNO-4932H	-	Historic	Refuse scatter	Recommended not eligible	Study Area	LADWP, BLM
P-26-008664	-	-	Historic	Mill Creek Powerhouse Road	Unknown	Study Area	LADWP
P-26-008935	-	-	Historic	Refuse scatter	Unknown	Study Area	INF

Source: Records Search

Notes: BLM=Bureau of Land Management; INF=Inyo National Forest; LADWP=Los Angeles Department of Water and Power; USFS-US Forest Service

6.0 STUDY APPROACH

6.1. STUDY METHODS

The methods proposed to meet the study goals and objectives are discussed in the following sections.

6.1.1. ARCHIVAL RESEARCH

As needed during implementation of the studies, additional archival research will be conducted at the repositories listed in the following text, as required to obtain additional information specific to the prehistory, ethnography, and history of the Project Area, the hydroelectric Project in whole, and its individual features. This may include contacting SCE employees, as appropriate, to gather feature-specific information. The results of the archival research will serve as the basis for preparing the prehistoric and historic contexts against which archaeological and built-environment resources may be evaluated. Places to be contacted or visited include:

- California Historical Research Information System
- Bureau of Land Management (BLM), Bishop Field Office
- Native American Heritage Commission
- Southern California Edison Records
- US Forest Service (USFS), Inyo National Forest
- Other online repositories as applicable

6.1.2. ARCHAEOLOGICAL INVENTORY

Based on the existing data previously described, FERC is required to make a reasonable and good-faith effort to identify historic properties that may be affected by the Project. As described in 36 CFR § 800.4(b)(1), this may be accomplished through sample field investigations and/or field surveys that are implemented in accordance with the Secretary of the Interior's Standards and Guidelines for Identification (NPS, 1983). FERC is required to consider any other applicable professional standards and Tribal, state, or local laws or procedures to complete the identification of historic properties.

To assist FERC in meeting its compliance obligations, and to develop appropriate management measures for historic properties within the APE, an archaeological inventory will be performed. The purpose of the field survey is to: 1) examine lands which have not been previously surveyed; and 2) to examine lands previously surveyed but where the field strategy is insufficiently described, or does not meet current professional standards, as defined in the S*ecretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (NPS, 1983) and the California Office of Historic Preservation (OHP). While a few previous inventories within the APE have been completed to current

professional standards, the majority do not, thus a complete resurvey of the APE will be performed.

The field survey will be supervised by one or more qualified, professional archaeologists (i.e., individuals who meet the Secretary of the Interior's Professional Qualifications Standards for Archaeology [NPS, 2021]) who will participate in all field work.

Archaeological surveys that occur on Inyo National Forest lands will require valid Organic Act permits. Work on BLM land will require a current Cultural Resources Use Permit issued by the BLM State Office, as well as a Fieldwork Authorization issued by the BLM, Bishop Field Office. SCE or their consultants will obtain all required permits prior to beginning field work and will notify the Inyo National Forest and BLM when field work is scheduled.

During the survey, archaeologists will walk systematic, parallel transects spaced at no more than 20 meters apart, to provide complete coverage of the APE, as vegetation and terrain allow. Areas within the APE that cannot be accessed in a safe manner (e.g., locations with dense vegetation or unsafe slopes) will not be included within the survey or recording of archaeological resources; these areas will be identified in the resulting survey report and an explanation for their exclusion will be provided. If conditions allow, lands typically inundated by Project reservoirs will be examined if they are accessible due to drawdowns during the survey season.

Locations of previously recorded archaeological sites will be verified, and their site records will be updated as necessary to reflect current site conditions, and to bring documentation to current professional standards. Newly discovered archaeological resources, including isolated finds, will be fully documented to current standards. All site recording will follow procedures outlined in *Instructions for Recording Historical Resources* (OHP, 1995), which utilizes California Department of Parks and Recreation 523 forms. Isolated finds will be recorded in a tabular fashion and reported only in an appendix to the survey report. The threshold for recording finds as archaeological sites, as opposed to isolated finds, will follow Inyo National Forest and BLM guidelines and permit stipulations.

Sites will be mapped to scale and photographed. Artifacts, features, and other site constituents will be described, mapped, and photographed as appropriate. All artifacts encountered during the field survey will be left in place; no collection will occur. A global positioning system (GPS) receiver will be used to map the locations of all cultural resources, including isolates; locations will be reported using the Universal Transverse Mercator (UTM) coordinate system. GPS data collection will adhere to Inyo National Forest and BLM specifications for accuracy and site-specific procedures where applicable. All mapping data will be submitted to Inyo National Forest, BLM, and SCE in their respective formats.

All newly recorded sites on Inyo National Forest land will be submitted to Inyo National Forest for assignment of USFS numbers. All newly recorded sites, regardless of land status, will be submitted to the CHRIS for assignment of permanent site numbers.

The completed inventory report will meet BLM and Inyo National Forest standards for format and content, as outlined in permit stipulations.

6.1.2.1. Discovery and Treatment of Human Remains

FEDERALLY MANAGED LANDS

Should human skeletal materials, burials, and/or associated funerary objects be identified during the survey or other Project phases or prior to license issuance on USFS Inyo National Forest or BLM land, all work in the immediate area will cease and the location of the find will be secured at the moment of discovery. Personnel responsible for the discovery will notify the SCE Cultural Resources Specialist who in-turn will notify the appropriate federal land management agency's archaeologist and law enforcement officer. The remains will be treated in accordance with protocols of the appropriate land management agency.

If the human skeletal remains are Native American and are located on federal land, FERC and SCE's Cultural Resources Specialist shall coordinate with the USFS Inyo National Forest to comply with their Native American Graves Protection and Repatriation Act protocols pursuant to 25 USC 3001 et seq.

PRIVATE OR STATE LAND

Should human skeletal materials, burials, and/or associated funerary objects be identified during the survey or other phases of the Project or prior to license issuance, they will be treated in accordance with California Health and Safety Code (CHSC) Section 7050.5(b). At the moment of discovery, all work in the immediate area will cease and the location of the find will be secured. Personnel responsible for the discovery will notify the SCE Cultural Resources Specialist who in-turn, given that the skeletal materials are verified as human, will contact the Mono County Coroner and a qualified archaeologist will be secured to evaluate the find to determine, in consultation with the coroner, if the remains are or are not Native American. The skeletal remains will be treated following CHSC Section 7050.5.

6.1.3. NON-AMERICAN INDIAN TRADITIONAL RESOURCES

As described above, FERC is required to make a reasonable and good-faith effort to identify historic properties that may be affected by the Project. As described in 36 CFR § 800.4(b)(1), this may be accomplished through sample field investigations and/or field surveys that are implemented in accordance with the Secretary of the Interior's Standards and Guidelines for Identification (NPS, 1983). FERC is required to consider any other applicable professional standards and Tribal, state, or local laws or procedures to complete the identification of historic properties. To assist FERC in meeting its compliance obligations, and to develop appropriate management measures for historic properties identified within the APE, a non-American Indian traditional resources inventory will be performed to identify their presence.

The inventory will be coordinated among the archaeological, built environment, and Native American Traditional Resource studies. Supervision will be a joint effort by one or more qualified professionals who meet the Secretary of the Interior's Professional Qualifications Standards (NPS, 2021) and who will participate in research, public outreach, and field work.

If a potential resource is identified during research, public outreach, and/or field work, oral interviews and/or field verification will be conducted as appropriate. Resource locations will be verified and fully documented following NRHP Bulletin No. 38, Guidelines for Evaluating and Documenting Identification of Traditional Cultural Properties (Parker and King, 1998). The locations of all non-American Indian TCRs identified during the survey will be entered into a GPS receiver to document the location, which will be plotted onto the appropriate USGS 7.5-minute topographic quadrangle using the UTM coordinate system. GPS data collection will adhere to the Inyo National Forest specifications for accuracy and site-specific procedures where applicable.

6.1.4. National Register of Historic Places Evaluation

The Study shall evaluate all resources for NRHP eligibility based on surface observation and archival research, as feasible and/or identify if additional studies are required to complete NRHP evaluations.

6.2. Coordination With Other Studies

To the extent feasible, SCE will coordinate archaeological and built-environment resources field studies with other Project-related environmental studies (e.g., Tribal resources and habitat surveys) and conduct them in a manner that does not affect other sensitive natural resources. When conducting archaeological or other investigations, Project sponsors and/or their contractors should not violate other federal or state laws or regulations protecting natural resources including but not limited to the Endangered Species Act and Clean Water Act. Project sponsors should consider that Tribes may utilize natural resources for subsistence or specific ceremonial uses and should avoid affecting those uses or events while conducting studies.

7.0 REPORTING AND HISTORIC PROPERTIES MANAGEMENT PLAN

The results of the Study implementation will be reported in Exhibit E of the License Application, which will include a summary of the information and findings of the technical studies. Figures and other pertinent data supporting the summary in Exhibit E will be appended to the License Application. The archaeological records and other sensitive information will be included in a confidential appendix withheld from public disclosure, in accordance with Section 304 (16 USC 4702-3) of the NHPA.

SCE anticipates FERC will enter into a programmatic agreement with the ACHP, OHP, and any other agencies or entities FERC elects to include. One of the programmatic agreement stipulations will be the completion and implementation of a HPMP to be included with the License Application.

The HPMP will consider direct and indirect effects of continued Project Operation and Maintenance on NRHP-listed or eligible archaeological and built-environment resources and will require avoidance and protection of specified resources, whenever possible. Processes and procedures will be developed for general and site-specific treatment measures, including minimization and mitigation measures to be taken should license implementation create unavoidable adverse effects to historic properties. The HPMP will include an Evaluation Plan and schedule for evaluating unevaluated resources.

8.0 SCHEDULE

8.1. STUDY SCHEDULE

For this Study, Table 8.1-1 outlines the major milestones to be completed throughout the study process.

Table 8.1-1. Implementation Schedule of Studies

Date	Activity
Ongoing	Conduct background research online and at the appropriate repositories
Spring-Fall 2025	Conduct field surveys
Winter 2025/2026	Compile study results and prepare draft report
Spring 2026	Distribute draft report to stakeholders
Summer 2026	Stakeholder review and comments on draft report
Fall 2026	Resolve comments and prepare final report
Fall 2026	Prepare draft HPMP
February 2027	Distribute final reports in Final License Application

9.0 LEVEL OF EFFORT AND COST

SCE estimates the cost to complete this Study, in 2024 dollars, is approximately $83,000.

10.0 REFERENCES

NPS (National Park Service). 1983. *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation*. Federal Register, Volume 48, No. 190 (September 29, 1983) p. 44716. Accessed: May 15, 2021. Available online: https://www.nps.gov/subjects/historicpreservation/upload/standards-guidelines-archeology-historic-preservation.pdf

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York, A. 1990. *An Evaluation of Twenty-One Archaeological Sites on the Lee Vining Creek, Rush Creek, and Lundy Hydroelectric Projects, Mono and Inyo Counties, California*. Dames & Moore. On file, Southern California Edison Company, Rosemead, California.

CUL-2 – CULTURAL RESOURCE - BUILT ENVIRONMENT

TECHNICAL STUDY PLAN

Lundy Hydroelectric Project
FERC Project No. 1390

December 2024

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1.0 POTENTIAL RESOURCE ISSUE

Southern California Edison (SCE) identified the need to conduct cultural resource studies archaeological, built environment, and Traditional Cultural Properties, as well as non-American Indian TCPs and TCRs, resource studies. The CUL-2 Cultural Resources, Built Environment Technical Study (Study) will consider built environment resources. American Indian TCPs and TCRs will be considered within the TRI-1, Tribal Resource Technical Study Plan. Archaeological and non-American Indian TCPs and TCRs will be considered in the CUL-1 Cultural Resources – Archaeology Technical Study Plan. Several terms used throughout this Study plan warrant definition at the outset.

- **Area of Potential Effect** - as defined in the Code of Federal Regulations (CFR), Title 36, Section 800.16(d) (36 CFR § 800.16(d)), as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations to the character of use of historic properties, if any such properties exist."

- **Historic Property(ies)** - as defined in the Code of Federal Regulations (CFR), Title 36, Section 800.16(l)(1) (36 CFR § 800.16(l)(1)), are precontact or historic archaeological sites, buildings, structures, objects, or districts included in or eligible for inclusion in the National Register of Historic Places (NRHP). Historic properties are identified through a process of evaluation against specific NRHP criteria in 36 CFR § 60.4.

- **A District** - is a geographic area containing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan and physical development. Examples of districts include (but are not limited to) precontact archaeological site complexes, hydroelectric projects, residential areas, commercial zones, mining complexes, transportation networks, rural villages, canal systems, irrigation systems, or large ranches (NPS, 1997).

- **Cultural Resource(s)** - for the purpose of this document, this term is used to discuss any precontact or historic-period district, site, building, structure, object, landscape, TCP, or TCR, regardless of its National Register eligibility.

- **Built Environment Resource(s)** - for the purpose of this study, this term is the term used to discuss any historic-period district, building, structure, or object, regardless of its National Register eligibility.

2.0 PROJECT NEXUS AND HOW THE RESULTS WILL BE USED

The Federal Energy Regulatory Commission's (FERC) decision to issue or re-issue a license is considered an "undertaking" pursuant to 36 CFR § 800.16(y). The National Historic Preservation Act (NHPA) requires federal agencies to take into account the effect that their undertakings may have on historic properties and allow the Advisory Council on Historic Preservation (ACHP) an opportunity to comment.

Continued Project Operation and Maintenance and other activities, including public recreation activities, may have an adverse effect on historic properties. The effect may

be direct (e.g., result of alteration of a historic structure), indirect (e.g., public access to Project areas), or cumulative (e.g., caused by a Project activity or public access in combination with other past, present, and reasonably foreseeable future projects). This study focuses on these potential Project effects to historic properties that are built environment resources.

For historic properties, appropriate study areas are defined by Regulations under 36 CFR § 800.16(d) as the APE. The APE for the Project is further defined in Section 4.0, *Extent of Proposed Study Area, and Study Sites*, of this Study Plan. The following will be assessed during the built environment resource surveys:

- Have built environment resources been adequately surveyed, identified, and evaluated, and if previously studied, has documentation been updated?
- Are there adverse effects to built environment resource historic properties? Adverse effects to historic properties may include, but are not limited to, demolition, relocation, or neglect of a historic property; or alteration of, or introduction of physical, visual, audible, or other changes to a historic property that would diminish the integrity of its significant features. (36 CFR § 800.5)
- Are the adverse effects direct, indirect, and/or cumulative? (36 CFR § 800.5(a)(1))
- If adverse effects are identified that would result from Project implementation, how will they be resolved? (36 CFR § 800.6)

Data collected during this study will be used to prepare the following:

- Cultural Resource Technical Report (CUL-2) for built environment resources.
- Historic Properties Management Plan (HPMP) addressing archaeological, built environment and Tribal resources.

3.0 STUDY GOALS AND OBJECTIVES

The Study goals and objectives include the following:

- Meet FERC compliance requirements under in its Regulations (18 CFR Part 5) and Section 106 of the NHPA, as amended, by determining if Project-related activities and public access will have an adverse effect on historic properties.
- Identify all built environment resources within the APE, evaluate which are historic properties, and report conclusions.
  - Conduct additional background archival research of the built environment resources in the APE.
  - Conduct field survey of built environment resources within or intersecting the APE.

  - Prepare a technical and evaluation report presenting conclusions of inventory and evaluation of built environment resources.

- Ensure that future Project facilities and operations are consistent with the Desired Conditions described in the Land Management Plan for the Inyo National Forest (USFS, 2019.

4.0 EXTENT OF STUDY AREA AND STUDY SITES

4.1. BUILD STUDY AREA

The Study will focus upon the FERC Project Boundary, which will serve as the proposed APE, and a larger proposed Study Area comprising a 0.5-mile radius around the proposed APE (Figure 4.1-1).

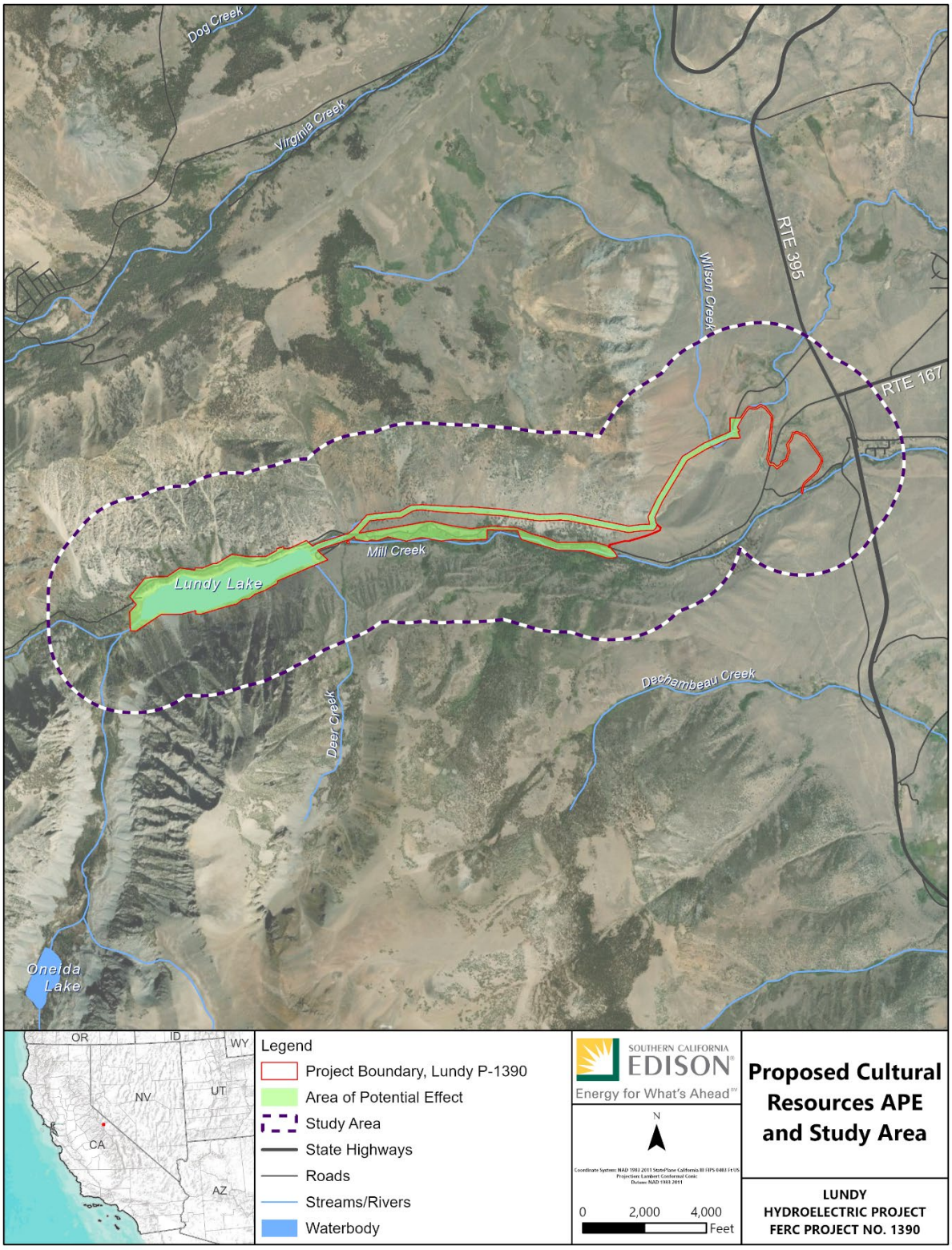

Figure 4.1-1. Proposed Cultural Resources APE and Study Area

5.0 EXISTING INFORMATION

5.1. SUMMARY OF RECORD SEARCHES AND ARCHIVAL RESEARCH

The cultural resources section of the Pre-Application Document (PAD)), filed in February 2024, was developed using information obtained from the SCE archives, Inyo National Forest, and the California Historical Resources Information System (CHRIS) Eastern Information Center (EIC) at the University of California Riverside, and is summarized in the following text.

5.2. PREVIOUS BUILT RESOURCES STUDIES

Thirty-four previous cultural resource investigations were identified within the proposed Study Area. Of these, 21 were conducted within the proposed APE or overlap the proposed APE and Study Area. Among the investigations are the ones conducted during the last relicensing (White, 1983, 1985, 1990; York, 1990). Most of these reports focused on documenting archaeological resources, and therefore are not listed in this study plan. The reader should refer to the CUL-1 TSP for the full list of previous studies. Maps of the previous studies are located in Appendix H (Confidential) of the PAD.

One study, White (1985) evaluated the Lundy Powerhouse and recommended that it not be eligible for listing on the NRHP. The SHPO concurred with this finding on December 9, 1988 (FERC Ref No. FERC861112A, FERC831003B, FERC880816A). It should be noted that the evaluation solely focused on the powerhouse and did not examine or discuss the system as a whole. Three built environment resources associated with the Lundy Project have been documented on California Department of Parks and Recreation 523 forms (Table 5.2-1). No other built environment resources have been documented with the APE and Study Area.

The key Lundy Project facilities include Lundy Dam, Lundy Lake, a flowline consisting of pipeline and penstock, Lundy Powerhouse, and the Mill Creek Return Ditch (MCRD). Lundy Lake is the intake and regulating reservoir for the Lundy Powerhouse. Lundy Lake has historically been drawn down in the winter to provide storage capacity for spring runoff. Water is conveyed from Lundy Lake to the powerhouse via the flowline and penstock. Minimum flows are provided into Mill Creek below Lundy Powerhouse via the MCRD (SCE, 2024).

Table 5.2-1. Previously Recorded Built Environment Resources Located within the Proposed Study Area and APE

Primary Number	USFS Number	Composition of Resource	NRHP Eligibility	In APE or Study Area	Property Owner
-	-	Lundy Hydroelectric System*	Not Eligible (FERC831003B)	APE	BLM, INF, County, Private
P-26-004077	-	Lundy Return Ditch	Unevaluated	APE	BLM, INF, County, Private
P-26-008664	-	Mill Creek Powerhouse Road	Unevaluated	Study Area (of portion recorded)	LADWP (Portion Recorded)
P-14-014235/ P-26-009006	FS 05-04-53-02829	Mill Creek-Control	Determined Not Eligible	APE	BLM, INF, Private

Source: Records Search

*No DPR

6.0 STUDY APPROACH

6.1. STUDY METHODS

The methods proposed to meet the Study goals and objectives are discussed in the following sections.

6.1.1. ARCHIVAL RESEARCH

As needed during preparation of the studies, archival research will be conducted at the repositories listed below if their collections are determined to be relevant. Research will seek additional information specific to the history of the built environment in the Project Area, the hydroelectric Project in whole, and its individual features. This may include contacting SCE employees, as appropriate, to gather resource-specific information. The results of the archival research will serve as the basis for preparing the historic contexts against which the built environment resources will be evaluated.

Historic photographs, maps, or other images located during the archival research will be inserted into and cited in the text, if not limited by copy wright or other use restrictions. Previous NRHP evaluations will be reviewed and brought up to current standards. Repositories to be contacted or visited for research regarding built resources include:

- Bancroft Library, University of California Berkeley
- California Historical Research Information System
- California State Archives, Sacramento

- California State Library, California History Room, Sacramento
- Southern California Edison Records
- US Forest Service (USFS), Inyo National Forest
- Water Resources Collection Archive & Library, University of California Riverside
- University of Nevada, Reno, Special Collections
- Other libraries, archives, and online repositories as applicable

6.1.2. Built Environment Resources Inventory

Based on the existing data previously described, FERC is required to make a reasonable and good-faith effort to identify historic properties that may be affected by the Project. As described in 36 CFR § 800.4(b)(1), this may be accomplished through sample field investigations and/or field surveys that are implemented in accordance with the Secretary of the Interior's Standards and Guidelines for Identification (NPS, 1983). FERC is required to consider any other applicable professional standards and Tribal, state, or local laws or procedures to complete the identification of historic properties.

To assist FERC in meeting its compliance obligations, and to develop appropriate management measures for historic properties within the APE, a built environment resources inventory will be performed. The purpose of the field survey is to conduct field inspection, documentation and subsequent NRHP evaluation of built environment resources. These activities will be undertaken by individuals meeting the Secretary of the Interior's Professional Qualifications Standards (PQS) for History and/or Architectural History (NPS, 2021), or under the direct supervision of PQS staff. All built environment resources will be record or re-record, as appropriate following procedures outlined in *Instructions for Recording Historical Resources* (OHP, 1995), which utilizes DPR 523 forms. Buildings and structures within the APE will be documented in the field, including those that are 45 years old by 2027 (survey age will be determined in consultation with SCE and the Inyo National Forest, as appropriate). In addition to the hydroelectric-related resources, the built environment resources survey will record buildings, structures, or objects associated with other historic-period activities in the APE, such as mining, road construction, agriculture/ranching, or recreation.

Fieldwork will include digital photography of all resources and the production of sketch maps of built resources that show the location of individual resources and the relationship of buildings and structures to each other (e.g., an operational hydroelectric facility or a campground within the APE). When possible, global positioning system (GPS) points will be taken of each resource that will then be plotted onto maps to create a comprehensive inventory of built environment resources within the APE.

GPS data collection will adhere to Inyo National Forest and BLM specifications for accuracy and site-specific procedures where applicable. All mapping data will be submitted to Inyo National Forest, BLM, and SCE in their respective formats.

All newly recorded sites on Inyo National Forest land will be submitted to Inyo National Forest for assignment of USFS numbers. All newly recorded sites, regardless of land status, will be submitted to the CHRIS for assignment of permanent site numbers.

The completed inventory report will meet BLM and Inyo National Forest standards for format and content, as outlined in permit stipulations.

6.2. COORDINATION WITH OTHER STUDIES

To the extent feasible, SCE will coordinate the built environment resources field studies with other Project-related environmental studies (e.g., archaeological, Tribal resources and habitat surveys) and conduct them in a manner that does not affect other sensitive natural resources. When conducting archaeological or other investigations, Project sponsors and/or their contractors should not violate other federal or state laws or regulations protecting natural resources including but not limited to the Endangered Species Act and Clean Water Act. Project sponsors should consider that Tribes may utilize natural resources for subsistence or specific ceremonial uses and should avoid affecting those uses or events while conducting studies.

7.0 REPORTING AND HISTORIC PROPERTIES MANAGEMENT PLAN

The results of the Study implementation will be reported in Exhibit E of the License Application, which will include a summary of the information and findings of the technical studies. Figures and other pertinent data supporting the summary in Exhibit E will be appended to the License Application. The confidential sensitive information will be included in a confidential appendix withheld from public disclosure, in accordance with Section 304 (16 USC 4702-3) of the NHPA.

SCE anticipates FERC will enter into a programmatic agreement with the ACHP, OHP, and any other agencies or entities FERC elects to include. One of the programmatic agreement stipulations will be the completion and implementation of a HPMP to be included with the License Application.

The HPMP will consider direct and indirect effects of continued Project Operation and Maintenance on NRHP-listed or eligible archaeological, built environment resources and Tribal resources, and will require avoidance and protection of specified resources, whenever possible. Processes and procedures will be developed for general and site-specific treatment measures, including minimization and mitigation measures to be taken should license implementation create unavoidable adverse effects to historic properties. The HPMP will include an Evaluation Plan and schedule for evaluating unevaluated resources.

8.0 STUDY PLAN SCHEDULE

8.1. STUDY SCHEDULE

The anticipated Study development and implementation schedule is identified below (Table 8.1-1).

Table 8.1-1. Study Plan Schedule

Date	Activity
Ongoing	Conduct background research online and at the appropriate repositories
Spring-Fall 2025	Conduct field surveys
Winter 2025/2026	Compile study results and prepare draft report
Spring 2026	Distribute draft report to stakeholders
Summer 2026	Stakeholder review and comments on draft report
Fall 2026	Resolve comments and prepare final report
Fall 2026	Prepare draft HPMP
February 2027	Distribute final reports in Final License Application

Note: TBD=to be determined

9.0 LEVEL OF EFFORT AND COST

SCE estimates the cost to complete this Study, in 2024 dollars, is approximately $84,000.

10.0 REFERENCES

NPS (National Park Service). 1983. *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation*. Federal Register, Volume 48, No. 190 (September 29, 1983) p. 44716. Accessed: May 15, 2021. Available online: https://www.nps.gov/subjects/historicpreservation/upload/standards-guidelines-archeology-historic-preservation.pdf

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York, A. 1990. *An Evaluation of Twenty-One Archaeological Sites on the Lee Vining Creek, Rush Creek, and Lundy Hydroelectric Projects, Mono and Inyo Counties, California*. Dames & Moore. On file, Southern California Edison Company, Rosemead, California.

TRI-1 – TRIBAL RESOURCES

TECHNICAL STUDY PLAN

Lundy Hydroelectric Project
FERC Project No. 1390

December 2024

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1.0 POTENTIAL RESOURCE ISSUE

Southern California Edison (SCE) identified the need to conduct a Tribal resource ethnographic and ethnohistoric research study. Technical professionals of the relicensing team have further acknowledged that there has been minimal investigation to date of 1) the Lundy Hydroelectric Project (Lundy Project or Project) Area American Indian ethnography, 2) the potential for American Indian Traditional Cultural Properties (TCPs), or 3) the potential for other American Indian resources, some of which may be eligible for listing in the National Register of Historic Places (NRHP). This TRI-1 Tribal Resources Study (Study) is intended to address the need to conduct the aforementioned baseline research. Potential resource areas include TCPs; Tribal economic ventures; resources of traditional, cultural, or religious importance; and environmental considerations of importance to the American Indian community.

Several terms used throughout this Study plan warrant definition at the outset.

- **Area of Potential Effect** - as defined in the Code of Federal Regulations (CFR), Title 36, Section 800.16(d) (36 CFR § 800.16(d)), as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations to the character of use of historic properties, if any such properties exist."

- **Historic Property(ies)** - as defined in the Code of Federal Regulations (CFR), Title 36, Section 800.16(l)(1) (36 CFR § 800.16(l)(1)), are precontact or historic archaeological sites, buildings, structures, objects, or districts included in or eligible for inclusion in the National Register of Historic Places (NRHP). Historic properties are identified through a process of evaluation against specific NRHP criteria in 36 CFR § 60.4.

- **A District** - is a geographic area containing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan and physical development. Examples of districts include (but are not limited to) precontact archaeological site complexes, hydroelectric projects, residential areas, commercial zones, mining complexes, transportation networks, rural villages, canal systems, irrigation systems, or large ranches (NPS, 1997).

- **Cultural Resource(s*)*** - for the purpose of this document, is used to discuss any precontact or historic-period district, site, building, structure, object, landscape, TCP, or TCR, regardless of its National Register eligibility.

- **Tribal places** - are locations associated with the ancestral past and places related to current gathering and/or hunting practices or other resource types.

- **Traditional cultural property/place (TCP)** - is a place or property that is eligible for inclusion in the NRHP based on its associations with the cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions of a living community. TCPs are rooted in a traditional community's history and are important in maintaining the continuing cultural identity of the community. Examples provided in National Register

Bulletin No. 381, Guidelines for Evaluating and Documenting Identification of Traditional Cultural Properties/Places (NPS 1998; NPS Draft Update 2023), include:

- A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;
- A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; or
- A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents.

The Project Area is the homeland of the Mono Lake Indian Community, also known as the Mono Lake Kutzadika[a] (Kootzaduka'a). As discussed further below, there are many other nearby Tribes that may also have resources of value in the Project Area. There may be Tribal gathering, fishing, or hunting areas in the Project Vicinity, as the local American Indian community continues to access medicine plants, food plants, materials for tools, and many other items as part of their ongoing traditional cultural lifeways. These communities have a connection with certain biological species, such as bighorn sheep, which may not be currently present in the area but nonetheless have value to heritage, stories, and traditional ecological knowledge. Some of these places may be TCPs or other properties eligible for inclusion in the NRHP, based on associations with the cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions. Some of the resources may not be TCPs because they are not associated with the ongoing values by a community but may have other ethnographic or Tribal values and may also be eligible for NRHP listing.

There is potential for both American Indian TCPs and other historic properties to be located in the Lundy Project Area. Potentially other Tribal resources may be located in the region that have values other than those traditionally investigated in historic property surveys. The Federal Energy Regulatory Commission (FERC) recognizes these values. The National Historic Preservation Act (NHPA) implementing regulations at 36 CFR (Code of Federal Regulation) 800 confirm Section 101(d)(6)(B) of NHPA by stating that when properties of religious and cultural significance to Indian Tribes may be affected by an undertaking, consultation with the Tribes is required, and that the Indian Tribe shall be a consulting party. To date, neither new research nor interviews have been conducted to identify or discuss such places of religious or cultural significance specific to this Project.

2.0 PROJECT NEXUS AND HOW THE RESULTS WILL BE USED

FERC's decision to issue a new license is considered a federal undertaking pursuant to 36 CFR 800.16(y). The NHPA requires federal agencies to take into account the effect of its undertakings on historic properties and allow the Advisory Council on Historic Preservation (ACHP) an opportunity to comment.

Continued Project operations and maintenance (O&M) and other activities, including public recreation activities, may have an adverse effect on Tribal resources, which may

include historic properties. The effect may be direct (e.g., result of ground-disturbing activities), indirect (e.g., public access to Project areas), or cumulative (e.g., caused by a Project activity or public access in combination with other past, present, and reasonably foreseeable future projects). The Tribal resource study will focus on identifying Tribal resources and if present, what effects are occurring.

FERC's requirements for involving American Indian Tribes outline the need to:

- Describe Indian Tribes, Tribal lands, and Tribal interests that may be affected by the Project.
- Include analysis of existing Project O&M that may impact Tribal cultural or economic interests.
- Identify impacts on Indian Tribes from existing Project O&M that may affect Tribal interests (e.g., Tribal fishing practices or agreements between the Indian Tribe and other entities) not necessarily associated with archaeological resources or other historic properties.

The Study proposes to identify:

- Tribal matters that may exist because of the Project;
- Project effects that may be direct, indirect, and/or cumulative;
- Potential license conditions that may be necessary to address the Tribal matters;
- Existing agreements Tribes may have with other entities, such as the Inyo National Forest (US Forest Service [USFS]) regarding access to Tribal resources, including but not limited to gathering (and gathering protocols), fishing, hunting, camping, ceremony, or other special uses; and
- Resource management goals of the USFS and take them into account when assessing effects.

Data collected during this Study will inform the following:

- Tribal Resource Technical Study Report (TRI-1);
- Tribal Resource Evaluation Report, as needed;
- Historic Properties Management Plan (HPMP), addressing archaeological, built environment and Tribal resources.

3.0 STUDY GOALS AND OBJECTIVES

The principal goal of the Study implementation is to assist FERC in meeting compliance requirements identified in 18 CFR Part 5 along with those requirements subject to NHPA Section 106 (as amended), among other federal laws and regulations, by determining if

licensing of the Project would have an adverse effect upon Tribal resources, which may also include historic properties. FERC desires to know to what extent the existing Project construction and operation may have affected Tribal, cultural, or economic interests; Tribal cultural sites; and connected interests with other technical group studies. In addition to historic properties, which may be a type of Tribal resource, there are other Tribal resources that may be identified through archival research, oral interviews, field inspections, and government-to-government consultation. The Study intends to ensure such places are described from a Tribal perspective and identify options for potential O&M effects.

Research conducted to date suggests that an ethnographic overview/background of the Project Area is minimal, and that for the previous license, there appears to have been no Tribal outreach. Additional goals of the Study implementation are to ensure that Tribal values and resources are identified and acknowledged from a Tribal perspective, and that an adequate baseline ethnohistory is developed. Similarly, ensuring that the land-managing agencies and any other stakeholder agencies have their program needs met with respect to the proposed Project Area of Potential Effect (APE) is a goal of the work. Finally, it is anticipated that management issues will be identified to be described and developed in subsequent planning efforts for the life of the license.

- Identify and document Tribal resources identified within or immediately adjacent to the proposed APE.
- Conduct a thorough American Indian ethnographic/ethnohistoric survey of the proposed APE and Study Area.
- Conduct outreach and contact with Tribal governments and their representatives.

4.0 EXTENT OF STUDY AREA AND STUDY SITES

The Study will focus upon the FERC Project Boundary, currently coincident with the proposed APE, and a larger Study Area proposed to be a 5-mile radius from the APE (Figure 4.1-1). This Study Area is a guide for archival research, development of the historic context and background statements, and general Tribal informant interviews.

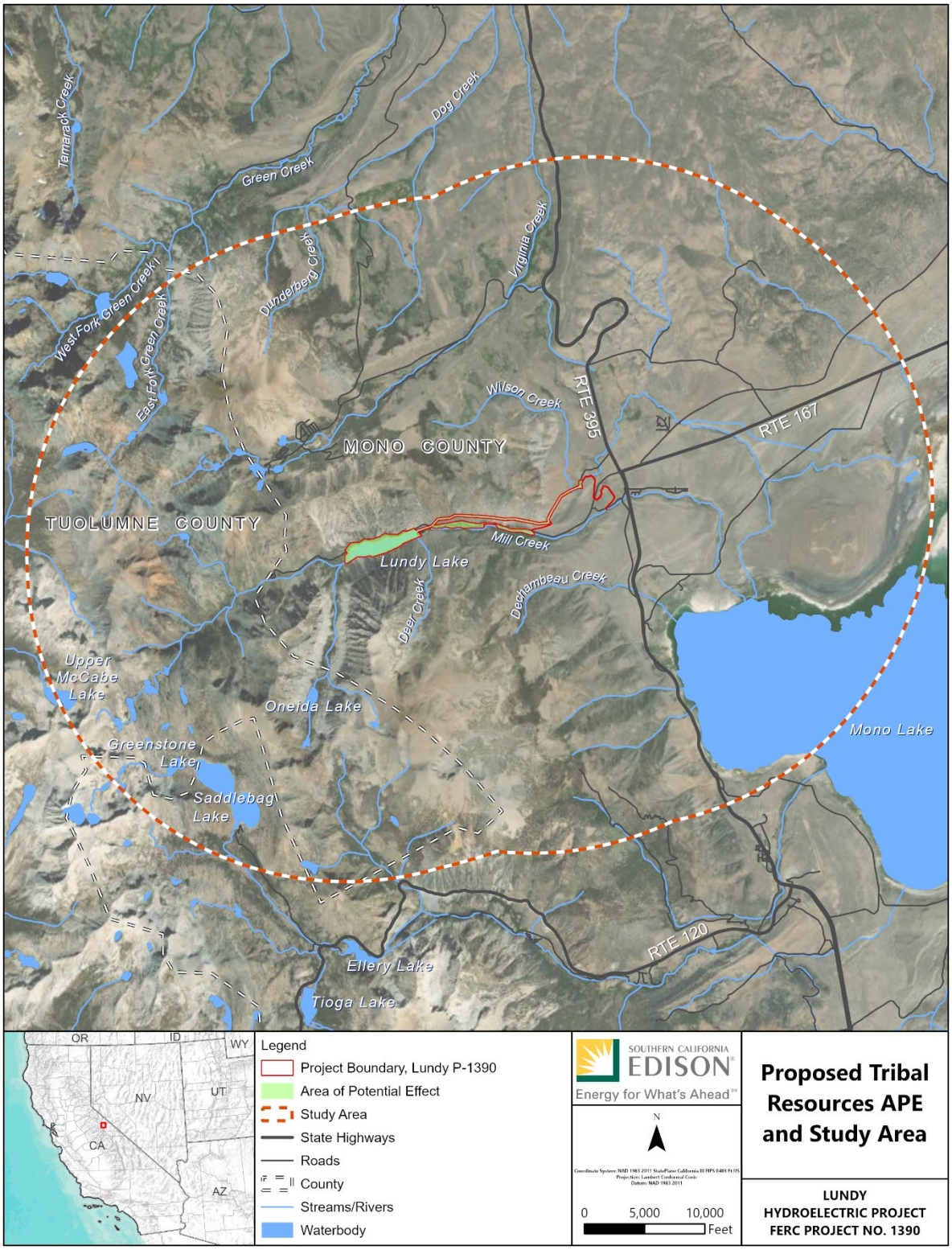

Figure 4.1-1. Proposed Tribal Resources APE and Study Area

5.0 EXISTING INFORMATION

Section 5.12, *Tribal Resources*, of the Pre-Application Document (PAD), filed in February 2024, describes existing information, and is summarized here. Sources of existing information include:

- Existing ethnographic literature, including Davis (1962, 1963, 1965); Davis-King (2007, 2010); Davis-King and Snyder (2010); Fowler (1989); Fowler and Liljeblad (1986); Merriam (n.d., 1898-1938), and Powers (1976)
- Native American Heritage Commission (NAHC) Sacred Lands File and Native American Consultation List (NAHC, 2023a, 2023b)
- Records on Ancestry.com, various
- Records on file at the National Archives and Records Administration (NARA), San Bruno, various
- Southern California Edison reports (White, 1983, 1985)
- Tribal websites, various

The Project is in the homeland of the Mono Lake Kutzadika[a] (Kootzaduka'a), a Northern Paiute group comprised of families with ties to the Lundy Canyon/Mill Creek, Lee Vining Creek, and Rush Creek drainage areas, the Mono Lake Basin, and the Bodie Hills. In addition, the greater Kutzadika[a] (Kootzaduka'a) homeland, extending from what is now Yosemite National Park in the Sierra Nevada Range east to Walker Lake and north and south along the eastern Sierra piedmont, was used during traditional seasonal rounds. Other groups have some affiliation with the Project Vicinity, including the Southern Sierra Miwuk, the Central Sierra Me-Wuk, the Owens Valley Paiute, the Bridgeport Indian Colony, the Walker River Paiute, and possibly the Washoe and other Tribes.

The NAHC Sacred Lands file search conducted for the Project did not provide results, meaning no ethnographic studies conducted in the proposed Lundy APE were identified (NAHC, 2023a). The contact list provided for the Lundy Project was mostly limited to eastern Sierra Nevada Tribes considered potential stakeholders (NAHC, 2023b). Tribes identified include the Mono Lake Kutzadika[a] (Kootzaduka'a) Tribe, the Bridgeport Paiute Indian Colony, the Utu Utu Gwaitu Tribe of the Benton Paiute Reservation, the Bishop Paiute Tribe, the Big Pine Tribe of the Owens Valley, the Washoe Tribe of Nevada and California, the Wadatkuta Band of the Honey Lake Valley, the Wuksache Indian Tribe/Eshom Valley Band, North Fork Rancheria of Mono Indians and the North Fork Mono. Information from the USFS, National Park Service, and/or Bureau of Indian Affairs (BIA) regarding groups with whom they consult may supplement the list of Tribal stakeholders.

FERC communicates with federally recognized and unrecognized Tribal groups. This policy is also followed by SCE, and formal consultation with Tribes with an interest in the

Project Area will commence in 2025. Additional Tribes with a possible interest in the Project Area also include:

- Bridgeport Indian Colony
- Bishop Paiute Tribe
- American Indian Council of Mariposa County/Southern Sierra Miwuk Nation
- Tuolumne Band of Me-Wuk Indians
- North Fork Rancheria of Mono Indians of California
- North Fork Mono Tribe
- Big Pine Paiute Tribe of Owens Valley
- Fort Independence Indian Community of Paiute Indians of the Fort Independence Reservation
- Walker River Paiute Tribe
- Washoe Tribe of Nevada and California

6.0 STUDY APPROACH

6.1. STUDY METHODS

The Study investigation will make a good-faith effort for proper communication with Tribal leaders as laid out in FERC's *Policy Statement on Consultation with Indian Tribes in Commission Proceedings*, issued July 23, 2003 (Docket No. PL03-4-000; Order No. 635). The investigation will follow FERC Regulations at 18 CFR § 2.1c, which added a policy statement on consultation with Tribes in FERC proceedings.

All phases of the Study investigation will be conducted in accordance with the American Indian community consultation standards outlined by the implementing Regulations of Sections 101 and 106 of the NHPA and discussed in the 2012 ACHP publication *Consultation with Indian Tribes in the Section 106 Review Process: A Handbook.*

Potential TCP documentation, consultation, and any necessary fieldwork will be implemented in accordance with Section 106 of the NHPA, as amended, and shall take into consideration National Register Bulletin (NRB) No. 38, *Guidelines for Evaluating and Documenting Identification of Traditional Cultural Properties* (Parker and King, 1990, 1998).

Study documentation will be implemented in accordance with FERC Regulations and with Section 106 of the NHPA, as amended, if such resources are potential historic properties, and shall take into consideration NRB No. 38 (Parker and King, 1998) among other NRBs.

NRHP evaluations will be conducted in adherence with NRB No. 15, *How to Apply the National Register Criteria for Evaluation* (NPS, 1997), and other NRBs as appropriate.

6.1.1. ARCHIVAL RESEARCH

As needed during the implementation of the Study, archival research will be conducted at most of the repositories identified in the following text to obtain additional information specific to the prehistory, ethnography, and history of the Project Area. The results of the archival research will 1) provide primary data to create a background American Indian ethnohistory of the proposed Study Area; and 2) inform the Tribal resources historic context against which such resources may be evaluated for the NRHP.

The Tribal resources expert will conduct background archival research of the Study Area. This will involve visits to many repositories, which may include the following:

- Autry Museum of the American West, Los Angeles
- California State Archive, Sacramento
- California State Library, California History Room, Sacramento
- Emma Lou Davis Archive, Maturango Museum
- Hulse and Essene (Bancroft Library, Berkeley and elsewhere)
- Huntington Library, San Marino
- Inyo USFS, Bishop
- Merriam (C. Hart) and Harrington (J.P.) notes
- Mono Basin Historical Society, Lee Vining
- Mono County Official Records, Bridgeport
- National Archive and Records Administration, San Bruno
- Tuolumne County Carlo M. De Ferrari Archive, Sonora
- University of California Bancroft Library, Berkeley
- University of California Jepson Field Notes, Berkeley
- University of California, C. Hart Merriam Collection, Davis
- University of Nevada Special Collections, Reno
- Yosemite National Park Research Library, El Portal

Background research will be conducted as needed throughout the life of the Project.

6.1.2. Assist Other Resource Specialists

Other resource areas may have a connection to Tribal resources. This includes biological areas, water, trails, and recreation, among other areas. As needed, the Tribal resource expert will work to assist other resource experts in identifying Tribal resources with connections to their technical study. Assistance to the cultural resource team is anticipated to aid field identification and documentation of historic American Indian resources, potential gathering areas, and other places that may have value to Indian Tribes.

6.1.3. Meetings with Tribal Governments

Meetings with Tribal governments or administrators and/or attendance at Tribal Council meetings is proposed to provide Project data to Tribal groups, elicit areas of interest, identify appropriate Tribal informants, and establish protocols for conveying information. To date, twelve American Indian Tribes have been identified as having potential interests in the Project. These are:

- American Indian Council of Mariposa County (also known as Southern Sierra Miwuk Nation)
- Antelope Valley Indian Community, Coleville Paiute Tribe
- Big Pine Paiute Tribe of Owens Valley
- Bishop Paiute Tribe
- Bridgeport Indian Colony
- Mono Lake Indian Community (Mono Lake Kutzadikaa (Kootzaduka'a)Tribe)
- North Fork Mono Tribe
- North Fork Rancheria of Mono Indians
- Tuolumne Band of Me-Wuk Indians
- Utu Utu Gwaitu Tribe of the Benton Reservation
- Walker River Reservation
- Washoe Tribe of Nevada and California

All Tribal groups will be contacted via telephone or email at a minimum to elicit their interest.

6.1.4. INTERVIEWS

Interviews are critical for identification, description of significance, and evaluation of potential effects to Tribal resources. Twenty interviews are proposed with Tribal experts to gain understanding about what is important to them and why. Individuals from each of the participating Tribes will be interviewed. The methods and nature of the interviews are expected to vary from person to person: some may be held in the field Project Area, others held in private homes, and still others held via telephone or teleconference. Interview records are similarly likely to be variable regarding confidentiality protocols and the Tribal expert's willingness to share. Recording methods (e.g., handwritten notes, video, audio tape) will be determined by consulting with the informant.

6.1.5. DOCUMENTATION AND EVALUATION

Three main categories of Tribal resources are anticipated that include 1) Tribal places; 2) TCPs; and 3) Tribal government matters. Each will be documented in a different manner. Tribal places may be potential historic properties, places associated with the ancestral past, places related to current gathering and/or hunting practices or be other resource types. Those that qualify as potential historic properties will be documented on California Department of Parks and Recreation (DPR) 523 forms as appropriate and with Tribal permission, while others will be described in the Study. TCPs will be documented on DPR 523 forms, with Tribal community permission, and Tribal government resources may be documented in the Study or may be larger or different resource types (e.g., documentation of Indian allotments in the Study Area). All resources will be documented and described according to Tribal values and submitted for review to Tribal representatives. NRHP evaluation of Tribal resources suitable for DPR 523 documentation will use site-specific procedures to identify historic context of the resource, boundaries, jurisdiction or land ownership, Tribal significance, integrity from a Tribal perspective, and contributing characteristics. Evaluation of other resource types may occur at the managerial or agency level.

7.0 REPORTING AND HISTORIC PROPERTIES MANAGEMENT PLAN

The results of the Study implementation will be reported in Exhibit E of the License Application, which will include a summary of the information and findings of the technical studies. Figures and other pertinent data supporting the summary in Exhibit E will be appended to the License Application. Tribal resource documentation and other sensitive information may be included in a confidential appendix withheld from public disclosure, in accordance with Section 304 (16 USC 4702-3) of the NHPA. The California Public Records Act similarly exempts site data from disclosure while Public Resources Code Section 21082.3(c) contains provisions specific to confidentiality related to any information submitted by an American Indian Tribe during the environmental review process, including, but not limited to, the location, description, and use of the Tribal cultural resources.

A detailed technical report will be prepared to include 1) regulatory, environmental, and cultural contextual statements; 2) discussion of research methods; 3) discussion of Tribal

resources that are not also cultural resources; 4) description and evaluation of resources that are assessed as potential historic properties; and 5) conclusions to include management considerations. Appendices are anticipated to include ethnobiological tables, chronological contact logs, specific historical reference materials, and more. The Study will identify all potential and actual Project effects from a Tribal perspective, provide Tribal suggestions for mitigation or modification of impacts, and provide a structural basis for FERC to conduct their National Environmental Policy Act analysis for this technical resource area.

SCE anticipates FERC will enter into a programmatic agreement (PA) with the ACHP, California Office of Historic Preservation, and any other agencies or entities FERC elects to include. One of the PA stipulations will be the completion and implementation of a HPMP to be included with the license or License Application.

The HPMP will consider direct and indirect effects of continued Project O&M on NRHP-eligible and unevaluated Tribal resources and will require avoidance and protection of specified resources, whenever possible. Processes and procedures will be developed for general and resource-specific treatment measures, including mitigation measures to be taken should license implementation create unavoidable adverse effects to historic properties.

8.0 STUDY SCHEDULE

8.1. STUDY SCHEDULE

The proposed schedule for this Study is included in Table 8.1-1.

Table 8.1-1. Study Schedule

Date	Activity
Ongoing	Conduct background research online and at the appropriate repositories
Summer 2025-Winter 2026	Conduct Tribal Site Visits and Evaluate Tribal Resources
Winter-Spring 2026	Analyze Data and Prepare draft report
Spring 2026	Distribute draft report to stakeholders
Summer 2026	Stakeholder review and comments on draft report
Fall 2026	Resolve comments and prepare final report
Fall 2026	Prepare draft HPMP

9.0 LEVEL OF EFFORT AND COST

SCE estimates the cost to complete this Study in 2024 dollars is approximately $90,000.

10.0 REFERENCES

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LAND-1 PROJECT LANDS AND ROADS STUDY PLAN

TECHNICAL STUDY PLAN

Lundy Hydroelectric Project
FERC Project No. 1390

December 2024

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LIST OF TABLES

1.0 POTENTIAL RESOURCE ISSUE

All lands necessary for the operation and maintenance (O&M) of the Lundy Hydroelectric Project must be encumbered in the Federal Energy Regulatory Commission (FERC) Project boundary.

2.0 PROJECT NEXUS AND HOW THE RESULTS WILL BE USED

The Federal Energy Regulatory Commission (FERC) requires that the FERC Project boundary encompasses all lands, roads, and trails necessary for project purposes, including the O&M over the term of the license. FERC further requires (18 CFR § 11.2) that a licensee compensate the United States for the use, occupancy, and enjoyment of its lands or its property. This LAND-1 Project Lands and Roads Study (Study) will collect information on the Project facilities and O&M activities to provide an accurate representation of Project lands that will be proposed in a Final License Application.

3.0 STUDY GOALS AND OBJECTIVES

- Identify whether additional Lundy Project lands may be needed for operation of the Project, including laydown and spoil areas, or whether current Project lands or facilities are no longer needed for Project operation.
- Confirm existing land ownership and federal lands within the existing FERC Project boundary are accurately represented.
- Identify which roads or access trails are used for access to and maintenance of the Project, and identify existing agreements related to maintenance of those roads and access trails.
- Inventory and assess the condition of those identified Project-related roads and access trails, including the potential need for improvements.
- Identify for purposes of describing in the License Application all Project facilities and structures used for hydroelectric generation (e.g., buildings, roads, and spillway).

4.0 EXTENT OF STUDY AREA AND STUDY SITES

The Study Area will include lands within the existing FERC Project boundary, as well as additional lands that may be needed to support Project O&M activities under the proposed action.

5.0 EXISTING INFORMATION

The following existing information and data sources will guide the analysis;

- Approved FERC Project boundary geographic information system (GIS) data
- Approved Project exhibit drawings

- Mono County tax parcel GIS data
- Federal land ownership GIS data
- Aerial imagery
- Lundy Lake Resort, Thomas Wragg, Patricia Wragg, and Haley Wragg License Agreement (LLR, 2023)
- County of Mono, License Agreement (CM, 2024)
- Land Management Plan for the Inyo *National Forest* (USFS, 2019).

6.0 STUDY APPROACH

- Assess the existing FERC Project boundary for accuracy.
  - Analyze the existing FERC Project boundary using GIS software to determine whether mapping errors or omissions are present in the representation of Project lands needed for operation under the current licenses.
- Assess existing Project lands ownership and lease agreements information.
  - Gather accurate land ownership and lease agreement data for existing Project lands to confirm ownership boundaries and representation of federal lands used for Project purposes.
- Consult with SCE O&M staff to determine whether the existing FERC Project boundary adequately encompasses all lands needed for current operations or any proposed changes to facilities or operations.
- Consult with SCE and U.S. Forest Service (USFS) staff to identify roads or access trails that may be used for Project purposes, such as for O&M of Project facilities or access to Project-related recreation opportunities.
- Assess the condition of roads or access trails identified for Project purposes.

7.0 REPORTING

A report will be prepared documenting the findings of this Study. The report will include an inventory of all existing Project lands as well as an assessment of any potential lands or roads needed for future Project operations, including applicable maps and illustrations.

8.0 STUDY SCHEDULE

8.1. STUDY SCHEDULE

For this Study, Table 8.1-1 outlines the major milestones to be completed throughout the study process.

Table 8.1-1. Study Schedule

Date	Activity
Spring 2025	Conduct desktop analysis and interview SCE staff
Fall/Winter 2025	Prepare initial findings for consultation
January 2026	File update on study progress with Initial Study Report
Winter/Spring 2026	Consult with appropriate agencies and determine need for site assessments
Summer 2026	Potential field season for site assessments
Summer/Fall 2026	Compile study results and prepare report
January 2027	File final study report with Updated Study Report

9.0 LEVEL OF EFFORT AND COST

SCE estimates the cost to complete this Study, in 2024 dollars, is approximately $45,000.

10.0 REFERENCES

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ATTACHMENT 3

PROPOSED STUDY PLAN MEETING ATTENDANCE AND NOTES

MEETING NOTES*
LUNDY HYDROELECTRIC PROJECT, FERC PROJECT NO. 1390
PROPOSED STUDY PLAN MEETING
SEPTEMBER 3, 2024, 8:30 AM–12:00 PM

**These meeting notes are documentation of general discussions from the meeting held on the above-noted date and focus on relicensing participants questions and comments. These notes are not a verbatim account of proceedings and do not represent any final decisions or official documentation for the project or participating agencies.*

1.0 OBJECTIVES

- Clarify SCE's Proposed Study Plans
- Discuss information gathering or study requests
- Discuss process and schedule for refining study plans

2.0 ATTENDEES

Relicensing Team Members
Martin Ostendorf, Southern California Edison (SCE)
Matt Woodhall, SCE
Audry Williams, SCE
Cornelio Artienda, SCE
Finlay Anderson, Kleinschmidt
Angela Whelpley, Kleinschmidt
Allison Rudalevige, Psomas
Brad Blood, Psomas
Edith Read, Edith Read and Associates
Heather Neff, Stillwater Sciences (SWS)
Christina Buck, SWS
Lynn Johnson, TEAM Environmental

FERC Staff
Jessica Fefer
Frank Winchell
Rebecca Kipp
Ousmane Sidibe

Agencies, Non-governmental organizations, individuals
Adam Cohen, State Water Resources Control Board (SWRCB)
Bartshe Miller, Mono Lake Committee (MLC)
Beth Lawson, California Department of Fish and Wildlife (CDFW)
Bryant Luu, CDFW
Chad Mellison, United Stated Fish and Wildlife Service
Daniel Anderson, CDFW
Danielle Christensen, MLC
Graham Meese, CDFW
Haley Wragg, Lundy Lake Resort
Jacqueline Beidl, United States Forest Service (USFS)
James Noss, SWRCB
Jeffrey Starosts, Bureau of Land Management
Jonathan Knight, USFS
Kurt Sable, USFS
Michael Weise, USFS
Robbie DiPaolo, MLC
Sheila Irons, USFS
Tristan Leong, USFS

3.0 WELCOME AND INTRODUCTIONS

The SCE relicensing team introduced the meeting's purpose as discussing the proposed study plan for the Lundy Lake relicensing, emphasizing the importance of relicensing participants comments and study requests leading up to the plan.

The SCE relicensing team opened the meeting by welcoming participants and outlining the agenda, which included introductions, a safety moment, and discussions on the proposed study plan for the Lundy Lake relicensing. They stressed the significance of relicensing participants input and the impact of their comments and study requests on shaping the plan.

The meeting aimed to clarify the proposed study plans, address information gathering, refine study plans based on relicensing participants feedback, and ensure engagement in the process leading to the FERC study plan determination.

The SCE relicensing team highlighted the presence of relicensing participants, including the FERC project manager, Jessica Fefer and Jessica's team from FERC, emphasizing the value of their contributions to the study plan meeting and the overall relicensing process.

SCE staff acknowledged the Lundy Project's location on the Mono Lake Kutzadika[a] Tribes' traditional lands, highlighting SCE's recognition of the historical stewardship by the tribes.

4.0 PROJECT OVERVIEW

SCE staff provided an overview of the Lundy Project, including its location, facilities, and operations. Additionally, a flow diagram of how water flows through the Lundy Project was reviewed. SCE staff discussed the adjudicated water rights and the priority of those rights at the Lundy Project.

Staff from the USFS sought clarifications about the relationship between the study program and existing settlement agreement (executed in 2005 and amended in 2022) between SCE and water rights holders and agencies regarding the Project. SCE staff explained that the settlement agreement primarily addresses state water rights issues that are not germane to FERC's relicensing of the Lundy Project. SCE affirmed, however, its intent to ensure that the provisions of the Settlement Agreement that are relevant to the FERC relicensing process are reflected in the RSP, and to work with settlement parties to ensure that relevant provisions of the Settlement Agreement that fall beyond FERC's relicensing jurisdiction continue beyond the expiration of the current license term.

5.0 WATER RESOURCES

The water quality studies involve seasonal sampling, bacterial sampling, and fish tissue mercury sampling, with the goal of comparing data to water quality standards and addressing state water board study requests.

5.1 AQ-1 FISH COMMUNITY SURVEY

The SCE relicensing staff presented the proposed study AQ-1, focusing on characterizing the fish community in Mill Creek and Lundy Lake, including abundance, biomass, age structure, and potential brown trout, brook trout, and rainbow trout populations.

5.2 AQ-2 FISH STRANDING STUDY

SCE relicensing staff presented the proposed study AQ-2, identifying that the study will focus on areas of high stranding risk and the objective of this study will include characterizing the flow fluctuations and establishing monitoring locations in the representative channel reaches throughout the bypass reach.

5.3 WQ-1 LUNDY LAKE AND MILL CREEK WATER QUALITY MONITORING

SCE relicensing staff outlined the proposed Water Quality study WQ-1, aiming to collect seasonal water quality data at various sites in Lundy Lake and Mill Creek to assess compliance with water quality objectives and address concerns related to mercury in fish tissue.

5.4 WQ-2 LUNDY LAKE AND MILLE CREEK WATER TEMPERATURE MONITORING

SCE relicensing staff gave an overview of the proposed Water Quality study WQ-2, noting the goal is to collect stream water temperature data and reservoir profile data to characterize current water temperature conditions in Lundy Lake and stream reaches of Mill Creek affected by Lundy Project operations.

6.0 TERR-1 GENERAL BOTANICAL RESOURCES SURVEY

SCE relicensing staff gave an overview of the proposed Botanical Resources survey TERR-1, explaining the goal of the study is to obtain additional information to supplement the existing information regarding botanical resources in this study area. To accomplish this, field staff will conduct a literature review to identify species that have been reported in the general region and then conduct two years of field surveys that will include vegetation mapping, as well as special status plant surveys to document location and microhabitat information and population size. Invasive species surveys will be conducted where population size and extent will be documented.

7.0 TERR-2 GENERAL WILDLIFE SURVEY

SCE relicensing staff discussed that the General Wildlife Survey TERR-2 would focus on identifying and documenting wildlife species, especially those at risk or of special concern, as designated by the US Forest Service, federal, and state governments. The study area overlaps with the botanical study area and includes additional regions to document potential habitats for Willow flycatchers. A literature review was completed for the pre application document, and this study plan includes pedestrian field surveys, nighttime

spotlighting, and installation of trail cameras to gather more data. The exact locations for the cameras will be determined before the study begins.

8.0 REC-1 RECREATION USE AND NEEDS ASSESSMENT

SCE relicensing staff discussed the recreation use and needs assessment study, focusing on collecting data on current recreation use and identifying future needs to ensure facilities meet visitor expectations. The recreation use and needs assessment study will collect data on current recreation use at FERC-approved sites, evaluate visitor feedback, and assess the capacity of existing facilities to meet future needs. The study will employ spot counts and visitor intercept surveys during weekdays, weekends, and peak holidays to gather comprehensive data on recreation use and visitor experiences.

9.0 REC-2 RECREATION FACILITIES CONDITION ASSESSMENT

SCE relicensing staff emphasized the importance of assessing the condition of recreation facilities and amenities, including the potential for universal accessibility, to ensure they align with visitor expectations and needs.

10.0 LAND-1 PROJECT LANDS AND ROADS STUDY

SCE relicensing staff discussed the Project Lands and Roads Study, LAND-1, highlighting the process in which SCE will review current lands and roads needed for operation and maintenance of the Project.

11.0 CUL-1 ARCHAEOLOGY, CUL-2 BUILT ENVIRONMENT, TRI-1 TRIBAL RESOURCES

SCE staff outlined the objectives of the archaeological, built environment, and tribal resource studies, aiming to identify and document cultural and tribal resources within the Project area for compliance with Section 106 of the National Historic Preservation Act.

SCE staff detailed the objectives of the cultural resources studies, which include identifying archaeological and built environment resources, determining historic properties, and developing a historic properties management plan consistent with the Land Management Plan for the Inyo National Forest.

The tribal resource study, separate from the archaeological and built environment studies, aims to document tribal resources, conduct ethnographic surveys, and engage with tribal governments to ensure compliance with Section 106.

The studies will involve archival research, field surveys, and evaluations for the National Register of Historic Places, with a focus on collaboration with tribal representatives and documentation of any identified resources.

12.0 PROPOSED STUDIES NOT ADOPTED

SCE relicensing staff reviewed the eight studies proposed by relicensing participants that SCE did not adopt in the PSP, together with SCE's justification as to why each study was not adopted. FERC's integrated license process was referenced in each case to note where SCE concluded that the study request did not meet FERC's study plan criteria.

FERC staff asked about the absence of a Sediment Transport Study Plan. SCE explained discrepancies between the figures filed with the PAD, which showed historic water-courses and the current disposition of Deer Creek, which no longer discharges into Lundy Lake and instead is a tributary to Mill Creek below the Dam. Deer Creek is not within the Lundy Project boundary nor does it discharge into Mill Creek within the Lundy Project boundary. As further clarification, SCE filed a follow up letter in response to SD2 on October 1, 2024 identifying the existing data that is available to inform FERC's NEPA analysis.

13.0 STUDY IMPLEMENTATION, NEXT STEPS, AND FINAL Q&A

SCE relicensing staff explained that the study implementation for each of study is outlined in the study schedule for each plan. Implementation of each study varies; however, they all contain relicensing participants consultation, if applicable, data collection, and study report development.

SCE relicensing staff also outlined the next steps in the process with the studies starting implementation once FERC issues the Study Plan determination on January 3, 2025. Moving through the ILP, after the first year of studies SCE will submit the Initial Study Report with a progress report on each study conducted to date. After the second year of studies, SCE will submit the Updated Study Report with a progress report on all studies conducted.

SCE relicensing staff reviewed the relicensing process timeline highlighting major milestones over the next couple of years.

14.0 ACTION ITEMS

Relicensing participants comments on the Proposed Study Plan are due to be filed with FERC on November 4, 2024. Each relicensing participant is responsible for submitting written comments in the FERC record to ensure that SCE will consider its comments when preparing the Revised Study Plan.